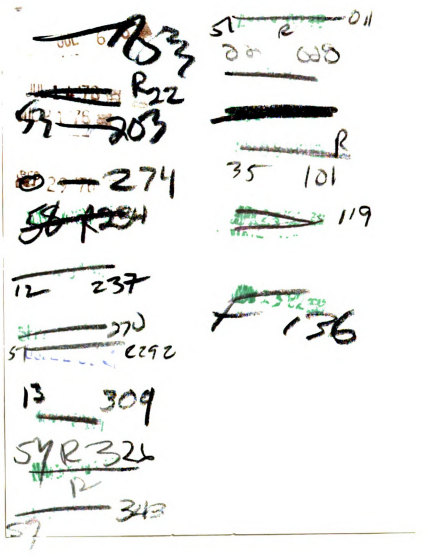

ABSTRACT

AN ANALYSIS OF SELECTED PERCEPTIONS OF CURRICULUM DEVELOPMENT AS EXPRESSED BY PUPILS AND INSTRUCTIONAL PERSONNEL IN MANITOBA

By

Alfred Angus Murray McPherson

The Problem

In this study selected perceptions of school personnel are investigated concerning the need for curriculum change and the means by which change may be achieved. The investigation is conducted by surveying selected perceptions of pupils and instructional personnel; by comparing and contrasting the perceptions as expressed by three sub-groups, namely, supervisors, teachers and pupils; and by analyzing relationships between certain demographic variables of instructional personnel and their recorded perceptions.

The study is based on the premise that achievement of educational goals may be facilitated if continuing and orderly curriculum development is maintained. The study provides:

1. Means by which the curriculum leader may assess the perceptions of school personnel regarding the need for and the processes of change.

2. Insights about demographic variables which are likely to indicate personal readiness to respond to curriculum innovation.

3. An assessment of differences of perceptions of curriculum change both within and between groups of teachers, supervisors, and pupils.

4. An activity through which teachers, supervisors, and pupils may become aware of the need for continuing and orderly curriculum development.

Procedure

Four hundred and thirty-eight instructional personnel along with 477 students from the same schools formed the sample. All were selected at random from ten school divisions in the Province of Manitoba and were judged to represent four types of communities, namely, rural, rural-urban, northern and urban.

Members of the sample reacted to two questionnaires, one for the instructional personnel and one for the students, in order to gather data on two fundamental questions: (1) should curriculum change be made? and (2) how should curriculum change be undertaken? Each questionnaire was constructed to provide demographic data and to probe a number of sub-questions derived from each of the two fundamental questions. The demographic data provided a description of the sample and individual items served as independent variables in the analyses.

Findings

The results of the survey of selected perceptions of school personnel and the statistical analyses produced the following significant findings:

1. Instructional personnel perceive curriculum change to be more desirable than do students; they also believe cooperative decision making based on local needs to be more necessary than do students.

2. Department heads, administrators, consultants, and professional development chairmen agree that curriculum change is desirable and on the process by which change may be effected.

3. Single-subject teachers perceive the system to be more tolerant and supportive of curriculum change than do teachers who instruct in several subjects; single-subject teachers also believe more strongly in cooperative decision making based on local needs.

4. The type of community is a significant variable in relation to differences in perceptions between instructional personnel and students.

5. Teachers from northern and urban communities perceive curriculum change to be more desirable than do rural or rural-urban teachers. Rural-urban teachers also perceive less need for total community involvement in curriculum decision making than do teachers from other types of communities.

6. Students from four types of communities agree on the degree of desirability of curriculum change; however, students from northern schools perceive cooperative decision making based on local needs to be less desirable than do students from other communities.

7. Teachers from large schools and those from small schools agree on the need for curriculum change; however, teachers from

large schools perceive a greater need for total community involvement in curriculum development than do teachers from small schools.

8. Students from small schools agree with students from large schools on the need for curriculum change; however, students from small schools perceive cooperative decision making based upon local needs to be more desirable than do students from large schools.

9. Young teachers and old teachers agree on the degree of desirability of curriculum change. However, young teachers perceive that the total needs of the community are not being met as fully as perceived by older teachers. Young teachers perceive a greater need for total community involvement in curriculum decision making than do older teachers.

10. Female teachers perceive the school system to be more tolerant and supportive of curriculum alternatives than do male teachers.

11. Less experienced teachers perceive the school system to be more tolerant and supportive of alternatives than do more experienced teachers. Less experienced teachers favour wide community involvement in curriculum decision making plus total community involvement more strongly than do experienced teachers.

12. Unmarried teachers believe more strongly than married teachers that the school system is not meeting the needs of the total community and that there are external forces pressing for curriculum change.

13. Teachers who have had extensive professional preparation believe that the system is tolerant and supportive of alternatives in curriculum more strongly than do teachers who have less professional

preparation. Also, more highly trained teachers believe the school programs should emphasize renewal and rejuvenation of both schools and society; less highly trained do not see this as a prime function of the school.

14. Teachers who have had extensive in-service education perceive curriculum change to be more desirable than those who have not had such training. Teachers who have had extensive in-service education do not perceive a high degree of curriculum uniformity to be essential.

15. Teachers who have played leadership roles in continuing in-service education perceive curriculum revision to be more desirable than do teachers who have not been leaders.

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CHAPTER I

INTRODUCTION

This study is directed at the need for and means of achieving changes in school curriculum. The purpose is to investigate the processes of curriculum development as perceived by instructional personnel and pupils in the context of a public system of education.

During this century, and particularly in the years since 1957, change has taken place at an increasing rate and continues to be a part of educational life. In fact, the more frequently change is noted, the more frequently it seems to reappear. Goodlad expressed the recurring nature of change when he wrote: "Curriculum change usually stems from assumed excesses or inadequacies in what exists. A period of change produces its own shortcomings and creates the need for another."[1]

In general, long-range or evolutionary change has been relied upon to keep educational systems up to date with the demands placed upon them. The events of the 1960's make this "wait and see" stance no longer tenable; the rate of societal change makes it imperative that the educational systems learn to live with change and to make

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[1]John I. Goodlad, "The Curriculum," Essay #1, Rational Planning in Curriculum and Instruction (Washington: National Education Association, The Center for the Study of Instruction, 1967), p. 3.

procedure for change an integral part of the mode of operation. A statement by Stuart Maclure upon the conclusion of the Third Curriculum Council, 1967, described the plight of international educators in a manner which applies to the present rather well. He stated:

> Educators seem to be no less cocooned in a web of things they take for granted than members of other professions. Perhaps more so. They live and work in educational "systems." The administrative assumptions of these systems all too early grow up into superstructures of ideas and orthodoxies. A challenge from outside can become a source of disquiet and insecurity, a spur of chauvinism, self-justification, complacency. But this need only be a first stage; with luck it [the challenge] can lead on to self-knowledge, wider sympathies and new vision.[1]

Means by which school systems can move beyond Maclure's first stage and develop a climate favourable to change require careful study. What are the perceptions of school personnel regarding conditions necessary for change to take place, and how are these conditions nurtured?

Significance of the Study

Writing in the Saturday Review a number of years ago, Goodlad noted the lack of continuity in curriculum reform of the past and suggested a need for research similar in purpose to this study.

> The most significant question for the future is whether the current curriculum reform movement, long overdue, has built-in mechanisms to guarantee continuing self-renewal. . . . If the current effort is to continue with vigor, it must either become established within the research and development of the universities or be taken over by new institutions capable of reaching both the resources needed and the schools.[2]

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[1] Stuart Maclure, Curriculum Innovation and Practice (Toronto: H. M. Stationery Office, 1968), p. 3.

[2] John I. Goodlad, "Changing Curriculum of America's Schools," Saturday Review, November 16, 1963, pp. 66-67, 87-88.

The premise that achievement of educational goals will be facilitated if continuing and orderly curriculum development is maintained within the educational systems of a nation is basic to this study. Arising from this premise, a number of reasons for the study are evident.

The first reason relates to the need for educational change to be undertaken. If teacher and supervisory personnel perceive curriculum change to be important and necessary, then changes which may be recommended are likely to be tried. Conversely, if school personnel regard change to be unnecessary or undesirable, the best plans are not likely to result in significant action. It is evident, therefore, that the educational leader whose concern is curriculum development should be aware of the perceptions of school personnel regarding the need for change before embarking on a new program. This study will provide means by which an assessment of such perceptions may be made.

Secondly, the educational leader should have complete understanding of the perceptions of school personnel regarding how change should take place. In school systems in which administrative and supervisory roles have been redefined, acquisition of this understanding has been a problem for newly appointed supervisory personnel who are not familiar with teaching staffs, their backgrounds, experiences, and feelings. The study will provide a process by which supervisors may become more aware of teacher attitudes toward how to change curricula.

Thirdly, all who are concerned with change in our schools should be aware of the characteristics of individual teachers which

are likely to indicate readiness to change. Each leader may, of course, conduct his own survey to ascertain which teachers are most ready to try new approaches; however, this study will make known those demographic and other characteristics which tend to indicate readiness to change. Armed with the simple guidelines to be developed from the study, the educational leaders in the school division may be more adequately prepared to select teachers whose attitudes toward changing content and methodology are favourable to the task at hand.

A fourth reason for the study grows out of need for recognition of differences of perceptions of both "why" and "how" curriculum change should take place as held by groups within a school system. The study will provide means of assessing the differential perceptions existing among school personnel; that is, it will pinpoint the differences of perceptions of curriculum change both within and between groups of teachers, supervisors, and pupils.

Finally, if societal, economic, and technological change is inevitable, and if the present rate of such change continues, it becomes imperative that educators devise means to anticipate such change, to plan for it and to provide the means of using change as an integral part of curriculum development in the schools. Otherwise, the general irrelevance of school programs, if it exists, will inevitably continue.

In their book entitled Curricula for the Seventies, Frost and Rowland express the need for orderly approaches to change as follows:

> If giant steps are to be taken, the educator will be a scientist-professional. Such persons will not cease to be concerned for individuals--quite the opposite--for their concern will not be

> expressed in a hit-or-miss fashion. Instead, educators will learn to analyze with a keen understanding of human development in order to plan precise effective intervention with the objective of change toward a predetermined goal.[1]

Other educators emphasize this need for on-going but orderly study of the change process. Shane and McSwain[2] support continuous evaluation and improvement of curriculum because these processes help keep the school capable of vigorous service. Schools should strive to anticipate the demands and requirements which a rapidly changing society imposes upon the children in school and in adult years to come. Beauchamp[3] says that two alternatives are available. The first is to let the schools be bombarded from all directions and then to react in the manner most fitting at the time. The second alternative is to develop organized rationales that will give direction to change. Of these alternatives, the second would appear to be the obvious choice; unfortunately, past experience in curriculum development does not indicate that such a plan has been followed. The cyclic pattern of curriculum reform which has been common to many schools would lead one to assume that a hit-or-miss procedure had been used. The writer does not contend that activity associated with curriculum development should be maintained at a particular level; rather, that consideration be given to means of facilitating continuous activity at

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[1]Joe L. Frost and G. Thomas Rowland, Curricula for the Seventies (New York: Houghton-Mifflin Co., 1969), p. 440.

[2]Harold Shane and E. T. McSwain, Evaluation and Curriculum (New York: Henry Holt & Co., 1958), pp. 12-22.

[3]George A. Beauchamp, Curriculum Theory (Wilmette, Ill.: The Kagg Press, 1968), pp. 178-179.

a moderate level. The absence of moderation in this regard has made it possible for several years to pass in which there has been almost no improvement in programs, a fact which has prompted the student opinion of schools as dead places which never change; while in other years teachers and pupils have been forced to take giant steps in uncharted ways in the name of change.

By conducting the study involving teachers, pupils, and administrators, the writer hopes to make numbers of these persons aware of the need for continuing and orderly curriculum development in the school system.

The Setting of the Study

The highly centralized public school system of the Province of Manitoba provides the setting in which the research related to the study is conducted. Answers to the questions posed will be sought, first, as they apply to this system, and second, as they may be applicable to systems that are similarly structured.

If, as Lloyd Trump stated in 1963, "Educational change is no phenomenon of the sixties. The tempo has increased steadily since 1890 with an increase in the scientific study of education, . . ."[1] then the essential nature of curriculum development in Manitoba may reach back even to her entry into confederation more than one hundred years ago. However, in spite of noteworthy efforts to develop a curriculum suitable for students in the original twelve school districts

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[1]J. Lloyd Trump, "Curriculum Changes for the Sixties," in Readings in Curriculum, ed. G. Hass and K. Wiles (Boston: Allyn and Bacon, Inc., 1965), p. 448.

established in 1871,[1] the social-political-economic events since that time have made demands on the educational system which make the present curriculum vastly different from the historic format.

> From the primitive educational services needed for an isolated and sparsely settled territory with church operated schools and a few hundred students located near Winnipeg, a modern, intricate and highly structured system has evolved, serving 240,000 students and served by more than 11,000 teachers.[2]

From a private and church-centered educational system in Manitoba whose main purpose in 1870 was to produce a degree of literacy for a diverse population has developed a highly complex system with a great deal of power centered in a Provincial Department of Education. Accompanying this change in structure have come many pressing problems which necessitate curriculum changes and skills in innovation for which teachers and supervisory personnel have had limited preparation.

Until recent years central control of curriculum has been a characteristic of the educational system of Manitoba and of most provinces. Reasons for central control were both political and practical: political, as this belief was closely allied to the traditional Canadian philosophy of developing a unified nation through directed education of the young; practical in the manner in which it was equipped to offer guidance and assistance to the teachers who in

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[1]The Manitoba School Act of 1871 made provision for the establishment of twelve school districts in and around the communities of Winnipeg and St. Boniface.

[2]Annual Report of Department of Youth and Education, Province of Manitoba (Winnipeg: Queen's Printer, 1969).

many instances had limited professional training. The Department of Education through the Curriculum Branch has provided leadership in curriculum development, innovation, and supervision. Schools have long accepted the Curriculum Branch as the curriculum architect and assumed that long-range curriculum plans would come from that source.

Recently, due to wider acceptance of change as a fact of life and to the realization by many educators that a central unified curriculum may not meet the needs of a large segment of the school population, the Department of Education has sought means by which some of its responsibilities for curriculum development may be transferred to the newly created school divisions. Although this action had been sought by some teachers for a number of years, the new responsibilities placed on the leadership of the school divisions have caused genuine alarm. The supervisory personnel of the divisions are finding themselves in situations which require professional expertise of a very different variety from that required in the older system which was characterized by "school inspection." Curriculum development is becoming a local matter in which teachers, supervisors, and members of the community are finding it necessary to work cooperatively. The Curriculum Branch, working with the provincial teachers' organization, will continue to play an important role in planning, but will in all likelihood leave the front-line curriculum development and implementation to the school divisions and to the teachers.

The Purpose of the Study

This study is designed to investigate the selected perceptions of school personnel regarding curriculum change in the schools

of Manitoba. The study is exploratory in nature; it seeks to test a number of hypotheses regarding two fundamental questions. These questions are: (1) Should curriculum change be made? and (2) How should curriculum change be undertaken? From these two questions arise a number of sub-questions which in turn lead to additional hypotheses which will be tested.

Since the perceptions of all persons working in the school system arise from complex personal attitudes regarding the need for and nature of change, the study will be of a socio-psychological nature. The hypotheses are concerned primarily with perceptions of on-going change processes and do not focus on any static or ideal curriculum to be sought for the total system.

With this in mind, the first purpose of the study is to survey and record the perceptions of school supervisors, teachers, and pupils regarding the necessity for and processes of change in curriculum. This aspect will be examined in the light of expressed judgments and beliefs regarding the need for change, the forces which militate for change or produce this need, the persons who should initiate reform, and the processes which are necessary to implement change. Such a survey will have meaning simply as a compilation of attitudes toward change and educational change processes.

A second, but equally important, purpose of this investigation is to compare and contrast the perceptions of change as held by the sub-groups of school personnel. This will be done by analyzing the responses made to selected categories of questions by supervisory personnel, teachers, and pupils, and by testing the agreement or

degree of harmony that is revealed among the responses of the sub-group of respondents. Comparisons and contrasts of perceptions of the sub-categories of instructional personnel are made by statistically testing hypotheses relating the responses.

The third purpose of the study will be to consider the relationship of certain personal data variables such as age, sex, teaching experience, academic preparation, teaching assignment, professional preparation of the teachers and supervisors to their perceptions of the need for change and how it should be undertaken.

Statement of Hypotheses

Two major hypotheses arise directly from the two fundamental questions of the study. These are to be tested by analyzing the agreement or degree of harmony of the perceptions of change processes as expressed by instructional personnel and pupils. A third hypothesis relates demographic variables of the instructional personnel to their perceptions of curriculum change.

Hypothesis I: Instructional personnel and pupils agree on the degree of desirability of curriculum change.

Hypothesis II: Instructional personnel and pupils agree on how curriculum change should be undertaken.

Hypothesis III: There is agreement across sub-groups of respondents selected on the basis of demographic and other variables regarding two fundamental questions:

a. Should curriculum change be made?

b. How should curriculum change be undertaken?

In order to conduct more detailed analyses of the data, the respondents are classified on the basis of the school setting in which they teach or study. Personal qualities are not considered in this classification; the respondents are classified on the basis of (a) their role in the educational system, (b) the type of community of which the school division is representative, and (c) the size of school. This classification of respondents leads to seven sub-hypotheses related to each of Hypotheses I and II. All sub-hypotheses which deal with perceptions of the need for curriculum change are presented with Hypothesis I; those which deal with perceptions of how change should be undertaken are presented with Hypothesis II.

I. A. Provincial curriculum consultants, school division supervisors, professional development chairmen, and administrators agree on the degree of desirability of curriculum change.

B. Teachers who specialize in one subject only and teachers who instruct several subjects agree on the degree of desirability of curriculum change.

C. Instructional personnel from each of four types of communities and students from these communities agree on the degree of desirability of curriculum change.

D. Instructional personnel who represent four types of communities agree on the degree of desirability of curriculum change.

E. Students from four types of communities agree on the degree of desirability of curriculum change.

F. Instructional personnel employed in small schools and those employed in large schools agree on the degree of desirability of curriculum change.

G. Students attending small schools and those attending large schools agree on the degree of desirability of curriculum change.

II. A. Provincial curriculum consultants, school division supervisors, professional development chairmen, and administrators agree on how curriculum change should be undertaken.

B. Teachers who specialize in one subject only and teachers who instruct several subjects agree on how curriculum change should be undertaken.

C. Instructional personnel from each of four types of communities and students from these communities agree on how curriculum change should be undertaken.

D. Instructional personnel who represent four types of communities agree on how curriculum change should be undertaken.

E. Students from four types of communities agree on how curriculum change should be undertaken.

F. Instructional personnel from small schools and those from large schools agree on how curriculum change should be undertaken.

G. Students attending small schools and those attending large schools agree on how curriculum change should be undertaken.

As has been noted, the third hypothesis deals with the perceptions of instructional personnel only.

Personal qualities serve as a basis for setting up the subcategories of respondents whose responses to each of the fundamental questions will be analyzed. For ease of presentation, the analyses of the "need" and "how" responses are presented under each of the personal variables considered. The personal or demographic qualities used are: age, sex, academic preparation for teaching, marital status, teaching experience, activity related to professional organizations, and in-service leadership experience.

Assumptions and Limitations of the Study

Assumptions

It is assumed that change will continue to take place in society, that is, in the world outside of the school, regardless of the efforts of the schools either to retard or accelerate the process of change.

It is also assumed that supervisors, teachers, and pupils exhibit a variety of perceptions regarding the possibility of curriculum change taking place and the means by which such change may be brought about.

A further assumption is that the questionnaire, designed as a part of this study, is a valid instrument which will provide an accurate indication of the perceptions of these persons regarding curriculum change.

With respect to the extent to which the findings of the study represent the perceptions of teachers and pupils of a centralized

school system, it is assumed that the recorded observations are valid representations of the perceptions of the total population and that any other randomly selected sample would yield a similar set of responses.

Delimitations

It is not the purpose of this study to evaluate or change the school curriculum at any grade level but to assess the perceptions of curriculum change as expressed by teachers, pupils, and supervisory personnel of the Manitoba schools. The study is, therefore, restricted to consideration of the need for change and of the processes by which change may take place rather than examination of outcomes which might result from curriculum change.

The study is also restricted to an examination of curriculum change in the context of a school system in which curriculum decision making has until recently been highly centralized.

The fact that only students of the high school grades were asked to respond to the student questionnaire added a further restriction.

Finally, the study is limited to personnel in school divisions where the superintendents expressed willingness to participate in the project.

Limitations

The writer is cognizant of a number of limitations of this study. The principal limitations are:

1. It is recognized that certain terminology used in the questionnaire may lead to differences in the expressed perceptions of teachers and pupils.
2. Reactions to the design of the questionnaire on the part of the respondents may have some bearing on the expressed judgments.
3. The writer's dual role as a faculty member in education and researcher may influence the reactions of teachers to the instrument used.
4. The school situation and timing of administration of the questionnaire may affect the responses given.
5. Finally, the sampling of respondents may be a limiting factor. Only teachers who expressed willingness to cooperate will respond to the questionnaire. It may be that the responses of those who chose not to participate would alter the total assessment markedly.

Definition of Terms

Academic Preparation--The term "academic preparation" is used to describe all courses, whether taken for university credit or not, which have been completed by the teacher or supervisor for the purpose of extending his knowledge of subject matter of the discipline.

Curriculum--The total academic and nonacademic experiences within the formal organization of the school are said to be the curriculum of the school.

Divisional Supervisors--All professional staff employed by the school division, other than classroom teachers, whose role brings them into the realm of curriculum development.

In-Service Education--Lectures, demonstrations, and courses provided for school personnel during their term of employment are defined as in-service education. These experiences are usually designed to improve the quality of teaching.

M.T.S.-Union-Sponsored Supervisors--The Manitoba Teachers' Society (M.T.S.) offers supervisory training to a limited number of teachers in each school division who are designated as "Professional Development Chairmen." Although the functions performed by these persons are primarily organizational, from the standpoint of in-service education they do serve in a supervisory capacity.

Northern Schools--All schools operated by the Frontier School Division and by the Canadian Department of Northern and Indian Affairs or any public schools located north of the 53rd parallel of latitude are classified as "northern schools."

Subject Area Consultants--The subject area consultants employed by the Curriculum Branch of the Manitoba Department of Education along with the curriculum director and his assistants make up the sub-group of supervisors known as the "consultants."

Perception--Perception is defined as the act of perceiving. In this study, the Combs definition, "an awareness of the environment gained through direct or intuitive cognition,"[1] is accepted. Perception

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[1]Arthur A. Combs, Perceiving, Behaving, Becoming (Washington, D.C.: Association for Supervision and Curriculum Development, 1962), p. 57.

is the result of our internalization of what our senses are exposed to in our environment.

Overview of the Dissertation

A review of literature related to curriculum development, attitudes toward educational change, the personal variables of the study, and curriculum development in the Manitoba setting is presented in Chapter II. The reports of curriculum researchers whose prime concern is the role of school personnel in the development processes are stressed.

Within Chapter III, the procedures employed in the study are presented. Included are an outline of the methodology, a description of the sample, a review of the instrumentation, and a summary of the data collection.

The data and the analyses are presented in Chapter IV.

Chapter V contains an interpretation of the data, as well as implications and recommendations for curriculum designers.

CHAPTER II

REVIEW OF THE LITERATURE

A review of some of the written and recorded material on the processes of change as they operate in school curriculum along with an analysis of these materials are presented in this chapter. This is followed by a summary of research findings related to the variables used in the study, and finally by a survey of changes and trends in education in Manitoba. Emphasis will be placed on the perceptions of school personnel as these appear to affect program development.

Processes of Change in Education

Most of the change we think we see in life
Is due to truths being in and out of favor.[1]

Change and the School Curriculum

Educators of the 1970's have opportunities and challenges that are unprecedented in history. The climate for educational research and curriculum experimentation is highly favourable. After a decade in which "innovation" has been the password in educational circles, individual citizens as well as public and private institutions have developed a keen interest in education and the effects of change on education. According to Ruth Anshan, this interest in education has

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[1]Robert Frost, "The Black Cottage," Complete Poems of Robert Frost (New York: Holt, Rinehart and Winston, Inc., 1958), p. 77.

been intensified by the rapidity of change. In an editorial introduction to an article by Ivan Illich, she writes:

> Man has entered into a new era of revolutionary history, one in which rapid change is a dominant consequence. . . . No civilization has previously had to face the challenge of scientific specialization.[1]

Modern technological advances are capable of extending the capabilities of man to limitless possibilities. Such extensions result in rapid and visible change which in turn may result in new awareness. Robert Oppenheimer describes this awareness in terms of experiencing a newness:

> In an important sense this world of ours is not a new world, in which the unity of knowledge, the nature of human communities, the order of society, the order of ideas, the very notions of society and culture have changed and will not return to what they have been in the past. What is new is new not because it has never been there before, but because it has changed in quality. One thing that is new is the prevalence of newness, the changing scale and scope of change itself, so that the world alters as we walk in it, so that the years of man's life measure not some small growth or rearrangement or moderation of what he learned in childhood, but a good upheaval. What is new is that in one generation our knowledge of the natural world engulfs, upsets, and complements all knowledge of the natural world before. The techniques among and by which we live, multiply and ramify, so that the whole world is bound together by communication blocked here and there by the immense synapses of political tyranny. The global quality of the world is new: our knowledge of any sympathy with remote and diverse peoples, our involvement with them in practical terms, and our commitment to them in terms of brotherhood. What is new in the world is the massive character of the dissolution and corruption of authority, in belief, in ritual and in temporal order. Yet this is the world that we live in. The very difficulties which it presents derive from growth in understanding, in skill, in power. To assail the

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[1]Ivan Illich, "Deschooling Society," in World Perspectives, Vol. 44, ed. Ruth Nanda Anshan (New York: Harper and Row Publishing Co., 1971), pp. ix-x.

> changes that have unmoored us from the past is futile, and in a deep sense, I think, it is wicked. We need to recognize the change and learn what resources we have.[1]

Society is caught in what Toffler refers to as "the roaring current of change, a current so powerful today that it overturns institutions, shifts our values and shrivels our roots."[2] Just as society is caught in the "roaring current of change," the schools are affected by

> . . . the flow of poverty and cultural deprivation, of changing manpower needs and allocation; of the vast explosion of knowledge and the restructuring of many of the academic disciplines; of the foment in the study of education and the encouragement of experimentation and innovation; of the unrest among minority groups, students, parents, and teachers who no longer submit to being passive onlookers of the decision-making processes which affect them; and of the changing characteristics of the teaching profession and its ability to deal more effectively with the complex educational problems of children.[3]

In a society that is constantly changing, adaptation and readjustment are constantly necessary. However, adaptation is a highly complex process which involves may diverse social and psychological as well as physical elements. To understand the problem of adaptation, we must recognize that several aspects of a situation may be changing at different rates of speed.

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[1]W. G. Bennis, K. D. Benne, and R. Chin (eds.), The Planning of Change (Toronto: Holt, Rinehart and Winston, Inc., 1969), pp. 1-2, citing Robert Oppenheimer, "Prospects in the Arts and Sciences," Perspective U.S.A. (Vol. II, 1955), pp. 10-11.

[2]Alvin Toffler, Future Shock (Toronto: Bantam Books, 1970), p. 1.

[3]K. Goldhammer et al., Issues and Problems in Contemporary Educational Administration (Eugene, Oregon: Center for Advanced Educational Administration, 1967), p. 2.

Block and Prince state that there are three considerations in studies of adaptation: "(1) the adaptation situation is a complex of many parts; (2) these parts are in a state of continuous change; (3) the rate of change is not the same for all parts."[1] In spite of studies such as this, Toffler expresses alarm about the dearth of information available relating to adaptation. He states:

> I gradually came to be appalled by how little is actually known about adaptivity, either by those who call for or create vast changes in our society, or by those who supposedly prepare us to cope with those changes. Earnest intellectuals talk bravely about "educating for change" or "preparing people for the future." But we know virtually nothing about how to do it. In the most rapidly changing environment to which man has ever been exposed, we remain pitifully ignorant of how the human animal copes.[2]

In terms of the impact on schools, the experience of change is unique and critical. Adaptation to change creates unforeseen difficulties. Education is a deliberate relating of people, usually younger or less experienced with older or more experienced, in a setting that is contrived to produce change. However, in this setting there is a tendency to view the future only as an extension of the past instead of a totally new entity with a very scientific and technical dimension. Toffler states:

> Change is the process by which the future invades our lives, and it is important to look at it closely, not merely from the grand perspectives of history, but also from the vantage point of the living, breathing individuals who experience it.[3]

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[1]Herbert A. Block and Melvin Prince, "Social Crisis and Deviance," Theoretical Foundations (New York: Random House, 1967), p. 24.

[2]Toffler, op. cit., pp. 2-3.

[3]Ibid., p. 1.

Knowledge of the crucial factors contributing to change in education may enable us to modify and control its direction and ease the tensions of adaptation and acceptance.

Change in itself is not bad but it must be along lines that men can understand. It is necessary therefore that society in general and education in particular should be alert to their real social responsibilities, and as Kerber and Smith state, "not stand helpless while the disfunction of society proceeds with the onslaught of massive change."[1] They also emphasize two general observations:

1. At all times society, not the schools, is responsible for its deepest problems.
2. If the schools are to serve society well at any time, and crucially in times of change, the schools should be given a clear mandate to inculcate values appropriate for continuing the growth of society.[2]

Factors Contributing to the Acceleration of Change

"For the acceleration of change does not merely buffet industries and nations. It is a concrete force that reaches deep into our personal lives. . . . This new disease can be called 'future shock.'"[3]

The rate of change in society has been accelerating for many years; in fact, as Toffler stated in 1970, "The acceleration of change in our time is an elemental force."[4] A number of these societal

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[1]August Kerber and Wilfred R. Smith, Educational Issues in a Changing Society (Detroit: Wayne State University Press, 1968), p. 10.

[2]Ibid., p. 11.

[3]Toffler, op. cit., p. 10.

[4]Ibid., p. 2.

changes, themselves, become factors which contribute to the need for changes in the school curriculum. Only when such factors or forces are recognized and understood by educators can the curriculum be changed with sufficient rapidity to meet new needs effectively. Otherwise the system stagnates until it is finally dragged or shoved into revision long after societal changes are established.

The factors contributing to the acceleration of change in curriculum are presented under three major headings. These are: (a) the need for relevant education, (b) technological changes, and (c) new knowledge.

Relevant education.--The role of public schools as agents of social status and control has become a matter of considerable public concern in recent years. The term "relevant education" has been used and misused in many contexts but usually in some form of criticism of the existing curriculum. Perhaps it is sufficient at this point to use the description of a relevant curriculum recently coined by William Van Til. He refers to a relevant curriculum as one which focuses on today and tomorrow, rather than on yesterday.[1]

In recent years, not only have students questioned the "today-ness" of the curriculum and the value of completing the school program, many have demonstrated their disapproval by dropping out completely, prior to graduation. In 1965, Gilchrist and Snygg, in a monograph titled "The Case for Change," wrote:

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[1]William Van Til, Curriculum: Quest for Relevance (Boston: Houghton Mifflin Company, 1971), p. v.

> The number of high school dropouts, for example, is appalling. We are not doing enough to prevent these dropouts; we are not doing enough either, to prepare such youngsters for the complex life they are likely to encounter.[1]

School attendance statistics for both Canada and the United States for the years 1971 through 1974 indicate that student acceptance of the school curriculum has not improved.

Not only has the action of those who leave the school prior to graduation raised questions regarding curriculum relevance; the reaction of those who do remain focuses attention on the same issue. Adequate plans to help youth make the transition from school to work or even from school to institutions of higher learning are evident in few school systems. As a result, the majority of students who choose not to enter college are inadequately prepared for the demands placed upon them, and many who do enter college do so without clearly defined purposes and goals.

Another aspect of relevant education which is contributing to the acceleration of change stems from the belief that humanness or humaneness should be respected in and enhanced through the curriculum. Within the curriculum of many schools a concerted effort is evident to place greater emphasis on humane values. As noted by Gilchrist and Snygg:

> Another observable inadequacy of our school system is the lack of emphasis placed upon humane values. Our world is a materialistic one and our schools reflect this way of life. The schools must place greater importance upon humanistic values if the American dream is to be realized: each child must be given

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[1]Robert Gilchrist and Donald Snygg, "The Case for Change," New Curriculum Developments (Washington, D.C.: Association for Supervision and Curriculum Development, 1965), p. 2.

> opportunity to develop to his greatest potential, not only to increase his own success and happiness, but also to make possible his optimum contribution to the society of which he is a part.[1]

This change in purpose for the individual student within the educational system is expressed as a dichotomy in the publication known as A Choice of Futures, or the Worth Report on Alberta schools. In a section dealing with value systems, this report states:

> A twofold and seemingly contradictory change in the current value-system will take place: toward an emphasis on values referring to the worth and well-being of each person; and toward an emphasis on values referring to social good or the welfare of mankind.[2]

Similarly, the Hall-Dennis Report on the educational system in Ontario refers to changing values as they affect the aims and purposes of the schools:

> Very many other and important changes and innovations require consideration. The lock-step structure of past times must give way to a system in which the child will progress from year to year throughout the school system without the hazards and frustrations of failure. His natural curiosity and initiative must be recognized and developed. . . . The atmosphere within the classroom must be positive and encouraging. The fixed positions of the pupil and teacher, the insistence on silence, the punitive approach must give way to a more relaxed teacher-pupil relationship which will encourage discussion, inquiry, and experimentation and enhance the dignity of the individual.[3]

In spite of the fact that many educators as well as segments of the population have serious reservations as to the direction in which

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[1] Ibid., p. 2.

[2] A Choice of Futures, A Report of the Commission on Educational Planning (Alberta: Department of Education, 1973), p. 6.

[3] Living and Learning (Ontario: Ontario Department of Education, 1968), pp. 9-15. (Abridged.)

these value changes may lead, they are a significant force in planning a relevant curriculum.

It should also be noted that relevance may be achieved in an educational system simply through involvement of the user in the planning. Some writers refer to this as "participatory planning" or "community involvement." Whatever the role of the student and the community in curriculum planning, the very fact that they are consulted will likely become a factor contributing to the acceleration of change. In the Worth Report, the effects of the involvement of a concerned society are described as follows:

> People must be more than mere clients of the educational system. They must share in determining it. If education truly is to benefit society, it must draw on all of society's strengths. Expertise, then, can be mobilized without granting educators and bureaucrats dominating roles because of their special credentials or strategic positions.[1]

However, it may be some time before this degree of public or "client" involvement is achieved. In a 1972 publication called "Rights of Youth," the degree to which schools are designed to meet student needs is described as minimal:

> In sum, we run our schools almost without reference to the needs of the children who attend them. What we teach, how we teach it, and even when and where we teach it are too often based upon the needs and convenience of the school, upon the comforts of the administrators, and the logistics of the system. And the students are all too aware of this; in all of our dozens of conversations with students in all parts of the country, not one boy or girl ever answered our initial question with: The schools are for kids.[2]

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[1] A Choice of Futures, op. cit., p. 39.

[2] M. Levin and C. Sylvester, Rights of Youth (Don Mills: Paperjacks, 1972), p. 34.

In an effort to summarize the impact of a long list of writers, each of whom has established a reputation as a critic of some aspect of the American public school system, William Van Til wrote an article titled "Epilogue: The Key Word Is Relevance." The following quotations from this article are selected to pinpoint lack of relevance in curriculum and to suggest one author's remedies.

> Let us begin with an admission: some of the content we teach in American schools is not as relevant as it might be in the lives of the young people we teach, to the society in which they are growing up, or to the clarification of democratic values.
>
> Recognizing the lack of relevancy in education in an exotic, faraway setting is easy.
>
> The closer to home we get, however, the harder it becomes for a teacher to recognize irrelevance.
>
> The obvious and sensible thing to do is to replace the irrelevant with relevant through changing the content.
>
> In making the content more relevant, there is no substitute for knowing the social realities which characterize the environment of the student. There is no substitute for knowing the learner as an individual. There is no substitute for having a philosophy which gives direction to the educational enterprise. So armed, one can relate much of the content to the learner, the class, the school, and the community.[1]

Technological change.--Associated with the demands for relevance which, basically, come from within the school, are a number of demands for new and different skills: skills which are made necessary because of technological change. New products, new techniques, and greater scientific knowledge are appearing at an unprecedented rate. Each such innovation requires new understanding and skills on the part of those who develop them as well as on the part of those who are

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[1]Van Til, op. cit., pp. 62-66.

distributors and consumers, understandings and skills which in turn frequently generate demands for change in curriculum.

Not only has technology produced a whole series of changes which affect society directly by their application; it has provided means by which the innovation process is accelerated. As Toffler observed,

> The stepped up pace of invention, exploitation, and diffusion, in turn, accelerates the whole cycle still further. For new machines or techniques are not merely a product, but a source, for fresh creative ideas.[1]

This rapidly accelerating nature of modern technology leads to continual realignment of concepts and ideas which may, in fact, lead to the development of a new super-machine. The modern computer has been described by some as the first vestige of such a machine.

The computer is able to record and assemble vast quantities of data which were heretofore perhaps known but not usable, and it has provided problem-solving capabilities beyond the imagination of most citizens. Few aspects of scientific study, commerce, or ordinary living are unaffected by this development.

Unruh and Turner contend that

> . . . probably the most dramatic area of change relates to concepts and knowledge of space. Continuing exploration of space, experiments in communication via Telstar, and space travel are affecting industries, professional practices and just plain people in all walks of life.[2]

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[1]Toffler, op. cit., p. 28.

[2]Adolph Unruh and Harold Turner, Supervision for Change and Innovation (Boston: Houghton Mifflin Co., 1970), p. 175.

Husen and Gunner continue in the same vein and state that

> . . . change caused during modern time by new technology and new forms of cooperation between people have given rise to new, constantly changing demands on the individual in his capacity as a citizen and as a holder of an occupation.[1]

Technological development is frequently characterized by the degree to which automation is evident in an industry or business. This process by which machines control their own operations with little or no human guidance is producing a major effect on life today. As Harold Shane stated, "Cybernetics is another great generator of future shock in education."[2] Not only does automation present the ultimate from the standpoint of efficiency, it raises a legion of social problems ranging from unemployment to retraining of personnel for new employment or for leisure. The educational challenge due to automation is enormous, for as Diebold and Stern state:

> To automate successfully, a businessman must first have a clear idea of his business operations. Then he must prepare a detailed plan. . . . He must study the results. . . . Finally he must hire [or train] workers who are skilled in operating it.[3]

Technology is not the only source of change in society, for we are all aware of the historic elements such as climatic and social changes which have been well documented. However, the statement by Toffler tends to place technology in its proper perspective. He

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[1]Torsten Husen and Bvalt Gunner, "Educational Research and Educational Change," The Case of Sweden (New York: John Wiley & Sons, Inc., 1968), p. 25.

[2]Harold Shane, "Future Shock and the Curriculum," Phi Delta Kappan, October 1967, pp. 67-60.

[3]John Diebold and James Stern, "Automation," The World Book Encyclopedia (Chicago: Field Enterprises Educational Corporation, 1967), Vol. I, p. 914.

states, "Yet technology is indisputably a major force behind the accelerated thrust."[1]

New knowledge.--The contribution of technology as an accelerator of curriculum change has been largely dependent upon new knowledge. Toffler describes the relationship between knowledge and technology in machine language: "If technology, however, is to be regarded as a great engine, a mighty accelerator, then knowledge must be regarded as its fuel."[2] This analogy, however, has limited applicability for in the knowledge-technology scheme not only does the fuel feed the engine but the engine tends to produce new fuel. In any event, an exponential increase in both engine and fuel or technology and knowledge appears to result.

The new knowledge which serves to accelerate curriculum changes may be divided into four categories: new content, new insights into learning, new techniques of teaching, and new understanding of the renewal processes.

One of the major criticisms of the school curriculum of the late 1950's and early 1960's was the lack of new content, that is, the absence of references to recent research findings of the academic disciplines. Whether or not this criticism was valid, it is interesting to note that content per se is seldom mentioned in the educational reports of those years, in spite of the fact that scientific writing

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[1]Toffler, op. cit., p. 25.

[2]Ibid., p. 30.

increased immensely.[1] Jerome Bruner, in his famous report of the Woods Hole Conference, described this situation by stating that "school programs have often dealt inadequately or incorrectly with contemporary knowledge."[2] As a direct result of this concern, educators have attempted to up-date and enrich curriculum content in an effort to reflect modern scientific thought.

Furthermore, there is reason to believe that the increase in scientific reports will continue. The number of scientific journals and articles is doubling about every fifteen years, and, according to biochemist Philip Siekevitz, "What has been learned in the last three decades about the nature of living beings dwarfs in extent of knowledge any comparable period of scientific discovery in the history of mankind."[3] It would appear that there is little hope for an extended period in which the ultimate in school curriculum will reign with no threat of replacement by new subject matter. Fuel for the great engine does not seem to be restricted by an energy crisis.

Just as researchers in the natural sciences have contributed to funds of knowledge which might be taught in schools, the social scientists have added new insights into how learning takes place. Bruner's theories on the structure of a subject have been widely accepted by most of the authors of new programs in science and

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[1] A simple comparison of the education review "Focus on Education" with the scientific review "Focus on Science" found in the Yearbooks (World Book) for the years 1960-1970 reveals marked differences.

[2] Jerome S. Bruner, The Process of Education (Cambridge: Harvard University Press, 1965), p. 3.

[3] Toffler, op. cit., p. 31.

mathematics. They believe that each area of science is essentially a structure of concepts which organize and give significance to the separate facts and thus make possible the deduction of new ones. Acceptance of this stance calls for a teaching approach rather different from that which results from use of the stimulus-response model.

Several psychologists who believe that the individual always behaves in such a way as to maintain the organization of his perceptual field, propose that the concept of subject matter organization is part of the general concept of cognitive organization and motivation. The key to the application of this theory is "readiness" or something which can be achieved through educative experiences. However, although this learning theory seems promising as a guide to educating children to deal with problems that may arise in society, these problems are likely to be of a nature we cannot accurately predict. This makes provision of readiness experiences difficult. In addition, this strategy necessitates extensive restructuring of curriculum at all levels, a task which is a challenge to those who seek its application.[1]

Continuing investigation of pupil motives and the causes of a desire to learn also provides new insights into the learning process. Pressure to assess the motives or lack of motives among pupils from both the advantaged and the disadvantaged sectors of North American society has produced elaborate research which has frequently been

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[1]Donald Snygg, "A Learning Theory for Curricular Change," Using Current Curriculum Developments (Washington, D.C.: Association for Supervision and Curriculum Development, 1963).

followed by curriculum changes designed to overcome deficiencies. The task for the educator in this area of research and application of findings is limitless.

Attitudes Toward Curriculum Change

> Change is not the anticipation, however intriguing, curriculum change is the occurring.[1]

An attitude is personal. It relates to the way a person feels, thinks, or behaves in specific situations.[2] Attitudes are, in effect, certain kinds of habit patterns. They result from learning. They operate in behaviour patterns, become part of the rich mental and emotional life of an individual. Each individual evaluates every situation in terms of his training and experience. The resulting attitudes and affective qualities determine his behaviour.[3] Attitudes serve as the mental retina which determines the nature of perception.

Modifying attitudes is a long-term affair; attitudes have a tendency to slip back into their original position and therefore continued efforts are necessary to modify them. Attitudes are highly resistant to change. They differ in their susceptibility to change and different approaches are needed according to situational factors. Change is easier when intensity rather than direction is at stake.

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[1]Leslie J. Bishop, "The Change Models Need Rewriting," Educational Leadership, January 1968, p. 287.

[2]Sophie K. Pura (Sr. M. Gerarda, O.S.B.), "Change and Resistance to Change" (term paper, University of Manitoba, 1972), p. 7.

[3]L. D. Crow and A. Crow, Understanding Our Behaviour (New York: Alfred A. Knopf, 1956), p. 90.

One factor determining susceptibility to change is the degree of internalization, and attitudes which have been internalized as part of the mores and folkways of the society are highly resistant to change.[1]

What is it about the school and its attitude that protects it from the forces of change comparable to other organizations? The school is made up of goal-oriented individuals who interact over a period of time. The interaction is patterned and based on mutual role expectations.[2] However, unlike organizations which have to compete to survive, the educational organization can behave like a local monopoly. The public schools do not have to compete for customers and the students must accept the services of the school to which they are assigned. Thus, the school might be referred to as a domesticated organization, meaning that it is protected and cared for in a fashion similar to that of a domesticated animal.[3] Perhaps this analogy is somewhat derogatory to the education organization as we know it, but it does reveal one way in which schools are protected from the forces of change.

James Russell says that although we live in a world swept by the winds of change, we have not learned yet how to understand what change is and what it does. From time immemorial we have been led to believe that the process of education is one of the constant things of life. Therefore, while surrounded by change, educators continue to do the same job and be the same kind of force in the lives of pupils.

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[1]R. A. Weisgerber, Instructional Process and Media Innovation (Chicago: Rand McNally, 1968), p. 42.

[2]Mark Hanson, "Stability, Change and Accountability," N.A.S.S.P. Bulletin, October 1971, p. 17.

[3]Ibid., p. 19.

The only way the concept of education can change and the only way educators can restructure everything they do, is to look at change in this new world of ours and try to give it meaning.[1]

This points to and raises the question of how educators perceive matters of curriculum change.

Teachers' Perceptions of Curriculum Change

In this section, research findings related to the teachers' perceptions of curriculum change are cited. It should be noted that research reports dealing with the teachers' role in curriculum change were not found to be abundant. It may be that the very nature of the perceptions reported herein may be related to the dearth of such reports.

In 1951, William Fullagar examined the issue of teacher-sensed problems in curriculum improvement. In the results he noted that new programs did not grow out of teachers' suggestions but rather from administrative edict. In this matter he noted also that teachers were often suspicious of the motives of the administrative staff and he concluded that there is a real necessity for the curriculum worker to work more closely with and have a greater understanding of the perceptual field of the teacher.[2]

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[1]James E. Russell, Change and Challenge in American Education (Boston: Houghton Mifflin Company, 1965), p. 7.

[2]William A. Fullagar, "Some Teacher-Sensed Problems in Curriculum Improvement" (Ph.D. dissertation, Columbia University, 1951), p. 45.

Gottlier and Brookover sought to discover how teachers perceived specific educational innovations, and their attitudes with respect to their acceptance and use of these innovations.[1] It was noted that teachers may not have a great deal of influence over their own professional expertise, and that they may be committed to having the administration of the school control important portions of their role behaviour. Reasons for this orientation are suggested, but this report indicates that a teacher did not perceive his role as someone who should or can make decisions about educational innovations. Most elementary teachers see acceptance of specific change as something contingent upon the relevant policies of their administration and tend to see their role primarily as the act of teaching, subject to administrative change.

Similar conclusions of the perceived role of the elementary teacher are reported by Albert Pryor. In his research, an attempt is made to analyze teacher perception of the professional role and to predict professional action. The findings were:

1. The way in which elementary teachers perceived their role was not significantly related to the way in which they viewed the educational system itself.
2. A majority of teachers (71%) did not view themselves as taking any positive action toward either curriculum change or cultural change.
3. Teachers (79.2%) felt that the control of their activities lay outside themselves.
4. The behavior which teachers projected for themselves was not related to the way they perceived the teacher role, the role of the administrator, or the educational system.

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[1] David Gottlier and Wilbur Brookover, Acceptance of New Educational Practices by Elementary Teachers (East Lansing, Michigan: Educational Publication Services, Michigan State University, May 1966), pp. 123-127.

5. The way in which the teachers of this sample perceive that segment of the educational systems which involves their professional relationship is not conducive to the development of curriculum in the schools or to the professional growth of the individuals involved.[1]

It would appear from the evidence provided to this point that elementary teachers perceive their role not to include activities designed to produce significant input into the change process in the school system nor into society in general. However, secondary teachers and university faculty members are reputed to perceive their role to be more autonomous and therefore perhaps more involved in curriculum development. Within the limited evidence found on this matter this opinion is upheld.

In 1968 Wilson and Gaff conducted a survey of nearly 1600 faculty members in six universities in an attempt to assess faculty attitudes toward educational change and the characteristics of those who favoured change. Their report indicates that a majority of faculty members surveyed favoured curriculum change and that there is a significant difference in purpose between those who were pro-change and those who were anti-change. The pro-change instructors favored programs which foster student self-development; the anti-change group expressed preference for programs focusing on vocational and technical competence. The former group also favoured more out-of-class content and individualized student assignments than did those opposed to change.[2]

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[1]Albert C. Pryor, "An Analysis of Teacher Perception of Professional Role and Predicted Professional Action" (Ph.D. dissertation, University of Connecticut, 1963), pp. 112-120.

[2]Robert C. Wilson and Jerry G. Gaff, "Faculty Supporters of Change," The Research Reporter (Berkeley, Calif.: University of California, Centre for Research and Development, 1970), p. 3.

As part of a locally conducted study of teacher needs, Kornberg sought to explore the changes in Manitoba education which teachers perceive to be important. The study encompassed three broad areas: classroom practices, resources, and perceived needs. The findings indicate: first, that a substantial majority of teachers favour change in the educational system; second, that they have strong views with regard to certain things that need to be changed; and third, that they want to be involved in the decision-making process, particularly as it applies to issues that are remote from the classroom.[1]

Kornberg's report indicates that teachers want improved communication links with other people involved in the educational process. They seek better exchanges with other teachers, with pupils, with principals, with curriculum consultants, with parents, and with the community. They also expressed a desire to have more and better curriculum resource materials available and that easier access to resources be provided. One segment of the questionnaire dealt with the extent to which teachers are involved in decision making on issues that affect them. The findings indicate that imposition of new methods by a central authority in top-down fashion is perceived to have little success in effecting change. It is rather the discussion and acceptance at the level where change must actively occur that is successful. The following quotation summarizes the report and may be a valid assessment of teacher opinion at this time:

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[1]Lela Kornberg, "Teachers and Change," The Manitoba Journal of Education, Manitoba Educational Research Council 9, 1 (1974): 3-6.

> The feeling one gets after studying 739 responses to a questionnaire is of individual teachers functioning in isolation in their own classrooms. They do not like this and do not want this situation to continue. Teachers appear to be conscientious. They want to improve the quality of education they receive by the utilization of a variety of resources, material or personnel. However, they do require the necessary information in order to do this. Also, teachers need a way of providing the system with their inputs; teachers need influence if they are to be effective agents of change.[1]

In the literature, a distinction is frequently made between learning and knowing about change, and actually changing. The former appears to be an intellectual process, while the latter is a behaviour process which may be more difficult to achieve. According to Wilkening, the processes of learning about change and changing are analogous to communication and decision making.[2] Rogers also sees the adoption process, that is, the process by which a recommended or suggested change becomes part of the behaviour pattern, as being analogous with decision making.[3]

This point of view is generally accepted by educators. In 1965, the Project on Instruction, a study of the National Educational Association concerned with innovations and educational change, identified two major decision areas--deciding what to teach (content) and organizing for teaching (methodology).[4]

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[1] Ibid.

[2] Eugene A. Wilkening et al., "Communication and Acceptance of Recommended Farm Practices Among Dairy Farmers of Northern Victoria," Rural Sociology 27 (June 1962): 116-197.

[3] Everett M. Rogers, Diffusion of Innovations (New York: The Free Press of Glencoe, Inc., 1962), p. 78.

[4] Ontario Curriculum Institute, New Dynamics in Curriculum Development (Toronto: Ontario Curriculum Institute, 1965), p. 7.

Decisions about what to teach, how to teach, and how to organize for teaching are made daily by the classroom teacher. However, decisions that affect the instructional program are made at three levels of remoteness from the student. According to Sand, these levels of remoteness may be classified as follows:

> Close to the students, teachers make daily instructional decisions. At a more remote level, teachers and administrators make institutional decisions. At a still more remote level, school board members, state legislatures and federal officials make societal educational decisions.[1]

Brinkell has used a similar classification to examine curriculum change. He refers to two levels of remoteness, namely: (1) the public, which is external to the institution; and (2) the professional, which is internal to it. Brinkell, however, emphasizes the importance of the teacher in the change process. He claims that as long as the teacher "remains inside his classroom he exerts almost complete control" of the decision to adopt or reject curriculum change.[2]

Ingram also agrees with the position taken by these writers. In an article titled "Education Change--A Challenge for the Profession," he maintains the decision makers at the classroom level, the teachers, are in a crucial position regarding educational change. Ingram indicates the significance of the teacher's role by stating, "It is at this level that change, or the lack of it, has its real

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[1]Ibid., p. 8.

[2]Henry M. Brinkell, Organizing New York State for Educational Change (New York: State Education Department, 1961), pp. 19-23.

effect."[1] Regardless of what innovations are made at the provincial, system, or school levels, changes made at the classroom level are the ones of major consequence.

If we accept the statements of Rogers, Sand, Brinkell, and Ingram, which tend to place the final responsibility for curriculum change squarely on the shoulders of the classroom teacher, and at the same time are aware that research indicates that elementary teachers, at least, do not see their role to be agents of change, we immediately recognize one of the reasons for the slow pace of curriculum renewal. Only when curriculum designers can instill a new perception of an innovator on the part of the classroom teacher is continuous curriculum improvement likely to take place.

Students' Perceptions of Curriculum Change

In the years from 1900 until the late 1950's a majority of Canadian students entered and passed through the provincially supervised school systems without real awareness of change taking place within these systems. This is not surprising, for despite the fact that many other facets of Canadian society were changing rapidly, few lasting curricular changes took place during this period. Those aspects of education (purpose, content, and methodology) bearing traditional and utilitarian respect were regarded more highly than was improvement of the system itself. Schools were regarded primarily as agents through which the best of thought and culture might be

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[1] Ernest T. Ingram, "Educational Change--A Challenge for the Profession," The ATA Magazine 45 (June 1965): 16-18.

transmitted to the youth of the nation and through which youth might learn the behavioural patterns of the culture.

Direct student input into curriculum decision making has traditionally been viewed as impractical and even undesirable by educators and by society. This view may reflect an assumption on the part of educators that students are immature compared with the adult population or that students are exposed to educational curriculum for too limited a period to perceive the broad picture. Recently, however, pressures caused by student activism and by general concern for relevance in curriculum have produced a marked increase in student involvement in the change processes:

> The role of high school students in the improvement of their curriculum may seem a far cry from that of the professionals and industrialists we have been considering, but it is a role, too, that came into greatly increased prominence as high school students began open protest against their schools in the late 1960's. "Why," many educators asked, "haven't we been consulting students all along?"[1]

Research conducted since the beginning of the activist period makes it very clear that students want to be consulted as "consumers" on matters concerning educational "wares."[2]

> In a recent study conducted for Life magazine, more than half of the students polled in one hundred schools across the nation [United States] revealed that they were unhappy with their limited participation in school policy making. Moreover, that 60 percent wanted more to say about making rules and a greater share of involvement in making curriculum decisions.[3]

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[1]William M. Alexander, The Changing High School Curriculum: Readings (New York: Holt, Rinehart and Winston, Inc., 1972), pp. 355-356.

[2]James E. House, "Can the Student Participate in His Own Destiny?" Educational Leadership 27 (February 1970): 442-445.

[3]Ibid., p. 445.

A study in Ohio, conducted by Goettler and associates, revealed that 90 percent of the high school students want to be involved in decisions such as: curriculum planning, dress codes, and rules of conduct. The results do not indicate how the students perceive their involvement in curriculum development, just a desire to be involved.

In order to ascertain the nature of student involvement in curriculum decision making, many schools have sought to develop systems of shared responsibility through existing student councils or by means of direct discussion with activist groups. In 1969, a conference on student involvement was convened at Lehigh University. The conference report lists many of the frustrations of administrators who have searched for continuous student input in the decision making of schools, but it also provides several interesting statements made by concerned students. Some of the statements are:

> Student activism is a good thing. You should recognize it, encourage it, and work with it. Can't schools be organized so that students have some say in the affairs of their school?[1]

> Students must have a share in making decisions on important matters [curriculum].[2]

In a series of year-end reports, "Focus on Education," written for The World Book, Cremin illustrates a shift in acceptance of student opinion since the late 1960's. From a basic attitude of little concern for student opinion in 1965, it would appear that educators have

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[1]Lloyd Ashby and John Stoops, Student Activism in the Secondary Schools (Danville, Illinois: The Interstate Publishers Inc., 1970), p. 57.

[2]Ibid., p. 61.

developed genuine interest in student opinions at all levels. Whether this move reflects acquiescence on the part of adults or maturity of expression on the part of students is not clear but meaningful dialogue appears to be taking place. The "re-coupling of the generations" process referred to in 1974 is an effort to overcome the alienation of numbers of students which has been evident for some time. As a result of a more "open" philosophy on the part of many educators, students in a number of areas appear to be moving toward a more responsible stance and to be accepting a major role in educational decision making.[1]

Personal and Professional Variables

> Ideally, of course, the teacher will be all the things expected of the perfect professional; but without teaching stature, he is no professional at all.[2]

Literature related to educational research reveals that the personal and professional characteristics of the sample are frequently employed as variables for analytical purposes. In this study these characteristics are important as they may serve as indicators of certain attitudes toward curriculum change. The personal characteristics considered are: sex, age, teaching experience, marital status, size of the school in which the respondent works or studies, the role or teaching assignment in the school, and the nature of the community.

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[1] Lawrence Cremin, "Focus on Education," The World Book (Chicago: Field Enterprises Educational Corporation, Yearbooks 1970-1974).

[2] A Choice of Futures, op. cit., p. 193.

The professional characteristics are: academic background, professional preparation, and professional leadership experience.

Sex

The sex of individuals in a sample has been used as a variable in a number of research studies. Dempsey stated that there appeared to be no significant relationship between the variables of readiness-to-change and sex of the respondent. However, in the same study he reported that male teachers saw fewer barriers-to-change than did female teachers.[1] Ingram used sex as a variable in a study concerning professional organizations of teachers and reports male teachers to be more highly committed to such organizations than females.[2]

More closely aligned to the purpose of the present study, Mort and Cornell found a positive relationship between the proportion of men teachers and the innovativeness of the school.[3] Ross found a similar result in his study titled "Administration for Adaptability."[4]

In his study of the innovative characteristics of junior high school teachers, Yakimishyn reported that male teachers scored higher on inventiveness ratios than did female teachers but did so only on

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[1]Dempsey, op. cit., p. 120.

[2]Ernest J. Ingram, "Member Involvement in the Alberta Teachers' Association" (Ph.D. dissertation, University of Alberta, 1965), p. 152.

[3]Paul Mort and Francis Cornell, American Schools in Transition (New York: Bureau of Publications, Teachers College, Columbia University, 1941), p. 272.

[4]Donald Ross et al., Administration for Adaptability (New York: Metropolitan School Study Council, Teachers College, Columbia University, 1951), p. 143.

the sub-scales related to some mechanical innovations. In other areas he found no significant difference.[1]

On the basis of the findings of Dempsey, Ross, and Yakimishyn it was decided that sex might be a meaningful independent variable for use in this study.

Age

Of the personal variables considered, the age of the respondent appears most frequently in the research literature. However, the findings are contradictory. Dempsey found age and readiness-to-change not significantly related, but he also reports that younger perceived fewer barriers-to-curriculum-change than did older teachers.[2]

Citing nine independent studies, Rogers revealed that younger age was associated with innovativenesss. In three other research projects the data showed older age to be associated with interest in innovation. Further to this, in an analysis of ten studies, Rogers found no significant relationship between age and innovativeness.[3]

In the Pennsylvania study, Mort and Cornell conclude that innovativeness in a school system is positively associated with the medium age of the teachers. They go on to state neither of the beliefs, that older teachers are out of date and unprogressive in their ideas,

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[1]Michael P. Yakimishyn, "A Study of the Relationship Between Selected Characteristics and the Innovativeness of Junior High School Teachers" (Master's thesis, University of Alberta, 1967), pp. 128-130.

[2]Dempsey, op. cit., p. 119.

[3]Rogers, op. cit., p. 276.

or that the younger teachers are more receptive to educational change, are substantiated by their study.[1]

Research conducted by Lippitt and associates presents findings that are in marked contrast to those of Mort and Cornell. Focusing attention on the individual teachers as they attempt innovations in their classrooms, Lippitt concludes that:

> The younger and the older teachers appear to be doing most of the innovating in our sample. Perhaps this means that the younger teachers who are recently out of college, or the older teachers who have come back to school from having children, are more willing to try out and experiment with new ideas; and that the middle range of teachers are less willing; in fact . . . . In general, the data show that older teachers tend to be potential adopters more than do younger teachers; but the younger teachers seem to be more innovative.[2]

Writing in The Canadian Administrator, Newton and Housego report a study conducted in Saskatchewan on teacher reaction to change. The evidence indicated that response to educational change did not differ according to the age of the respondent. However, they did report one finding of major significance to this study, namely: a greater proportion of the inexperienced teachers believed that change was necessary. This would suggest that the younger teachers, if it can be assumed that inexperienced teachers are usually younger than experienced teachers, are more flexible and perceive less barriers-to-change.[3]

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[1]Mort and Cornell, op. cit., p. 276.

[2]Richard I. Miller, ed., Perspectives on Educational Change (New York: Appleton-Century-Crofts, 1967), p. 322.

[3]E. Newton and I. Housego, "Teacher Reaction to Change: A Case Study," The Canadian Administrator 6 (April 1967): 25-28.

The age of the respondent appears to be a commonly used variable in research studies. Perhaps the ease and accuracy with which it may be recorded is one reason for its frequent usage; however, more likely, many researchers bear built-in beliefs about attitude changes and older age which prompt the inclusion of age classification as a means of analysis. In spite of the contradictory evidence found in the literature, it was decided that age should be used as a variable in this study.

Teaching Experience

Research findings on the relationship of teaching experience to readiness-to-change school curriculum appear to be as inconsistent as those in which age is a variable. Ross reports that maximum innovativeness occurs after at least fifteen years of teaching, but he also states that for a number of years prior to this time, many teachers are not ready to adapt to change.[1]

Dempsey reports that teachers with little teaching experience are more ready to attempt job-related change than those with more teaching experience. He also concluded that less experienced teachers perceived fewer barriers-to-change than those with more teaching experience.[2]

Eicholz, in his study on the rejection of educational innovation which could be considered as resistance to change, found no appreciable relationship between rejection and the number of years of

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[1]Ross, op. cit., p. 145.

[2]Dempsey, op. cit., p. 139.

teaching experience.[1] In contrast to this evidence, Yakimishyn reported that teachers whose experience in the classroom was from seven to seventeen years are more innovative than those who had less or more teaching experience.[2]

Brinkell confirms the report that beginning teachers are not very innovative. He points out that colleges and universities responsible for teacher education programs "have little influence on instructional innovation." Brinkell's findings imply that the novice will lack many of the necessary skills for program innovation in the early part of his career.[3] This supports the contention of Ross and Yakimishyn that teachers with less than three years experience tend to be less involved in curriculum change.

In spite of the inconsistencies noted in the research literature there appears to be evidence to indicate that for the first number of years, willingness to change and general innovativeness tends to increase with experience.

Marital Status

Marital status has frequently been used as a variable in educational research involving teachers and, in a number of studies, has been reported as a significant factor related to change. The conjecture that teachers who are married and are bringing up families are

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[1]Gerhard C. Eicholz, "Why Do Teachers Reject Change?" Theory Into Practice 2 (December 1963): 264-268.

[2]Yakimishyn, op. cit., p. 178.

[3]Henry M. Brinkell, Organizing New York State for Educational Change (New York: State Education Department, 1961), p. 85.

more inclined to try or experiment with new ideas is common in several research reports.

Buley's findings, as summarized by Ross, indicated that high schools in which there is a large percentage of married teachers provide an environment in which change and innovation take place readily. However, Buley also stated that at the elementary school level the reverse appears to be true.[1]

Mort and Cornell reported a zero correlation between the percentage of single teachers and the innovativeness of the school and concluded that for female teachers marital status was not a significant variable relating to activity observed with respect to educational change.

Dempsey began his study assuming that unmarried teachers might be more ready-to-change than married teachers and would therefore perceive few barriers-to-curriculum change. This assumption was made on the basis of the fact that good teaching requires considerable time for planning, preparation and professional growth, all of which might require time available only to unmarried teachers. The findings, however, did not bear out this assumption, as Dempsey found no significant relationship between marital status and teachers' perception of barriers-to-change.[2]

In a pilot study for the current research the writer noted a significant relationship between marital status and the perception of

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[1]Ross, op. cit., p. 148.

[2]Dempsey, op. cit., p. 123.

the need for curriculum change in the schools of one division in Manitoba. The young married teachers in three secondary schools perceived change in curriculum to be a more pressing need than did their single colleagues.

Because of the reports of Buley and Ross, and on the findings of the pilot study, marital status was included as a personal variable in this research.

Size of School

Many educational leaders have assumed that large schools can provide greater opportunity for experimentation and therefore may be places where curriculum change can be fostered. Several authorities report that within certain optimum limits, school size is a significant factor relating to curriculum change.

In the Pennsylvania study, Ross reports that the size of the school, as measured by school population, was found to correlate positively with the innovativeness of the school. This report does not isolate reasons within the school for the positive effect of size, but it does imply that teachers in larger schools tend to seek changes more frequently than do their counterparts in smaller schools.[1] However, he points out that somewhat different results were found in a study of the schools of New York City. In that setting the size of the school was not found to be as important as in the Pennsylvania study.

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[1] Ross, op. cit., p. 109.

Research on educational change deals not only with innovations developed within a school but with willingness on the part of school personnel to accept changes which come from external sources. Dealing with this aspect of change, Carlson found high rates of adoption of innovations from external sources by school systems that have comparatively large enrollments.[1]

In a study of the adoption of automatic data processing in large Canadian schools, Hemphill found a relationship between size and adoption. Using three variables, namely, total school enrollments, grade nine enrollment, and total instructional staff, he found significant differences between adopter and nonadopter schools.[2] In each case adopter schools tended to be larger than nonadopters.

With respect to the attitude toward change as expressed by students of varying sizes of schools, there is evidence that students from small high schools perceive the need for change to be less than do students from large high schools. In an extensive study of student participation in nonclass aspects of the school environment, Barker and associates noted significant differences between students from small and large schools. They noted that students from small schools will expend more effort and engage in more difficult tasks than will their counterparts from larger schools. In addition, the small school

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[1]Richard O. Carlson, Adoption of Educational Innovations (Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1965), p. 55.

[2]David H. Hemphill, "A Survey and Analysis of the Adoption of Automatic Data Processing in Canadian School Districts" (Master's thesis, University of Alberta, 1966).

students were reported to be more willing to accept things as they are,[1] an attitude which bears directly on the need to effect change.

The research reports reviewed and the evidence cited appear to support the conjecture that personnel from different sizes of schools will have varied perceptions of the need for curriculum change.

Position in School

The position of the respondee in the school has been used as a control variable in a number of studies relating to administrative procedures as well as curriculum development. In general, the findings indicate that a greater degree of specialization of teaching role has a positive relationship to the desire to institute change. Rogers reports three studies in which this tendency is noted. He explains this relationship by pointing out that a high degree of specialization permits an innovative person to keep up-to-date more readily and may lead him to seek more sophisticated data sources to support his work.[2]

Differences in perception of need for change due to position or type of school classification are suggested by Ross. He notes that specialization of teaching area and the type of school designed around this concept may be more closely related to innovativeness in high schools than in elementary schools.[3]

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[1]Roger Barker et al., "The Ecological Environment," Big School, Small School (Stanford: Stanford University Press, 1964).

[2]Rogers, op. cit., p. 177.

[3]Ross, op. cit., p. 109.

In a study dealing with sense of power among teachers, Moeller and Charters singled out the position of responsibility or administrative specialization as a variable. Their study indicates that teachers who are assigned specialized responsibilities such as department chairmen manifest higher scores on sense-of-power ratings but may not demonstrate a significant desire to produce change. The findings in this study tend to reinforce the hypothesis that teachers who seek to specialize in one subject area or discipline perceive change in curriculum to be more necessary than do teachers who are assigned special administrative roles.[1]

Type of Community

In numerous research studies the type of community in which the respondent works is considered as a variable while in others the socio-economic characteristics of the respondent or the socio-geographical region is used. Whatever the descriptive terminology, the nature of the community served by the school frequently appears to be a significant factor related to the rate and degree of educational change.

Napier, in an article titled "Rural-Urban Differences: Myth or Reality," attacked the problem of rural-urban differences but found difficulty in defining "rurality."[2] He quoted the Wirth studies in

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[1]Gerald H. Moeller and W. Charters, Jr., "Relationship of Bureaucracy to Sense of Power Among Teachers," Administrative Science Quarterly 10 (1966): 444-465.

[2]Ted Napier, Rural-Urban Differences: Myth or Reality (Wooster: Ohio Agricultural Research and Development Center, 1973), pp. 1-3.

which "rurality" is characterized by low-density population, homogeneous social groupings, traditional orientation, and informal social organization.[1] Napier concluded that differences in the patterns of change do exist between rural and urban communities, the major difference being the rate of acceptance rather than the depth or degree of change. Rural communities tend to accept change more slowly.

Hathaway and associates discovered differences in rural and urban students which is closely aligned to the concern of this study. They stated that rural children exhibited a tendency to be more shy, more suspicious, more self-depreciating than urban children. The urban child demonstrated a high degree of rebellion to authority and was less self-critical than the rural child.[2] This clear-cut distinction would be most helpful in a study such as this; however, it should be noted that the Hathaway observations were made prior to the advent of television.

In considering attitudes toward change held by either the student or the teacher, it is difficult to isolate "rurality" as a separate and distinct variable related to the individual's attitude to curriculum change. Some evidence points to the fact that administrative consolidation of schools into divisions has resulted in marked attitude change in spite of the fact that other rural characteristics remain the same. Heyman reported that the Ontario rural schools went

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[1]Louis Wirth, "Urbanism as a Way of Life," American Journal of Sociology, July 1944, pp. 44-45.

[2]S. Hathaway et al., "Rural and Urban Adolescent Personality," Rural Sociology, December 1924, pp. 331-333.

through a period of transformation following the introduction of the "Robarts Plan" in which consolidation was effected as an initial step before significant variations were noted in the rural pattern of life.[1] This would suggest that rural life styles are not as significant in controlling educational change as are the administrative and communication patterns through which new ideas in education are made known to the communities.

The occupation of the father of the teacher was considered as a variable by Dempsey in his investigation of perceived barriers-to-change. This variable might be viewed as an indicator of the type of community from which the teacher derived some of his attitudes. In any event, the occupation of the father was not found to be a factor in the teacher's perceived barriers-to-curriculum-change.[2]

A number of the findings of studies in educational innovation reported by Mort may be directly applicable to the present study, particularly to differences in attitude toward change in different communities. These are:

1. The rate of diffusion of complex innovations appears to be the same as that for simple innovations; innovations that cost move more slowly than those that do not.
2. Communities vary in the degree to which they take on new practices. A community that is slow to adopt one innovation tends to be slow to adopt another. A pioneer in one area tends to be a pioneer in other areas.
3. Explanation of the differences in educational adaptability of communities can be found in no small degree in the character of the population, particularly in the level of the

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[1]Richard Heyman, Robert Lawson, and Robert Stamp, Studies in Educational Change (Toronto: Holt, Rinehart and Winston of Canada, 1972), p. 86.

[2]Dempsey, op. cit., p. 132.

> public's understanding of what schools can do, and the citizens' feeling of need for education of their children.[1]

In summary, the research literature appears to underscore that rural-urban differences were at one time quite distinct. More efficient communication systems have tended to reduce attitude differences amongst communities, but variation in economic levels tends to maintain attitude differences particularly with regard to curriculum innovations which may be costly. Occupational life styles may also be a significant factor in the continuation of attitude differences.

In this study, the type of community, classified as rural, rural-urban, northern, and urban, was selected as a personal variable to accommodate socio-economic-geographic differences.

Academic Background

A commonly expressed hypothesis relates academic training with innovativeness. However, in a number of research studies in which extensive academic training on the part of teachers has been correlated with a drive to improve curriculum in the school, the correlation is not high.

Dempsey, in a study of barriers-to-change in schools, reported that teachers who hold a master's degree sense fewer barriers-to-change than do teachers who do not hold such a degree, but surprisingly,

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[1]Paul R. Mort, "Studies in Educational Innovation From the Institute of Administrative Research," in Innovation in Education, ed. Matthew Miles (New York: Bureau of Publications, Teachers' College, Columbia University, 1964), pp. 325-326.

the same more qualified teachers did not score abnormally high on a Readiness-to-Change scale.[1]

Mort and Cornell, in the Pennsylvania study, investigated characteristics related to the ability of a teacher to adapt to changing environments. The following conclusion indicates the importance placed on academic training: "The single measure dealing with teachers which was found to have the greatest relationship with the adaptability of a school was the average number of years of training of teachers beyond high school."[2] However, a greater number of university courses does not appear to increase the degree of innovativeness beyond an optimal point, which Ross claimed is arrived at with approximately five years of study.[3] This conclusion is in keeping with the finding of Dempsey, as the master's level of study would require this amount of post-secondary school training.

In a study of instructional innovativeness amongst teachers of vocational agriculture, Christiansen found that the more innovative a teacher is, the greater amount of formal education he is likely to have obtained. Christiansen also stated that academic preparation achieved after teacher certification is more effective as it tends to have special impact upon the desire to innovate.[4]

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[1]Dempsey, op. cit., p. 112.

[2]Mort and Cornell, op. cit., p. 277.

[3]Ross, op. cit., p. 136.

[4]James Edward Christiansen, "The Adoption of Educational Innovations Amongst Teachers of Vocational Agriculture" (Ph.D. dissertation, The Ohio State University, 1965).

Yakimishyn, in a study of instructional innovativeness amongst junior high school teachers in Manitoba, reported results which correspond closely with the findings of earlier studies. The teacher group with from three to five years of post-secondary education scored higher mean innovativeness ratios than did teacher groups with six or more years academic training.[1]

Although most of the research studies reviewed concentrated upon innovativeness as it related to specific educational changes, sufficient evidence was noted to justify including the extent of academic preparation as a variable in the current study.

Professional Preparation and Leadership Experience

In the development of a professional teacher, academic background and professional preparation are usually regarded as the dual components which give status to the individual. Therefore, it would seem appropriate to consider professional preparation and professional leadership as variables in relationship to perceptions of curriculum change.

In a study titled "Observations on Adoption Studies," Young refers to "professionalism" as a characteristic which correlates with those who frequently adopt changes. She also concludes that the frequency of contact with sources of "professionalism," such as attendance

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[1]Yakimishyn, op. cit., p. 179.

at meetings of associations and participation in program discussions, correlates with adoption.[1]

A statistically significant relationship was found between innovativeness and the extent of participation in professional meetings in the Christiansen study. He noted that the more innovative a teacher is, the greater number of professional meetings he is likely to attend.[2] This correlation, although significant, appears to place the variables in reverse order, a fact which tends to suggest that although the relationship exists there is really no indication of causality in the findings.

A study of Fox and Lippitt, which was reported by Miles, revealed that the amount of involvement by teachers in professional activities available to them was directly related to the rate of innovation and change they displayed.[3] These findings reinforce Young's contention that the quality and quantity of participation is a measure of professionalism.

On the basis of research evidence available, Yakimishyn hypothesized that teachers classified on the basis of involvement in professional activities at the local level differ significantly in their instructional innovativeness. The report of this study revealed recency of in-service experience to be the most significant factor in

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[1]Ruth Young, "Observations on Adoption Studies," Rural Sociology 24 (September 1959): 272-274.

[2]Christiansen, op. cit., p. 167.

[3]Matthew B. Miles, ed., Innovation in Education (New York: Bureau of Publications, Teachers' College, Columbia University, 1964), p. 296.

relationship to innovativenesss, and that frequency of attendance at association or other professional gatherings was not significant in relationship to change. However, Yakimishyn did find that teachers whose sources of input and professional contacts reached far beyond the local level tended to be more innovative in the classroom than those who did not have such associations.[1]

From the research evidence reported to this point, it would appear that professional associations might provide the support necessary to assist teachers in seeking curriculum change. In a report on the feeling of powerlessness among classroom teachers in the school organization, Moeller and Charters attempted to ascertain the nature and extent of such support. They found the highest scores on sense of power were associated with welfare committees and, contrary to the initial hypothesis, teachers' unions were the least effective in enhancing the classroom teachers' sense of power.[2] These findings indicated that mere contact with support groups is not sufficient to guarantee an interest in curriculum development; although not stated in this study it is implied that the nature of the association itself is important.

In a report dealing with aspects of curriculum development in Great Britain, Morris and Howson consider the impact of various forms of professional development programs for teachers. They state:

> In-service training in the form of a concentrated dose taken once or twice a year is, however, rarely satisfactory. It is

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[1]Yakimishyn, op. cit., p. 179.

[2]Moeller and Charters, op. cit., p. 460.

> usually necessary to provide participating teachers with more frequent opportunities to meet.
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> Another form of in-service training is provided by the Colleges and Departments of Education which offer one term and one year courses on specific aspects of curriculum development.[1]

They continue by adding that the latter form of experience is most desired as a part of the continuing education program for teachers: a program which should provide skills to serve as leaders of curriculum development at the local level.

In an essay titled "Teachers as Change Agents," Geraldine Channon expressed her view of the Canadian teacher of the future:

> There is only one effective way to change educational practice, and that is to alter teachers. Reforms will not be implemented if teachers do not accept and support them. One after another, organizational plans, philosophies, and machinery imposed from without have been rejected and side-stepped.
>
> But right away the protest can be heard. "Teachers are the very antithesis of change agents. Teachers are obedient, if not servile, conservative if not retrogressive." I do not believe this is necessarily true, although it may have been so in the past. There is more likely to be a range from highly innovative to highly conservative.[2]

Channon continues to describe the essential elements she believes should be included in the pre-service and in-service experiences of the teacher who is to be change oriented. Throughout this essay emphasis is placed on the learning and teaching others aspects of the change agent's role in a school system.

On the basis of the research evidence and theoretical support cited, professional preparation and past leadership experience were included as variables in this study.

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[1] R. W. Morris and G. Howson, "Curriculum Development," Developing a New Curriculum (London: Heineman Publishers, 1972), p. 23.

[2] Geraldine Channon, "Teachers as Change Agents," Education--Volume 7 (Toronto: W. J. Gage Limited, 1969), p. 51.

Curriculum Development in Manitoba

> In and for each Province the Legislature may exclusively make Laws in relation to Education.[1]

The process of curriculum development in the Manitoba system is unique in the manner in which it reflects the social and political character of the oldest western province. However, many facets of this development were derived from changes which took place earlier in the provinces of Eastern Canada. Most of the major causes of conflict in curriculum development, that is, racial and religious differences, which affected development in the east, have been evident in Manitoba at some time in its educational history.

As was the case in Ontario and in the Maritime Provinces, curriculum development in Manitoba has traditionally been viewed as the domain of professional consultants, publishers, and the Curriculum Board of the Department of Education, and representative groups of provincial teachers.[2] Committees consisting primarily of classroom teachers were involved in the development of course outlines and made recommendations regarding the authorization of textbooks and resource materials.[3] Frequently the committee would be called upon to oversee pilot projects involving new programs, but from that point on, the programs became the official literature of the Curriculum Branch and were distributed to all schools. Curriculum guides and the accompanying

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[1] The British North America Act, 1867, Section 93.

[2] Margaret Bean and Edward Reimer, Curriculum Development (Winnipeg: The Manitoba Teachers Society, 1974), p. 2.

[3] Appendix G--Survey of Curriculum Revision in Manitoba Schools 1969-70.

authorized texts were viewed by teachers and parents as centrally prescribed. This perception was reinforced by sections of The Public Schools Act, such as:

1. Every teacher shall:
   (a) teach diligently and faithfully all courses prescribed or otherwise authorized for the school, and according to the terms of his agreement with the school district and according to this Act and the regulations. (Section 283)
2. An authorized textbook in actual use in a public school may be changed by the teacher of the school for any other authorized textbook on the same subject, on written approval of the trustees and the inspector, if the change is made at the beginning of the school year. (Section 272)
3. A teacher or other person who negligently or wilfully substitutes an unauthorized textbook for an authorized textbook upon the same subject in use in the school is guilty of an offence and is liable, on summary conviction before a justice of the peace, to a fine of not more than ten dollars. (Section 306)[1]

During the post-war era most of the larger urban school systems as well as a number of rural systems attempted to serve the student population more adequately by providing greater freedom and latitude for the teachers to develop their own curriculum. Such moves were viewed with concern by those who believed that the old one-track curriculum was sacred. This was not surprising, however, as the conflicting views of Progressives versus Traditionalists were still evident in educational discussions in many other parts of the world.

The developments of the early 1960's, following Sputnik and the advent of the space science programs, strengthened the concept of a centrally prescribed curriculum. Curriculum designers built programs

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[1] Excerpts from The Public Schools Act, Province of Manitoba. (The Act was rewritten in 1972. Most sections bearing the authoritative tone of the above were removed.)

based on the structure of the discipline with instructions to teachers not to deviate from carefully laid plans. The concept of the teacher-proof curriculum was promoted as a means to guarantee significant improvements in student learning.[1] The intensity of curriculum production and promotion of this era produced a cadre of teachers who became aware of the need for continuous development of curriculum at the local level. The impact of these teachers as leaders in a movement toward local involvement in curriculum change is proving to be significant.

It is obvious that the school environment for the majority of students in Manitoba has become vastly different from what it was even two decades ago. Larger centralized schools which have facilities for a diversified curriculum have become common. Most students now find themselves in a much larger social orientation. Teachers have become specialists in more limited areas and are able to provide a richer learning environment.[2]

Developments within the teaching profession and in society in general have created a reaction against uniform or centrally prescribed curriculum. Armed with more extensive knowledge of the profession, teachers feel more competent about academic content and methodology. Bean and Reimer describe the teachers:

> They have the professional competence, understanding, and a broad base of knowledge of the factors basic to curriculum development. They recognize that no one else is in a better position to know the needs of the children for whom the

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[1] Bean and Reimer, op. cit., p. 3.

[2] Janzen, op. cit., p. 91.

> curriculum is being developed. They accept the fact that involvement in every stage of curriculum development results in greater commitment. The teacher who has gone through the process of sorting out philosophical issues, determining goals and defining procedures for goal achievement, will treat the program in a much more dynamic and spontaneous fashion than a person who is simply attempting to translate someone else's objectives into action.[1]

It would appear that not only is the teaching professional prepared to carry a more extensive role in curriculum development; a large segment of society expects it to do so. In a recent survey conducted in Winnipeg, parents were asked: "What are the main things you would like to see changed or improved as far as our schools are concerned?"[2] The responses were varied but it is interesting to note that 60 percent of those responding agreed that teachers should have more influence than they do now on what is taught in schools, that is, deciding on the curriculum.

In addition to pressures from teachers and parents, student demands for greater "relevance," a wider selection of courses, and a greater degree of responsiveness to student needs have increased the necessity for decentralization of curriculum development. The newly instituted student-initiated high school courses[3] are one form of response to those demands. However, the search for relevance requires hard work and dedication on the part of each teacher as well as a

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[1] Bean and Reimer, loc. cit.

[2] John Collins, "What Do Winnipeg Parents Think of Their Schools and Their Teachers?" The Manitoba Teacher 53 (January 1975).

[3] A maximum of three credits in the New High School Program (Manitoba) may be achieved through student-initiated study projects.

degree of self-direction on the part of the student. Student-initiated courses will undoubtedly involve students to a greater degree and may assist in the quest for relevance, but, as Van Til stated, the teacher must know the social realities which characterize the environment of the student and thereby relate the content to the learner, the school, and the community.[1]

Summary

In this chapter, a review of literature related to the processes of change in education, attitudes toward change, the variables of the study, and curriculum change in Manitoba were presented.

After a decade of innovation, segments of society have become vitally aware of the effects of societal change on our schools and changes in the schools themselves. Means by which school curriculum may be developed in a logical, relevant form are sought by many educators. In order to provide deeper understanding of the nature of curriculum change, factors believed to contribute to the acceleration of the processes of change were presented. These factors are: the drive for relevant education, technological change, and new knowledge of both what to teach and how to teach it.

Literature related to attitudes toward change along with research evidence pertaining to teachers' and students' perceptions of their roles in effecting curriculum reform were reviewed. Further evidence was reviewed in order to isolate the variables selected in the study; six personal and three professional characteristics

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[1]Van Til, op. cit., p. 66.

were investigated for inclusion as demographic variables for comparison purposes.

Finally, a brief review of curriculum development in Manitoba with reasons for and significance of the current trend toward decentralization was presented.

CHAPTER III

THE METHODOLOGY OF THE STUDY

The purpose of this chapter is to describe the procedures used in the collection and treatment of the data. The development of the study design, the description of the instruments used, the sources of data, the steps used in the collection of data, and the procedures used in the analysis of the data are treated in sequence.

Development of the Study Design

The initial step of the study consisted in framing two fundamental questions, namely (a) should curriculum change be made? and (b) how should curriculum change be undertaken?

In the second step each of the fundamental questions was subdivided in order to focus on a number of factors likely to be involved in the processes of curriculum change. Collectively, these questions and related sub-questions provide a framework or study design upon which the individual stimulus items were developed. The responses to these items form the record of the perceptions of school personnel regarding change in school curriculum.

The third step consisted in converting each of the sub-questions of the study design into a positive or assertive statement with which the respondent could agree or disagree. These assertions are the design statements of the study under which the stimulus items are

grouped;[1] they also serve as the dependent variables of the statistical analyses.

The Instrumentation

Two instruments, a questionnaire and an interview schedule, were considered for collection of data related to the opinions of school personnel on curriculum development. Each has features which made it preferable in this setting.

> The questionnaire technique is similar to that of the controlled interview. It is considered desirable when controlled interviews would be difficult to arrange. The format makes immediate feedback impossible but for the exact opposite reasons noted regarding the interview the questionnaire can be relatively free of subjectivity on the part of the person responsible for administration.[2]

Having considered the nature of the data to be collected, and recognizing that a large sample would be desirable, it was decided that a questionnaire[3] would be used. In order to provide open-ended input, respondents were encouraged to express opinions in spaces provided for this purpose.

Development of the Instruments

The questionnaire used to record the perceptions of instructional personnel of curriculum change was developed over a period of two years. From the two fundamental "should" and "how" questions, a

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[1]Note: A number of items were judged to provide data under two design statements. Such items are labelled R in the categories of items which follow.

[2]Arvil S. Barr et al., Educational Research and Appraisal (Chicago: J. B. Lippincott Company, 1953), pp. 65-70.

[3]The questionnaires are presented in Appendix D.

data-gathering instrument was designed. The items are statements or questions which probe the perceptions of teachers regarding curriculum change. The sections of the instrument also provide the categories into which the responses are grouped for purposes of statistical analyses.

The first draft of the questionnaire (Form A), consisting of 120 items, was completed early in 1972. After a preliminary review and critique by a number of teachers from a parochial school, it was administered to approximately fifty teachers in a summer school class. Criticism offered by the respondees along with application of a factor analytic treatment of the data served as the basis for the first major revision.

Form B which followed was reviewed item by item by an advisory panel consisting of two administrators and one curriculum consultant. They were asked to consider the clarity of each statement and if the statements reflected genuine concern of teachers. Based on the advice received at that time, the wording of a number of items was improved and the total number of items reduced to eighty. The new form (Form C), while being shorter, still contained items designed to probe the teacher's perceptions of an "ideal curriculum" as well as items dealing with the two fundamental questions.

Form C was further revised since it called upon the respondees to give their perceptions of an "ideal curriculum," which appears to be a static or fixed concept, in contrast to gathering their perceptions of change and change processes, which are dynamic concepts. In Form D the items relating to an "ideal curriculum" were removed while the

number of items which focus on the fundamental questions was increased. This form was tested extensively by use in the Souris Valley School Division in the spring of 1973. (Fifty-two teachers from a possible fifty-five responded to the questionnaire.)

The final form (Form E) consisted of eighty-six items for which the responses are to be recorded in a space provided in the booklet, plus one open-ended question for which space is provided for an expository response. This item consists of a simple question--"In your judgment are curriculum changes necessary?" Form E is essentially the same as Form D except for the addition of item 87.

The student questionnaire was developed from the final form of the teacher questionnaire. The demographic items were rewritten to provide informational categories for analysis purposes and the response items redesigned to match a student's point of view.

The Questionnaires

The questionnaires designed to gather data from instructional personnel and students each consist of three sections. These are:

1. Personal background information.
2. Perceptions of the need for curriculum change.
3. Perceptions of how curriculum change should be undertaken.

The purpose of the personal background information section is to secure data regarding the independent variables, that is, the characteristic of the sample. In the instructor's questionnaire, this section is composed of twelve items which seek information from each respondent on: sex, age, teaching experience, marital status, size of school, position in school, type of community, academic preparation for

teaching, professional preparation, in-service education, professional membership, and professional leadership experience. In the student questionnaire the items include: sex, age, grade level, grades taught in school, size of school, type of community, and plans for the future.

The items in the second section of both questionnaires probe the perceptions of school personnel on the degree of desirability of curriculum change and the related sub-questions of the study design. Each item of the section was assessed by the advisory panel and classified as positive (+) or negative (-) in terms of the response which would be anticipated from a person who favours change. That is, an item judged to be positive would elicit agreement by a respondent who favours curriculum change, and conversely, an item classified as negative would elicit disagreement by such a respondent. Thirty-two items make up this section of the instructor's questionnaire, while the student's form calls for only twenty-five responses.

In section three the items are designed to probe how curriculum change should be undertaken as perceived by instructional personnel and students. A classification of items similar to that for section two was conducted. Items classified as positive (+) were judged as those which would elicit agreement from a respondent who favours cooperative, democratic, and open forms of decision making in curriculum matters, while those judged to be negative (-) would elicit a disagreeing response from such persons. The instructor's questionnaire contains forty-one items in this section, and the student questionnaire has thirty-four.

Procedures.--In section one of the questionnaire the respondent is asked to indicate the response category which best describes his

personal characteristics. If, for any item, a respondent is unsure of the required information he is advised to make the best estimate possible without enquiry of an outside source.

In sections two and three each item is presented as a stimulus statement relating to the sub-section of the study design. The responses are recorded on a five-point scale, that is: I strongly agree, I agree, I neither agree nor disagree, I disagree, I strongly disagree. The dual categories on either side of the ambivalent or neutral perception are provided to ascertain the strength of the feeling expressed by the respondent. The extreme categories are used to evoke a more thoughtful response but are not used for weighting purposes; in the statistical treatment there is no difference between "I strongly agree" and "I agree."

The items classified as negative were scored in reverse in order to bring the perceptions of any one respondent to a consistent direction. The items reversed are:

a. teacher questionnaire	b. student questionnaire
17, 19, 21, 23, 25, 26, 27, 28, 30, 37, 42, 47, 48, 51, 55, 58, 65, 66, 67, 72, 73, 77, 79, 80, 83	8, 9, 13, 14, 20, 22, 25, 30, 31, 34, 37, 39, 42, 43, 45, 46, 47, 65

Categories of items.--Each sub-question posed in the framework was converted into an assertion or design statement under which a number of items were grouped. Agreement or disagreement with the design statement is determined by summing the agree-disagree responses to the items

related to the statement. The design statements and the related items for the teacher questionnaire are as follows:

One - 1. Design statement--The school program currently in action is not meeting the perceived needs of the total community.

13. Many teachers with whom I work believe that the current programs of study should be revised.

18. I find it extremely difficult to make the topics in our program relevant to today's society and world.

23. The program of studies currently being used in our school is regarded by most students as relevant and useful.

25. Most parents with whom I discuss school programs regard the program to be satisfactory.

27. The graduates of our school program are well prepared for courses at the universities and colleges.

31. Employers frequently say that the graduates of our schools are ill-prepared for the jobs available.

36. New developments in knowledge and new needs in society dictate that the school programs must change regularly.

One - 2. Design statement--The system is tolerant and supportive of alternatives in curriculum.

14. If a teacher in my school proposes a novel program, most colleagues would support his/her efforts.

19. When I get used to doing things one way, it is disturbing to have to change to a new method.

24. Teachers and administrators with whom I work are usually tolerant of new ways of doing things.

28. I feel hostile to those who suggest that I change the way I teach.

32. I feel that I would receive strong support from my superiors if I attempted any significant teaching changes.

One - 2. 37. Provincial programs of study are essential to ensure that students who transfer from one school to another will not be penalized.

41. Schools should be concerned more about meeting the needs of students than about a uniform program.

One - 3. Design statement--Significant curriculum change has taken place recently.

15. Revision of the program of study for Manitoba schools has been conducted on an on-going basis for many years.

20. Some of the programs currently in use in our school were adopted as complete packages from publishers without sufficient consideration of local needs.

26. Too many changes in curriculum have been attempted in our schools in the past few years.

29. Most curriculum changes of the past few years have proved to be beneficial for students.

33. Systematic revision of educational programs tends to stimulate and motivate teachers.

38. Most changes in school programs which have been implemented in the last few years have been successful.

42. The trouble with teaching is that you just get used to doing things one way and then they want you to do them differently.

One - 4. Design statement--The school system should facilitate discovery and renewal.

16. The prime function of the school program is to transmit the essentials of our culture to a new generation.

21. People who plan and make up programs of study have a lot of reckless ideas.

24. Teachers and administrators with whom I work are usually tolerant of new ways of doing things. (R)

30. The major purpose of the school program is to turn out citizens who respect law, order and traditional forms of society.

One - 4. 34. The challenge for educators is to develop schools with built-in mechanism for constant renewal.

39. Teachers should continually search for new methods and materials in an effort to motivate children to think for themselves.

42. The trouble with teaching is that you just get used to doing things one way and then they want you to do them differently. (R)

43. Pupils should be provided with opportunities for discovering new ways of doing things.

One - 5. Design statement--There are forces in society which tend to make change inevitable.

17. Changes in employment requirements have little bearing on the need for program changes in the school.

22. New course studies at universities and colleges compel schools to change their programs regularly.

31. Employers frequently say that the graduates of our schools are ill-prepared for the jobs available. (R)

35. Many changes in school programs are initiated simply because other schools are changing.

27. The graduates of our school program are well prepared for courses at the universities and colleges. (R)

36. New developments in knowledge and new needs in society dictate that the school program must change regularly. (R)

40. The "knowledge explosion" of the post-war years has made curriculum upgrading an essential part of educational planning.

44. The great movement toward curriculum review and development of the past few years was a result of a combination of social and economic forces rather than the result of a planned attempt to improve education.

One - 6. Design statement--Curriculum changes are necessary.

87. In your opinion should curriculum change be made?

Two - 1. Design statement--Curriculum uniformity need not be maintained across the province.

45. Teachers in a school division should develop programs of study for use in the schools in the division.

53. Groups of teachers and pupils within a school should have freedom to alter the program of studies to meet the needs of pupils.

60. All classes in the same grade in a school need not have the same program of studies.

67. It is preferable that one text be authorized for each subject and grade for all schools in Manitoba.

77. Universities and colleges should insist on a uniform program of studies so that they will know the standard of achievement of high school graduates.

Two - 2. Design statement--Local school people (teachers, administrators, pupils, and parents) should initiate change.

46. The classroom teacher should be the judge of what is best for his/her class.

47. I believe it is the responsibility of the curriculum planners of the school division to investigate innovative ideas and to choose those to be used in our division.

54. Curriculum development committees should include a few parents.

61. Publishers should listen to teacher-consultant teams and produce materials to meet classroom needs.

68. It is the duty of each teacher to try or test new methods of presentation in the hope of improving teaching and learning.

78. The curriculum authority of the Department of Education should be limited to matters of course objectives and minimum content.

80. The school administration is usually better qualified than the teacher to judge what is best in developing curricula.

Two - 3. Design statement--New programs should be directed by local school personnel.

55. New or innovative programs usually work best when they are directed by the Curriculum Branch of the Department of Education.

79. If a school decided to try an innovative program of studies, a curriculum consultant or specialist should be employed to direct it.

81. Most new programs that I know about have worked best when directed by school personnel, i.e., teachers and principals.

Two - 4. Design statement--Teachers, pupils, and parents should be involved in curriculum development.

54. Curriculum development committees should include a few parents. (R)

62. Local or school curriculum development committees should include student representatives selected from the grades involved.

64. Most teachers in my school are willing to contribute their time to develop new methods of teaching. (R)

68. It is the duty of each teacher to try or test new methods of presentation in the hope of improving teaching and learning. (R)

69. Student opinion should be considered through reaction to pilot studies before a new program or text is authorized.

70. Local and provincial teachers' associations should support curriculum development by funding pilot projects proposed by teachers. (R)

81. Most new programs that I know about have worked best when directed by school personnel, i.e., teachers and principal. (R)

82. Parents are likely to support a program in which they have had a share in planning. (R)

Two - 5. Design statement--Local school personnel (teachers, pupils, and parents) should be responsible for evaluation.

46. The classroom teacher should be the judge of what is best for his/her class. (R)

48. Every proposal for revision of a program of studies should be evaluated by a provincial curriculum committee before it is tried in a classroom.

56. Innovative curriculum projects should be evaluated by teachers, pupils and parents before they are implemented as part of the regular program.

63. School personnel (teachers and pupils) should have freedom to try a new program on a pilot basis without having it evaluated by authorities outside the school.

80. The school administration is usually better qualified than the teacher to judge what is best in developing curricula. (R)

Two - 6. Design statement--Curriculum innovation should be supported by parents, students, local boards, and governments.

49. On-going curriculum research should be supported by each school division.

57. The federal government through summer employment programs should involve teachers and students in curriculum-building programs.

64. Most teachers in my school are willing to contribute their time to develop new methods of teaching.

70. Local and provincial teachers' associations should support curriculum development by funding pilot projects proposed by teachers.

71. Comprehensive curriculum libraries should be developed and maintained to enhance the availability of current resource materials to prospective and in-service teachers.

82. Parents are likely to support a program in which they have had a share in planning.

Two - 7. Design statement--Student needs should be the major basis for curriculum decision making.

50. The prime basis for decision making regarding school programs should be the needs of the student involved.

51. Teachers should adjust their planning and teaching to the administration's view of good educational practice.

53. Groups of teachers and pupils within a school should have freedom to alter the program of studies to meet the needs of pupils. (R)

56. Innovative curriculum projects should be evaluated by teachers, pupils and parents before they are implemented as part of the regular program. (R)

58. In time of crisis in my classroom I frequently rely on techniques similar to those used by my teacher when I was in school.

65. "How" students learn is not as important as "what" they learn.

72. In the process of decision making on school programs, administrative convenience should be a major factor.

83. Subject matter (content) should be the prime consideration in developing school programs.

84. Participation by teachers and the community should be ensured in planning school programs.

Two - 8. Design statement--Democratic, cooperative procedures of decision making should be employed in curriculum development.

51. Teachers should adjust their planning and teaching to the administration's view of good educational practice.

55. New or innovative programs usually work best when they are directed by the Curriculum Branch of the Department of Education. (R)

59. Teachers should be included by principals in planning and policy-making decisions which may affect school operation.

Two - 8. 66. Prescription of goals and course content by an authority outside the school should ensure that the right things are taught.

71. Comprehensive curriculum libraries should be developed and maintained to enhance the availability of current resource materials to prospective and in-service teachers. (R)

73. Changes in program usually work best when they are authorized by the Curriculum Branch for implementation by the schools.

74. In-service meetings and workshops have produced significant changes in school programs over the past ten years.

79. If a school decides to try an innovative program of studies, a curriculum consultant or specialist should be employed to direct it. (R)

85. Each school should be required to report on changes in the educational program to the division board and to the public at least once per year.

86. Since the classroom teacher must be the instructional leader, curriculum decision making must be teacher oriented or even teacher dominated.

Two - 9. Design statement--The change agent should be a consultant who works close to the classroom.

47. I believe it is the responsibility of the curriculum planners of the school division to investigate innovative ideas and to choose those to be used in our division. (R)

52. Some of the novel methods I use in my classes would be effective for other teachers.

75. The most effective manner in which a curriculum consultant can effect change is to make new material available and let teachers devise means by which these materials may be used.

Two - 10. Design statement--Curriculum change requires development of skills in design, diffusion, experimentation, and evaluation.

47. I believe it is the responsibility of the curriculum planners of the school division to investigate innovative ideas and to choose those to be used in our division. (R)

57. The federal government through summer employment programs should involve teachers and students in curriculum-building programs. (R)

69. Student opinion should be considered through reaction to pilot studies before a new program or text is authorized. (R)

71. Comprehensive curriculum libraries should be developed and maintained to enhance the availability of current resource materials to prospective and in-service teachers. (R)

75. The most effective manner in which a curriculum consultant can effect change is to make new material available and let teachers devise means by which these materials may be used. (R)

76. Curriculum consultants and change agents should teach part-time.

81. Most new programs that I know about have worked best when directed by school personnel, i.e., teachers and principal. (R)

Sources of Data

The School Divisions and Administrative Clearance

To obtain data, secondary school personnel and provincial supervisory staff in Manitoba school divisions were selected on the basis of the following criteria:

1. The school division is the body responsible for public education, grades VII through XII.

2. The participating schools are judged to be representative of one of four distinct socio-economic regions of Manitoba. The regions are classified as: rural, rural urban, northern, and urban.

All school divisions which met criterion one were listed. In consultation with members of the advisory panel of three school administrators, each division was considered in light of criterion two and placed in one of the four categories. From those divisions representing each of the four socio-economic regions of Manitoba at least one school division was selected at random and was invited to participate in the study.

The superintendent of each of the selected school divisions was contacted to explain the nature and purpose of the study and to solicit his support. At this point it was noted that the number of eligible teachers in five of the divisions was large in contrast to the other divisions. In order to keep the representation relatively close to the school populations in the four socio-economic regions, a reduction in the number of respondents in the large divisions was necessary. This reduction was effected by making a random selection of the participating schools from those divisions.

Following clearance with the superintendent's office, principals of the secondary schools were approached to obtain:

1. The principal's willingness in permitting the teaching staff and selected students to participate in the project.
2. The principal's assistance in carrying out the study. This assistance involved collecting and returning

questionnaires from the teachers, selecting representative students from all grades and programs in the school, as well as attempting to obtain maximum voluntary participation of all school personnel.

3. Essential statistical information related to the school.

It should be pointed out that in the large divisions, any reluctance to participate on the part of a principal resulted in selection of an alternate school. In one case only, an alternative selection had to be made.

The Teachers

The decision to use the secondary teachers as a unit of analysis was governed by the nature of the basic questions being asked and by the sub-problems generated from these questions. Since the perceptions of school personnel whose functions are different, that is, single-subject teachers, multi-subject teachers, supervisors, and administrators, were sought, it became apparent that the secondary schools would provide the best cross-section.

Thus, on the basis of these conditions, an attempt was made to obtain data from a maximum number of secondary personnel from the participating schools.

The Students

The students responding to the questionnaire were selected on the basis of the following criteria:

1. The number of students from any school should be approximately equal to the number of teachers taking part in the project.

2. The students selected from each school should represent a cross-section of the school population in the various grades and programs offered by the school.
3. An approximately equal representation of male and female students is desirable.

In consultation with the principal and/or the school counsellors, the writer arranged to obtain data from a suitable number of students in all schools participating in the project.

The Sample

The sample used in the study consisted of 438 classroom teacher and administrative personnel and 477 students, and was representative of ten school divisions in the Province of Manitoba. Five of the school divisions are located in urban and suburban areas of the City of Winnipeg, while the remainder are located across the rural and northern areas of the province. In total, twenty-eight secondary schools were involved.

To provide the reader with more detailed insight into the personal characteristics of the teachers and pupils, Tables 3.1-3.6 are included.

Collection and Analysis of Data

The data were first transferred by key punch to I.B.M. cards. The reading of the cards, the presentation of student and teacher surveys, and the statistical tests were performed by the computer at the University of Manitoba.

Table 3.1.--Characteristics of sample (instructional personnel): age, sex, and marital status.

Characteristic	Frequency Observed	Percentage Observed	Cumulative Percentage
Sex			
Male	302	68.9	68.9
Female	136	31.1	100.0
Total	438	100.0	100.0
Age			
20 - 24	41	9.4	9.4
25 - 32	196	44.7	54.1
33 - 39	97	22.1	76.3
40 - 45	38	8.7	84.9
46 - 65	66	15.1	100.0
Total	438	100.0	100.0
Marital Status			
Unmarried	89	20.3	20.3
Married--spouse employed	184	42.0	62.3
Married--spouse not employed	157	35.8	98.2
Divorced or separated	8	1.8	100.0
Total	438	100.0	100.0
Teaching Experience			
1 year	44	10.0	10.0
2 - 4	88	20.1	30.1
5 - 9	125	28.5	58.7
10 - 14	83	18.9	77.6
15 or more	98	22.4	100.0
Total	438	100.0	100.0

Table 3.2.--Characteristics of sample (instructional personnel): school size, role in school, and socio-geographical location of school.

Characteristic	Frequency Observed	Percentage Observed	Cumulative Percentage
Teachers by School Size			
1 - 99	11	2.5	2.5
100 - 249	40	9.1	11.6
250 - 499	96	21.9	33.6
500 - 999	213	48.6	82.2
1000 - 2000	78	17.8	100.0
Total	438	100.0	100.0
Role in School			
Single-subject teacher	134	30.7	30.7
Teacher--several subjects	177	40.6	71.3
Department head	50	11.5	82.8
Administrator	47	10.8	93.6
Consultant	10	2.3	95.9
Professional development chairman	20	4.6	100.0
Total	438	100.0	100.0
Teachers by Type of Community			
Rural[a]	101	23.1	23.1
Rural-urban[b]	57	13.0	36.1
Northern	19	4.3	40.4
Urban	261	59.6	100.0
Total	438	100.0	100.0

[a]Rural communities including towns of 2500 persons or less.

[b]Towns of 2500 or more but less than 10,000 persons, plus the surrounding rural areas.

Table 3.3.--Characteristics of sample (instructional personnel): academic preparation, professional preparation, and continuing education experience.

Characteristic	Frequency Observed	Percentage Observed	Cumulative Percentage
Academic Preparation			
College Courses in Teaching Area			
Less than 6 cr. hr.	23	5.3	5.3
6 cr. hr.	18	4.1	9.4
7 - 18 cr. hr.	62	14.2	23.6
19 - 30 cr. hr.	84	19.2	42.8
31 - 48 cr. hr.	211	48.2	91.0
Other[a]	40	9.0	100.0
Total	438	100.0	100.0
Professional Preparation			
Less than 6 cr. hr.	20	4.6	5.0
6 cr. hr.	81	18.5	25.1
12 cr. hr.	126	28.8	51.9
18 cr. hr.	69	15.8	67.7
24 cr. hr. or more	103	23.5	91.2
Other[a]	39	8.8	100.0
Total	438	100.0	100.0
Continuing Education Workshop			
None	121	27.6	27.6
One	79	18.0	45.6
Two	74	16.9	62.5
Three	53	12.1	74.6
Four or more	74	16.9	91.5
Other[a]	37	8.5	100.0
Total	438	100.0	100.0

[a]Teachers who have completed professional and academic preparation at institutions using other reporting systems.

Table 3.4.--Characteristics of sample (instructional personnel): professional association membership and experience in directing curriculum development workshops.

Characteristic	Frequency Observed	Percentage Observed	Cumulative Percentage
Professional Membership			
None	39	8.9	8.9
One	149	34.0	42.9
Two	140	32.0	74.9
Three	52	11.9	86.8
Four or more	22	5.0	100.0
Total	438	100.0	100.0
Workshops Directed			
None	253	57.8	57.8
In-service workshop	92	21.0	78.8
Division workshop	10	2.3	81.1
Department of Education in-service	9	2.1	83.2
Combination of above	37	8.4	91.6
No response	37	8.4	100.0
Total	438	100.0	100.0

Table 3.5.--Characteristics of sample (students): sex, age, grade level, and grades taught in school.

Characteristic	Frequency Observed	Percentage Frequency	Cumulative Percentage
Sex			
Male	216	45.3	45.3
Female	261	54.7	100.0
Total	477	100.0	100.0
Age			
13 - 15	170	35.6	35.6
16 - 18	290	60.8	96.4
19 - 20	14	2.9	99.3
21 - 25	3	.7	100.0
Grade Level			
Seven-eight	53	11.1	11.1
Nine	97	20.3	31.4
Ten	77	16.1	47.5
Eleven	145	30.4	77.9
Twelve	105	22.1	100.0
Total	477	100.0	100.0
Grades Taught in School			
One to twelve	47	9.9	9.9
Seven to twelve	84	17.6	27.5
Nine to twelve	170	35.6	63.2
Ten to twelve	123	25.8	89.1
Seven to nine	52	10.9	100.0

Table 3.6.--Characteristics of sample (students): size of school, socio-geographical location of school, and students' plans for future.

Characteristic	Frequency Observed	Percentage Observed	Cumulative Percentage
Students by Size of School--Number of Classrooms			
4 - 6	20	4.2	4.2
7 - 10	45	9.4	13.6
11 - 15	36	7.5	21.1
16 or more	276	78.9	100.0
Total	477	100.0	100.0
Students by Type of Community			
Rural	97	20.3	20.3
Rural-urban	59	12.4	32.7
Northern	18	3.8	36.5
Urban	303	63.5	100.0
Total	477	100.0	100.0
Students' Plans for the Future--After Graduation			
Take a job	87	18.2	18.2
Attend a community college	49	10.3	28.5
Enroll at university	217	45.5	74.0
Other training	23	4.8	78.8
Not known at this time	101	21.2	100.0
Total	477	100.0	100.0

Cumulative responses to the design statements and the related stimulus items from sub-groups of teachers and pupils classified on the basis of demographic, situational, and professional variables were compared by use of the chi-square statistic. Significant differences in responses were noted and in cases of significance involving more than two sub-groups a one-way analysis of variance was performed. Finally, the "a priori orthogonal multiple F ratio" test was applied to isolate the sub-groups for which the responses produced the differences.

For all the statistical tests the 5 percent (.05) level of significance was used in the study.[1]

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[1]The .05 level of significance was selected after discussion with Dr. M. McSweeney of the Department of Educational Psychology. It is possible that in a study of this nature a more liberal level might be more appropriate.

CHAPTER IV

PRESENTATION AND ANALYSES OF DATA

The purpose of this chapter is to present the data collected along with a series of analyses designed to test the hypotheses of the study. In keeping with the three sections of the problem, this chapter is divided into: a survey of the perceptions of school personnel of the need for curriculum change and means by which it may be achieved; a comparison of perceptions held by three sub-groups, namely, supervisors, teachers, and pupils; and an analysis of the relationship between the perceptions of instructional personnel and demographic variables.

Additional data are reported in Appendices B and C. These data are of interest in the study and some of the observations of the study are based on information presented therein; however, all information pertinent to the stated hypotheses is included in this chapter.

The Variables of the Study

The Dependent Variables

Two dependent variables are used in the study. The first is a measure of the perceptions of school personnel of the need for curriculum change; the second is similar in nature but focuses on perceptions of means by which change may be undertaken.

The need-for-curriculum-change variable is presented as a series of stimulus items which are grouped around six sub-questions related to the first fundamental question, namely, "Should curriculum change be made?" Since summation of responses into a numerical total for Variable One tends to conceal important reactions, the responses to the sub-questions are presented along with the responses to the fundamental question. This allows for analysis of each sub-question, a procedure which provides additional insight into the perceived needs for curriculum change.

The how-change-should-be-undertaken variable is presented in the same manner as the need-for-curriculum-change variable. In this case ten sub-questions related to the second fundamental question, namely, "How should curriculum change be undertaken?" are presented. Analyses of the responses to each sub-question are also included.

The Independent Variables

Personal and professional characteristics of the respondents serve as the independent variables of the study. An initial review of literature revealed a number of relationships between demographic information and attitude toward change; this information served as a guide for selection of those characteristics which would be used for grouping respondents for statistical comparisons.

The demographic characteristics of the sample, which are presented in Tables 3.1 through 3.6, are in display form designed for ease of understanding. For each characteristic the total frequency observed and the percentage observed, along with the cumulative frequency of observations within the total sample are given. In order to

conduct the statistical analyses proposed it is necessary to arrange for fewer categories containing larger numbers of observations under each characteristic. Therefore, each demographic characteristic is regrouped into two categories. The new categories are not arranged to provide equality; the division is done in a manner considered to provide the most meaningful sub-categories for analyses, that is, into groups which may express different perceptions. The regrouped variables are presented in Tables 4.1 through 4.5.

The Perceptions of School Personnel

The Need for Curriculum Change

The perceptions of instructional personnel and of students of the need for changes in school curriculum are presented as a mean response on a five-point scale. The scale extends across the range of possible responses, that is, from agree strongly through the neither agree nor disagree point, to strongly disagree. A recorded mean response of 2.500 or less implies that the respondent agrees with the stimulus item, while a mean response of 3.500 or more implies that the respondent disagrees. To indicate the variation around the mean response, the standard deviation is also provided for each mean. A percentage interpretation is also listed for each design statement.

The responses of instructional personnel and of students are presented in Table 4.6. Mean responses of less than 2.500 or agreement responses are marked with an asterisk.

For the instructional personnel only, the data found in Table 4.6 are further analyzed and displayed in Table 4.7. In this

Table 4.1.--Characteristics of sample (instructional personnel) revised: sex, age, marital status, teaching experience, and school size.

Characteristic	Frequency Observed	Percentage Observed
Sex		
Male	302	68.9
Female	136	31.1
Total	438	100.0
Age		
Under 40 years	334	76.2
40 years and over	104	33.8
Total	438	100.0
Marital Status		
Single	89	20.3
Married	349	79.7
Total	438	100.0
Teaching Experience		
Less than 10 years	257	58.7
10 years or more	196	41.3
Total	438	100.0
Teachers by School Size		
Less than 500 students	147	33.6
500 students or more	291	66.4
Total	438	100.0

Table 4.2.--Characteristics of sample (instructional personnel) revised: role in school, type of community, academic preparation, professional preparation, and continuing education.

Characteristic	Frequency Observed	Percentage Observed
Role in School		
Single-subject teacher	134	30.7
Others	304	69.3
Total	438	100.0
Type of Community		
Non-urban	177	40.4
Urban	261	59.6
Total	438	100.0
Academic Preparation		
6 credit hours or less	101	25.1
7 credit hours or more	337	74.9
Total	438	100.0
Continuing Education Workshops		
None or one	200	45.6
Two or more	238	54.5
Total	438	100.0

Table 4.3.--Characteristics of sample (instructional personnel) revised: professional membership and workshops directed.

Characteristic	Frequency Observed	Percentage Observed
Professional Membership		
None or one	188	42.9
Two or more	250	57.1
Total	438	100.0
Workshops Directed		
None	253	57.8
One or more	185	42.4
Total	438	100.0

Table 4.4.--Characteristics of sample (students) revised: sex and age.

Characteristic	Frequency Observed	Percentage Observed
Sex		
Male	215	45.3
Female	261	54.7
Total	477	100.0
Age		
Less than 16 years	170	35.6
16 and over	307	64.6
Total	477	100.0

Table 4.5.--Characteristics of sample (students) revised: grade level, grades taught in school, size of school, type of community, and plans for future.

Characteristic	Frequency Observed	Percentage Observed
Grade Level		
Grade X or below	227	47.6
Grade XI or XII	249	52.4
Total	477	100.0
Grades Taught in School		
Seven through twelve	131	27.5
Departmentalized	345	72.5
Total	477	100.0
Students by Size of School		
15 classrooms or less	101	21.1
16 classrooms or more	276	78.9
Total	477	100.0
Type of Community		
Non-urban	174	36.5
Urban	303	73.5
Total	477	100.0
Plans for Future		
College	266	55.8
Other	211	44.2
Total	477	100.0

Table 4.6.--Perceptions of the need for curriculum change as expressed by instructional personnel (teachers) and students.

Design Statement	Group	Mean Response	Standard Deviation	Percentage Agree	Percentage Disagree
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	2.897	0.455	19.4	8.0
	Students	3.159	0.604	11.1	26.6
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	2.458*	0.438	56.4	2.5
	Students	2.759	0.545	28.9	5.2
One 3 (History) Significant curriculum change has taken place recently.	Teachers	2.640	0.437	39.4	2.7
	Students	2.706	0.610	36.5	7.3
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	2.275*	0.365	79.9	0.5
	Students	2.226*	0.497	75.5	0.8
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum	Teachers	2.467*	0.350	62.9	0.2
	Students	2.656	0.600	38.2	5.2
One 6 Curriculum changes are necessary.	Teachers	1.018*	0.224	95.0	3.4
	Students	1.216*	0.412	78.4	21.6

*Group mean of 2.500 or less on scale of 1-5 implies agreement with the design statement.

Table 4.7.--Group means of perceptions of need for curriculum change of sub-groups of instructional personnel.

Design Variable		Mean of Observations					
		Teachers		Dept. Head	Administrator	Consultant	Prof. Development
		Single Subject	Multi-Subject				
		n=134	n=177	n=50	n=47	n=8	n=20
One	1	2.918	2.879	2.911	2.915	3.089	2.743
	2	2.491*	2.508	2.337*	2.322*	2.518	2.450*
	3	2.639	2.676	2.666	2.477*	2.857	2.593
	4	2.246*	2.333*	2.272*	2.160*	2.156*	2.319*
	5	2.469*	2.480*	2.427*	2.497*	2.484*	2.337*
	6	1.030*	1.023*	1.000*	1.000*	1.000*	1.000*

*Group mean of 2.500 or less on scale of 1-5 implies agreement with the design statement.

table the mean responses to each design statement for six categories of personnel are presented.

How Should Curriculum Change Be Undertaken?

The responses of school personnel to the issue of how curriculum change should be undertaken are presented in a manner similar to the presentation of the need-for-change data. For each of ten design statements the mean response for instructional personnel is given (Two 1 through Two 10) along with the standard deviation and percentage interpretations in Table 4.8. For instructional personnel only, the data presented in Table 4.8 are further analyzed and displayed in

Table 4.8.--Perceptions of how curriculum change should be made as expressed by instructional personnel (teachers) and students.

Design Statement	Group	Mean Response	Standard Deviation	Percentage Agree	Percentage Disagree
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province	Teachers	2.244*	0.590	71.2	3.2
	Students	2.874	0.684	26.0	15.3
Two 2 (Initiation) Local school people (teachers, administrators, pupils, and parents) should initiate change.	Teachers	2.317*	0.326	71.2	0.0
	Students	2.409*	0.634	56.6	2.7
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	2.400*	0.522	56.2	2.7
	Students	2.845	0.781	32.7	16.8
Two 4 (Involvement) Teachers, pupils, and parents should be involved in curriculum renewal.	Teachers	2.231*	0.413	71.7	0.2
	Students	1.948*	0.695	82.4	1.7
Two 5 (Evaluation) Local school personnel (teachers, pupils, and parents) should be responsible for evaluation.	Teachers	2.436*	0.437	53.6	1.8
	Students	2.671	0.596	36.7	5.2

Table 4.8.--Continued.

Design Statement	Group	Mean Response	Standard Deviation	Percentage Agree	Percentage Disagree
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards, and governments.	Teachers	2.233*	0.421	82.9	0.5
	Students	2.396*	0.622	59.7	3.4
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	2.347*	0.396	65.8	0.0
	Students	2.621	0.598	39.6	3.6
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	2.371*	0.348	56.4	0.0
	Students	2.744	0.570	29.8	5.5
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom	Teachers	2.584	0.411	29.9	2.5
	Students	2.767	0.509	26.2	3.1
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment, and evaluation.	Teachers	2.280*	0.336	73.7	0.2
	Students	2.811	0.819	35.0	16.5

*Group mean of 2.500 or less on scale of 1-5 implies agreement with the design statement.

Table 4.9. In this table the mean responses for six categories of personnel are given.

Table 4.9.--Group means of perceptions of how curriculum change should be made as expressed by sub-groups of instructional personnel.

Design Variable		Mean of Observations					
		Teachers		Dept. Head	Administrator	Consultant	Prof. Development
		Single Subject	Multi-Subject				
		n=134	n=177	n=50	n=47	n=8	n=20
Two	1	2.216*	2.354*	2.256*	1.928*	2.250*	2.230*
	2	2.291*	2.342*	2.280*	2.356*	2.339*	2.293*
	3	2.403*	2.458*	2.320*	2.298*	2.042*	2.450*
	4	2.250*	2.278*	2.190*	2.053*	2.047*	2.313*
	5	2.385*	2.495*	2.376*	2.400*	2.425*	2.490*
	6	2.219*	2.282*	2.197*	2.106*	2.312*	2.300*
	7	2.333*	2.396*	2.267*	2.272*	2.472*	2.361*
	8	2.366*	2.426*	2.272*	2.319*	2.262*	2.345*
	9	2.528	2.620	2.535	2.644	2.750	2.575
	10	2.241*	2.328*	2.211*	2.271*	2.464*	2.307*

Note: This table provides the mean response of each sub-group of instructional personnel for each design statement.

*Group mean of 2.500 or less on scale of 1-5 implies agreement with the design statement.

Statistical Analyses of Data

Three major hypotheses, each followed by a number of related hypotheses, are tested by statistical treatment of the data in this study. A null form for each of the major hypotheses is stated along with the direct or positive form, and suitable statistical tests applied to the null form.

Rejection of a null hypothesis involving two or more groups of respondents is indicated by a chi-square value or a F ratio larger than the maximum acceptable at the .05 level of error. This is indicated in the tables of this study by listing the calculated X^2 or F ratio followed by $p < .05$. This means that the probability of the observed differences between the groups in question may occur due to chance alone less than 5 percent of the time.

For the related hypotheses, similar statistical tests are conducted but the null form is not stated. Tests which result in chi-square values or F ratios for which $p > .05$ imply that the hypothesis is accepted; that is, the perceptions of the groups are in harmony or the groups agree. Conversely, chi-square values or F ratios for which $p < .05$ imply that the hypothesis is rejected and therefore the perceptions of the groups are different.

Hypothesis I: Instructional personnel and students agree on the degree of desirability of curriculum change.

Null form: There is no significant difference between the perceptions of instructional personnel and the perceptions of students with respect to the desirability of curriculum change.

It is hypothesized that there is a direct relationship between the perceptions of those who are responsible for instruction in schools and the perceptions of those receiving instruction with regard to the need for curriculum change; and that any differences which may exist are statistically non-significant. As the measure of perceptions of personnel is achieved by a summation of responses to five distinct design statements, each of which forms a basis for a sub-hypothesis, it is appropriate that the statistical analysis be provided for the test of the main hypothesis (Table 4.10A) and that similar analyses be displayed for the sub-hypotheses (Table 4.10B).

Table 4.10A.--An analysis of summation of perceptions of need for curriculum change as expressed by instructional personnel and students.

Group	Responses			Statistics
	Agree	Neither	Disagree	
Teachers	1016	1113	61	$X^2 = 72.7473$
				df = 2
Students	907	1262	216	$P < .05$

Findings: In Table 4.10 an analysis of responses with respect to the desirability of curriculum change is presented. The statistical test ($X^2 = 72.7473$, d.f. = 9, $P < .05$) indicates a significant difference exists between the perceptions of instructional personnel and the perceptions of students. The need for curriculum change is perceived to be more imminent by teachers and supervisors than it is by students.

Table 4.10B.--An analysis of the perceptions of the need for curriculum change as expressed by instructional personnel (teachers) and students.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	85	318	35	X^2 = 58.82883
	Students	53	297	127	sig.= 0.0000
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	247	180	11	X^2 = 71.11922
	Students	138	314	25	sig.= 0.0000
One 3 (History) Significant curriculum change has taken place recently.	Teachers	172	254	12	X^2 = 9.99822
	Students	174	268	35	sig.= 0.0067
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	297	139	2	X^2 = 7.74208
	Students	360	113	4	sig.= 0.0208
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Teachers	215	222	1	X^2 = 27.96834
	Students	182	270	25	sig.= 0.0000
One 6 Curriculum changes are necessary.	Teachers	416	7	15	X^2 = 73.33095
	Students	374	0	103	sig.= 0.0000

This information is presented graphically in Figure 1, where it will be noted that the mean for the teacher responses lies slightly to the left of the students' mean; that is, the teacher scores tend to cluster closer to the agree part of the scale.

Analyses of the sub-hypotheses, displayed in Table 4.10B, indicate that significant differences in perceptions exist between teachers and students for all design statements except One 4--"The school system should facilitate discovery and renewal." For this hypothesis no difference in response was found. For the remaining design statements and their attendant hypotheses the teacher responses showed curriculum change to be more desirable than did the student responses.

Hypothesis IA: Department heads, school principals, subject area consultants, and professional development chairmen agree on the degree of desirability of curriculum change.

Hypothesis I seeks to determine if the perceptions of instructional personnel and those of students are congruent. Hypothesis IA attempts to ascertain whether or not differences in perceptions exist within supervisory sub-groups of instructional personnel. As four groups are to be compared, the analysis of variance statistical test was used.

Findings: The responses of the non-teaching personnel, that is, department heads, principals, consultants, and professional development chairmen, were analyzed by means of an analysis of variance procedure. The details of this analysis are presented in Appendix B, Tables 6.1A and 6.1B.

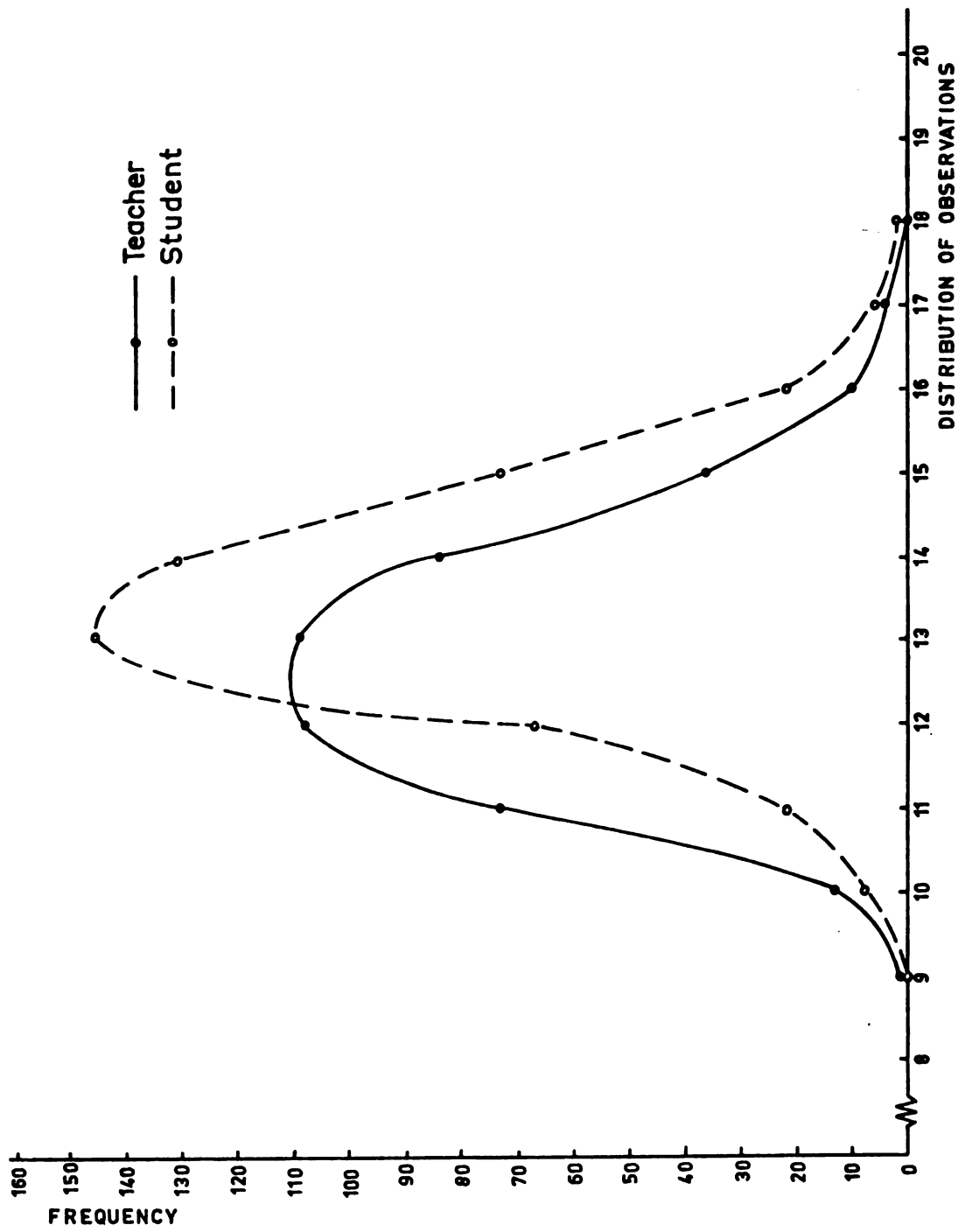

Figure 1.--Distribution of perceptions--need for curriculum change.

An F ratio of .0968 for the analysis of variance gives an F probability of 0.412 which exceeds the 0.05 level. This indicates that no significant difference exists among the perceptions of department heads, principals, subject-area consultants, and professional development chairmen, with regard to the need for curriculum change.

Hypothesis IB: Teachers who specialize in one subject only and teachers who instruct several subjects agree on the degree of desirability of curriculum change.

The large group of classroom teachers who make up the 75 percent of the sample of instructional personnel are divided into two groups: those who teach only one subject and those who teach several subjects. It is hypothesized that the perceptions of the need for curriculum change as expressed by these two groups of teachers are similar.

Findings: The responses of the classroom teachers to the need-for-change variable were analyzed by an analysis of variance procedure. This analysis is presented in Appendix B, Tables 6.2A and 6.2B.

The F ratio of 0.760 from the analysis of variance gives a probability of 0.388 which exceeds the 0.05 level; therefore it is concluded that no differences exist between the perceptions of single-subject teachers and multi-subject teachers with regard to the need for curriculum change.

Hypothesis IC: Instructional personnel from each of four types of communities and students of these communities agree on the degree of desirability of curriculum change.

In the presentation of Hypothesis I, agreement between the perceptions of instructional personnel and the perceptions of students of

the desirability of curriculum change is assumed; however, rejection of this hypothesis on the basis of statistical evidence implies that such agreement does not, in fact, exist. In order to ascertain whether or not the implied difference in perceptions of instructional personnel and students was evident in various types of communities, similar statistical tests were applied to the data generated in each of four types of community from which the sample was drawn. The data and the tests indigenous to each type of community are presented in Tables 4.11A, 4.11B, 4.11C, and 4.11D. A summary of the analyses appears in Table 4.11E.[1]

Findings: The analyses presented in Tables 4.11A through 4.11E reveal marked contrasts in the differences in perceptions of need for change between teachers and students from four types of communities. In rural-urban communities there appears to be a high degree of congruence between the perceptions of students and teachers, while in urban communities marked differences are noted on nearly all issues presented.

In rural communities teachers perceive the school system not to be meeting the needs, while students believe it to be moderately satisfactory; at the same time the teachers believe the community to be tolerant of change, while students do not see this to be true. Rural teachers do not perceive the schools' role to be related to discovery and renewal, but the rural students express preference for programs which stress these issues.

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[1]The response format for design statement One 6 provided for agree or disagree only; therefore, in Tables 4.11A, 4.11B, 4.11C, and 4.11D, the neither category is recorded as zero.

Table 4.11A.--An analysis of perceptions of the need for curriculum change as expressed by teachers and students from rural communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	25	69	7	X^2 = 16.10789
	Students	9	65	23	sig.= 0.0003
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	56	42	3	X^2 = 13.44506
	Students	29	65	3	sig.= 0.0012
One 3 (History) Significant curriculum change has taken place recently.	Teachers	45	55	1	X^2 = 0.97715
	Students	48	47	2	sig.= 0.6135
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	62	39	0	X^2 = 13.55126
	Students	83	14	0	sig.= 0.0002
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Teachers	49	52	0	X^2 = 5.83168
	Students	40	52	5	sig.= 0.0542
One 6 Curriculum changes are necessary.	Teachers	96	0	5	X^2 = 3.93485
	Students	87	0	10	sig.= 0.1398

Table 4.11B.--An analysis of perceptions of the need for curriculum change as expressed by teachers and students from rural-urban communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	5	48	4	X^2 = 3.27125
	Students	7	42	10	sig.= 0.1948
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	19	36	2	X^2 = 0.63337
	Students	16	40	3	sig.= 0.7286
One 3 (History) Significant curriculum change has taken place recently.	Teachers	19	33	5	X^2 = 1.92442
	Students	13	39	7	sig.= 0.3820
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	31	26	0	X^2 = 1.20935
	Students	39	20	0	sig.= 0.2715
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Teachers	31	25	1	X^2 = 9.21703
	Students	16	40	3	sig.= 0.0100
One 6 Curriculum changes are necessary.	Teachers	51	0	6	X^2 = 5.60534
	Students	45	0	14	sig.= 0.0606

Table 4.11C.--An analysis of perceptions of the need for curriculum change as expressed by teachers and students from northern communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	9	8	1	X^2 = 4.64857
	Students	4	9	5	sig.= 0.0979
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	13	5	0	X^2 = 6.24561
	Students	6	10	2	sig.= 0.0440
One 3 (History) Significant curriculum change has taken place recently.	Teachers	5	12	1	X^2 = 0.44444
	Students	4	12	2	sig.= 0.8007
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	13	5	0	X^2 = 0.13846
	Students	13	5	0	sig.= 0.7098
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Teachers	11	7	0	X^2 = 2.8125
	Students	5	13	0	sig.= 0.0935
One 6 Curriculum changes are necessary.	Teachers	18	0	0	X^2 = 5.00000
	Students	12	0	6	sig.= 0.0254

Table 4.11D.--An analysis of perceptions of the need for curriculum change as expressed by teachers and students from urban communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Teachers	46	193	22	X^2 = 40.26144
	Students	33	180	89	sig.= 0.0000
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Teachers	159	96	6	X^2 = 59.04912
	Students	87	198	17	sig.= 0.0000
One 3 (History) Significant curriculum change has taken place recently.	Teachers	103	153	5	X^2 = 10.48292
	Students	109	169	24	sig.= 0.0053
One 4 (Role of School) The school system should facilitate discovery and renewal.	Teachers	191	68	2	X^2 = 0.64042
	Students	225	73	4	sig.= 0.7260
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Teachers	124	137	0	X^2 = 16.56068
	Students	121	164	17	sig.= 0.0003
One 6 Curriculum changes are necessary.	Teachers	251	5	5	X^2 = 61.55615
	Students	230	0	72	sig.= 0.0000

Table 4.11E.--Summary of levels of significance of differences of perceptions of the need for curriculum change as expressed by teachers and students from four types of communities.

Design Statement	Rural	Rural-Urban	Northern	Urban
One 1	0.0003*	0.1948	0.0979	0.0000*
2	0.0012*	0.7286	0.0440*	0.0000*
3	0.6135	0.3820	0.8007	0.0053*
4	0.0002*	0.2715	0.7098	0.7260
5	0.0542	0.0100*	0.0935	0.0003*
6	0.1398	0.0606	0.0254*	0.0000*

*Significant at the .05 level.

For rural-urban communities the only design statement which produced a significant difference in response from teachers and students was: "There are forces in society which are pressing for changes in school curriculum." On this issue teachers expressed a high level of agreement, while the students did not perceive this to be true.

In northern communities the students perceive the school system to be meeting the needs of the total community, while the teachers do not agree. As was the case for rural communities, northern students and teachers differed in their perceptions as to whether the community was supportive of alternatives.

The urban students and teachers expressed opposing opinions on almost all issues relating to the need for curriculum change. Both

groups perceive the school system to be meeting the needs of the community but the teachers expressed less agreement on this issue. The teachers perceive the community to be supportive of alternatives but the students disagree strongly. Only on the issue of discovery did the urban teachers and pupils agree in their responses.

Hypothesis ID: Teachers who represent four types of communities agree on the degree of desirability of curriculum change.

The concept of decentralized decision making in curriculum matters implies that differences in student needs and expectations do exist across the geographic area served by the Curriculum Branch of the Department of Education. In order to ascertain if such differences have direct bearing on the perceptions of instructional personnel of the need for curriculum change, it is hypothesized that teachers representing four types of communities agree on this issue; that is, that their perceptions do not differ because of the type of community in which they teach. If, in fact, real differences in perception are found to exist, the need for decentralization may also be underscored.

Analyses of data relating to the type of community are presented in Tables 4.12A and 4.12B. In cases for which a significant difference is found to exist, an analysis of variance and appropriate contrasts are carried out in order to isolate the source of difference.[1]

Findings: Analysis of the summation of perceptions of teachers indicates that significant differences do not exist across the teachers

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[1]Note: In cases for which the chi-square statistic indicates a significant difference, an analysis of variance was conducted using the original "ungrouped" data.

representing four types of communities (X^2 = 6.690, d.f. = 3, P > .05). While no statistically significant differences were found among the responses from teachers across four types of communities, inspection of the data revealed higher percentages of northern and urban teachers than rural or rural-urban teachers perceive curriculum change to be desirable. However, analyses of the sub-hypotheses related to the need for change yields two chi-square values which indicate significant differences in perceptions do exist. These are: One 1--"The school system is not meeting the perceived needs of the total community," and One 2--"The system is tolerant and supportive of alternatives." For each of these statements an analysis of variance is performed along with a post-hoc test to determine which type of community produces the different perceptions. In Tables 6.3A and 6.3B the ANOVA for One 1 is presented and a similar test for One 2 appears in Tables 6.3C and 6.3D. The results show that teachers in northern schools do not perceive the school system to be meeting the needs of the total community and that rural-urban teachers perceive less support for and tolerance of alternatives in curriculum than do teachers from other types of communities.

Table 4.12A.--An analysis of summation of perceptions of the need for curriculum change as expressed by teachers from four types of communities.

Group	Responses		Statistics
	Agree	Do Not Agree	
Rural	39	62	X^2 = 14.28601
Rural-Urban	19	38	d.f.= 3
Northern	10	8	sig.= 0.0746
Urban	126	136	P > .05

Table 4.12B.--An analysis of perceptions of the need for curriculum change as expressed by instructional personnel from four types of communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs)	Rural	25	69	7	X^2 = 29.18184
The school program is not meeting	Rur-Urban	5	48	4	
the perceived needs of the total	Northern	9	8	1	sig.= 0.0003
community.	Urban	46	193	23	
One 2 (Alternatives)	Rural	56	42	3	X^2 = 18.09750
The system is tolerant and	Rur-Urban	19	36	2	
supportive of alternatives.	Northern	13	5	0	sig.= 0.0205
	Urban	159	97	6	
One 3 (History)	Rural	45	55	1	X^2 = 12.89807
Significant curriculum change	Rur-Urban	19	33	5	
has taken place recently.	Northern	5	12	1	sig.= 0.1154
	Urban	103	154	5	
One 4 (Role of School)	Rural	62	39	0	X^2 = 14.50324
The school system should facilitate	Rur-Urban	31	26	0	
discovery and renewal.	Northern	13	5	0	sig.= 0.0696
	Urban	191	69	2	
One 5 (Forces)	Rural	49	52	0	X^2 = 9.84883
There are forces in society which	Rur-Urban	31	25	1	
are pressing for changes in	Northern	11	7	0	sig.= 0.2758
school curriculum.	Urban	124	138	0	
	Rural	96		5	X^2 = 4.945
One 6	Rur-Urban	51		6	
Curriculum changes are necessary.	Northern	18		0	sig.= 0.1759
	Urban	251		11	

Hypothesis IE: Students from four types of communities agree on the degree of desirability of curriculum change.

In the analyses of data relating to Hypothesis I, significant differences between the perceptions of instructional personnel and the perceptions of students were noted. Investigation of perceptions of instructional personnel across four types of communities in Hypothesis ID revealed fewer differences than were evident between instructors and students. In Hypothesis IE, the homogeneity of student perceptions across four types of communities is tested. The analysis is presented in Table 4.13A and a summary of analyses of sub-hypotheses in Table 4.13B.

Table 4.13A.--An analysis of summation of perceptions of the need for curriculum change as expressed by students from four types of communities.

Group	Responses			Statistics
	Agree	Neither	Disagree	
Rural	26	69	0	X^2 = 6.68439
Rural-Urban	7	52	0	d.f.= 6
Northern	4	14	0	sig.= 0.3510
Urban	60	240	2	P > .05

Findings: The perceptions of students representing four types of communities do not differ significantly with respect to the need for curriculum change (X^2 = 6.6844, d.f. = 6, P > 0.05). Hypothesis IE is therefore accepted. Analyses of the sub-hypotheses reveal a high degree of uniformity of student perceptions of the need for change

Table 4.13B.--An analysis of perceptions of the need for curriculum change as expressed by students from four types of communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs)	Rural	9	63	23	X^2 = 7.22258
The school program is not meeting	Rur-Urban	7	42	10	
the perceived needs of the total	Northern	4	9	5	sig.= 0.3008
community.	Urban	33	180	89	
One 2 (Alternatives)	Rural	29	63	3	X^2 = 2.63878
The system is tolerant and	Rur-Urban	16	40	3	
supportive of alternatives.	Northern	6	10	2	sig.= 0.8526
	Urban	87	198	17	
One 3 (History)	Rural	47	46	2	X^2 = 16.84941
Significant curriculum change	Rur-Urban	13	39	7	
has taken place recently.	Northern	4	12	2	sig.= 0.0099
	Urban	109	169	24	
One 4 (Role of School)	Rural	81	14	0	X^2 = 10.21351
The school system should facilitate	Rur-Urban	39	20	0	
discovery and renewal.	Northern	13	5	0	sig.= 0.1159
	Urban	225	73	4	
One 5 (Forces)	Rural	40	50	5	X^2 = 6.70296
There are forces in society which	Rur-Urban	16	40	3	
are pressing for changes in	Northern	5	13	0	sig.= 0.3492
school curriculum.	Urban	121	164	17	
	Rural	86		9	X^2 = 10.849
One 6	Rur-Urban	45		14	
Curriculum changes are necessary.	Northern	12		6	sig.= 0.0126
	Urban	230		72	

across four types of communities, although rural students perceive curriculum change to be more desirable than do students from the other categories. In response to the design statement "Significant curriculum change has taken place recently," rural students expressed 49 percent agreement, which is considerably higher than the responses from northern or urban students. In response to the direct question "In your opinion, should curriculum change be made?" rural students replied affirmatively 90 percent of the time, while other groups were less definite in their response. The difference in this case was significant (X^2 = 10.8490, d.f. = 3, $P < 0.05$).

Hypothesis IF: Instructional personnel employed in small schools and those employed in large schools agree on the degree of desirability of curriculum change.

One of the reasons presented in favour of consolidation of small school districts into large administrative units with large high schools was the capability of larger schools to present a more flexible and relevant program. On the other hand, some parents and school administrators have been vocal in support of small schools and have frequently used the same arguments to promote their cause. In this study it was hypothesized that the size of the school is not a significant factor in relation to the perceptions of teachers of the need for curriculum change. Data generated by teacher responses are analyzed and presented in Table 4.14A.

Findings: The statistical test indicated that a significant difference exists between the perceptions of the need for curriculum change as expressed by instructional personnel from small schools and the perceptions of those employed in large schools (X^2 = 15.5043,

d.f. = 1, P < 0.05). Forty-four percent of the personnel from large schools perceive curriculum change to be desirable, while only 39 percent of the small school staff members perceive this need.

Table 4.14A.--An analysis of summation of perceptions of the need for curriculum change as expressed by teachers from small and large schools.

Group	Responses		Statistics
	Agree	Do Not Agree	
Small Schools	21	30	X^2 = 15.50428 d.f.= 1 sig.= 0.0004 P < .05
Large Schools	173	214	

Hypothesis IG: Students attending small schools and those attending large schools agree on the degree of desirability of curriculum change.

Findings: The data presented in Table 4.15A indicate that no significant difference exists between students who attend small schools and those who attend large schools with regard to their perceptions of the need for curriculum change. In addition, the statistical tests for the sub-hypotheses reveal no significant differences, although for each of the design statements the students from small schools expressed a higher rate of agreement than did those from large schools. Only in response to the question "In your opinion, is curriculum change necessary?" did a significant difference occur (X^2 = 6.8551, d.f. = 1, P < 0.05). The small school students responded "yes" to this direct question more frequently than did students from large schools (92 percent vs. 77 percent).

Table 4.14B.--An analysis of perceptions of the need for curriculum change as expressed by instructional personnel in small-large schools.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community	Small	13	34	4	X^2 = 1.38260
	Large	72	284	31	sig.= 0.5009
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Small	25	25	1	X^2 = 1.50796
	Large	222	155	10	sig.= 0.4705
One 3 (History) Significant curriculum change has taken place recently.	Small	24	26	1	X^2 = 1.50885
	Large	148	228	11	sig.= 0.4703
One 4 (Role of School) The school system should facilitate discovery and renewal.	Small	30	21	0	X^2 = 2.57201
	Large	267	118	2	sig.= 0.2764
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Small	25	26	0	X^2 = 0.13283
	Large	190	196	1	sig.= 0.9361
One 6 Curriculum changes are necessary.	Small	138	0	9	X^2 = 0.2675
	Large	278	0	13	sig.= 0.6050

Table 4.15A.--An analysis of summation of perceptions of the need for curriculum change as expressed by students from small and large schools.

Group	Responses			Statistics
	Agree	Neither	Disagree	
Small Schools	14	49	0	X^2 = 0.43270 d.f.= 2 sig.= 0.8055 P > .05
Large Schools	83	326	2	

Hypothesis II: Instructional personnel and students agree of how curriculum change should be undertaken.

Null Form: There is no significant difference between the perceptions of instructional personnel and the perceptions of students with respect to how curriculum change should be undertaken.

On the question of how curriculum change should be made, it is hypothesized that a direct relationship exists between the perceptions of those who provide instruction and those who receive instruction; and furthermore, that any differences that may exist are statistically non-significant.

A graphic representation of the responses is presented in Figure 2, and the results of the chi-square analyses appear in Table 4.16A. Similar tests for the responses to each sub-hypothesis are given in Table 4.16B.

Findings: The data presented in Figure 2 and the analysis of Table 4.16A reveal a significant difference between the perceptions of instructional personnel and the perceptions of students on the means by which curriculum change should be undertaken (X^2 = 94.927, d.f. = 2, $P < 0.05$). The graph of Figure 2 shows the teachers' perceptions to

Table 4.15B.--An analysis of perceptions of the need for curriculum change as expressed by students of small-large schools.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
One 1 (Meeting Needs) The school program is not meeting the perceived needs of the total community.	Small	8	44	11	X^2 = 3.22718
	Large	45	250	116	sig.= 0.1992
One 2 (Alternatives) The system is tolerant and supportive of alternatives.	Small	21	40	2	X^2 = 1.10137
	Large	117	271	23	sig.= 0.5766
One 3 (History) Significant curriculum change has taken place recently.	Small	26	37	0	X^2 = 5.90661
	Large	147	229	35	sig.= 0.0522
One 4 (Role of School) The school system should facilitate discovery and renewal.	Small	52	11	0	X^2 = 2.25614
	Large	306	101	4	sig.= 0.3237
One 5 (Forces) There are forces in society which are pressing for changes in school curriculum.	Small	24	34	5	X^2 = 1.04997
	Large	158	233	20	sig.= 0.5916
One 6 Curriculum changes are necessary.	Small	58	0	5	X^2 = 6.8551
	Large	315	0	96	sig.= 0.0088

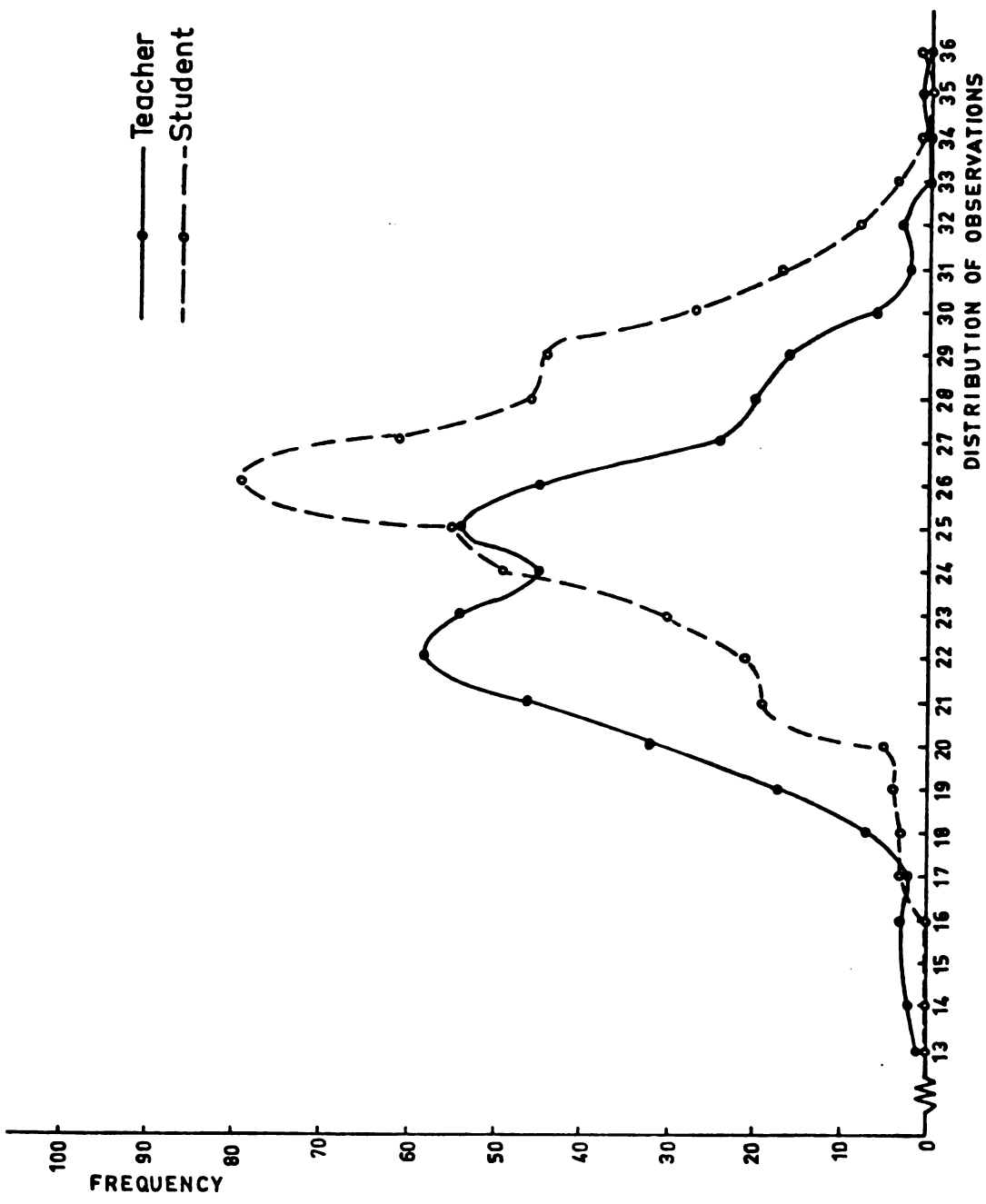

Figure 2.--Distribution of perceptions--how curriculum change should be undertaken.

give a bi-modal curve for which the mean lies to the left of the student mean. This indicates that instructional personnel affirm the need for democratic, cooperative procedures of curriculum development based on local student needs, while students see less need for such procedures. Teachers do not perceive uniformity of curriculum to be an important determinant in curriculum development, but students express concern on this issue lest students who transfer from one school to another are penalized.

Table 4.16A.--An analysis of perceptions of how curriculum change should be undertaken as expressed by instructional personnel and students.

Group	Responses			Statistic
	Agree	Neither	Disagree	
Teachers	1016	1113	61	$X^2 = 94.927$
Students	907	1262	216	$P < 0.05$

Hypothesis IIA: Provincial curriculum consultants, school division supervisors, professional development chairmen, and administrators agree on how curriculum change should be undertaken.

The sample of instructional personnel included 313 classroom teachers and 125 supervisory and administrative personnel. It is hypothesized that the perceptions of how change should be undertaken are the same for the sub-groups of personnel within the sample. In Table 4.17 all sub-groups are compared and in Tables 6.4A and 6.4B (Appendix B) the perceptions of the supervisory personnel are compared.

Table 4.16B.--An analysis of how curriculum change should be made as perceived by instructional personnel and students.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Teachers	312	112	14	X^2 =191.76167
	Students	124	280	73	sig.= 0.0000
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Teachers	312	126	0	X^2 = 28.87100
	Students	270	194	13	sig.= 0.0000
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	246	180	12	X^2 = 77.72746
	Students	156	241	80	sig.= 0.0000
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Teachers	314	123	1	X^2 = 23.75322
	Students	393	76	8	sig.= 0.0000
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Teachers	236	194	8	X^2 = 30.83110
	Students	175	277	25	sig.= 0.0000

Table 4.16B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Teachers	302	134	2	X^2 = 15.43731
	Students	285	176	16	sig.= 0.0004
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	288	150	0	X^2 = 70.79018
	Students	189	271	17	sig.= 0.0000
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	247	191	0	X^2 = 80.67421
	Students	142	309	26	sig.= 0.0000
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom	Teachers	131	304	3	X^2 = 8.19211
	Students	125	337	15	sig.= 0.0166
Two 10 (Roles) Curriculum change requires development skills in design, diffusion, experiment and evaluation.	Teachers	323	114	1	X^2 =164.02922
	Students	167	231	79	sig.= 0.0000

Table 4.17.--An analysis of summation of perceptions of how curriculum change should be made as expressed by instructional personnel classified on the basis of school position.

Group	Responses		Statistics
	Agree	Do Not Agree	
Single-subject teachers	99	35	
Multi-subject teachers	115	62	X^2 = 6.69417
Department heads	41	9	d.f.= 5
Administrators	34	13	sig.= 0.2444
Consultants	6	2	P > .05
Professional development chairmen	14	6	

Findings: Results of the chi-square test presented in Table 4.17 indicate that no significant differences exist among the perceptions of all sub-groups of instructional personnel on how curriculum changes should be undertaken. The responses to all design statements indicate agreement of 70 percent or better to each, with no sub-group showing consistent deviation. Responses from supervisory personnel are tested by analysis of variance; again no significant differences in perceptions were found (F = 0.742, d.f. = 3, F probability = 0.531).

Hypothesis IIB: Teachers who specialize in one subject and teachers who instruct in several subjects agree on how curriculum change should be undertaken.

Findings: Noteworthy differences between the perceptions of how change should be undertaken as expressed by single-subject teachers

and by teachers who instruct in a number of subjects are observed. The analysis of variance test presented in Tables 6.5A and 6.5B (Appendix B) gives an F ratio of 5.184 and a probability of 0.022 or $P < 0.05$. Single-subject teachers express a greater degree of confidence in cooperative, democratic decision making based on the needs of local students than do multi-subject teachers. Single-subject teachers perceive uniformity of curriculum across the province to be less desirable than do multi-subject teachers, and in general believe in high community involvement in the initiation, support and evaluation of curriculum change.

Hypothesis IIC: Instructional personnel representing four types of communities and students from these communities agree on how curriculum change should be undertaken.

Analyses of data for Hypothesis II indicated that students and instructional personnel differ significantly in their perceptions of how change should be undertaken. In order to ascertain if these differences are common to four types of communities, it is hypothesized that instructional personnel and students for each type of community agree on the procedures of curriculum change. The analyses are presented in Tables 4.18A through 4.18D.

Findings: Rural students and instructional personnel differ significantly in their perceptions of how curriculum change should be undertaken ($X^2 = 35.3300$, d.f. = 16, $P < 0.05$). In Table 4.18A it is noted that for seven of ten design statements the teachers perceive greater need for cooperative, local-based curriculum decision making than do students. Students perceive greater need for uniformity and

Table 4.18A.--An analysis of perceptions of how curriculum change should be made as expressed by teachers and students from rural communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Teachers	74	26	1	X^2 = 38.24057
	Students	30	55	12	sig.= 0.0000
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Teachers	85	16	0	X^2 = 12.34942
	Students	61	34	2	sig.= 0.0021
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	62	34	5	X^2 = 9.84319
	Students	39	46	12	sig.= 0.0073
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Teachers	73	27	1	X^2 = 15.06198
	Students	90	6	1	sig.= 0.0005
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Teachers	53	47	1	X^2 = 2.07940
	Students	41	55	1	sig.= 0.3536

Table 4.18A.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Teachers	64	36	1	X^2 = 1.80149
	Students	70	26	1	sig.= 0.4063
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	69	32	0	X^2 = 17.93028
	Students	38	57	2	sig.= 0.0001
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	61	40	0	X^2 = 8.65749
	Students	40	55	2	sig.= 0.0132
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Teachers	42	59	0	X^2 = 23.46048
	Students	31	64	2	sig.= 0.1510
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment and evaluation.	Teachers	76	24	1	X^2 = 23.46048
	Students	41	49	7	sig.= 0.0000

Table 4.18B.--An analysis of perceptions of how curriculum change should be made as expressed by teachers and students from rural-urban communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Teachers	33	21	3	X^2 = 12.93946
	Students	15	36	8	sig.= 0.0015
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Teachers	30	27	0	X^2 = 3.72683
	Students	34	22	3	sig.= 0.1551
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	23	33	1	X^2 = 6.96758
	Students	23	27	9	sig.= 0.0307
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Teachers	35	22	0	X^2 = 10.14892
	Students	50	8	1	sig.= 0.0063
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Teachers	26	28	3	X^2 = 0.45193
	Students	25	32	2	sig.= 0.7977

Table 4.18B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Teachers	36	21	0	X^2 = 2.59787
	Students	40	17	2	sig.= 0.2728
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	29	28	0	X^2 = 4.06887
	Students	23	33	3	sig.= 0.1308
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	19	38	0	X^2 = 4.40046
	Students	13	43	3	sig.= 0.1108
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Teachers	13	44	0	X^2 = 3.04997
	Students	14	42	3	sig.= 0.2176
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment and evaluation.	Teachers	39	18	0	X^2 = 21.70880
	Students	18	30	11	sig.= 0.0000

Table 4.18C.--An analysis of perceptions of how curriculum change should be made as expressed by teachers and students from northern communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Teachers	15	2	1	X^2 = 13.50175
	Students	4	10	14	sig.= 0.0012
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Teachers	10	8	0	X^2 = 1.06667
	Students	10	7	1	sig.= 0.5866
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	10	8	0	X^2 = 5.81512
	Students	7	6	5	sig.= 0.0546
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Teachers	14	4	0	X^2 = 1.26496
	Students	12	5	1	sig.= 0.5313
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Teachers	9	8	1	X^2 = 4.63636
	Students	3	14	1	sig.= 0.0985

Table 4.18C.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Teachers	14	4	0	X^2 = 3.06667
	Students	10	6	2	sig.= 0.2158
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	11	7	0	X^2 = 5.13889
	Students	5	11	2	sig.= 0.0766
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	11	7	0	X^2 = 10.13986
	Students	2	15	1	sig.= 0.0063
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Teachers	3	15	0	X^2 = 0.0000
	Students	4	14	0	sig.= 1.0000
Two 10 (Roles) Curriculum change requires expertise in design, diffusion, experiment and evaluation.	Teachers	13	5	0	X^2 = 14.58333
	Students	3	7	8	sig.= 0.0007

Table 4.18D.--An analysis of perceptions of how curriculum change should be made as expressed by teachers and students from urban communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Teachers	190	62	9	X^2 =131.26884
	Students	75	178	49	sig.= 0.0000
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Teachers	186	75	0	X^2 = 20.13348
	Students	165	130	7	sig.= 0.0000
Two 3 (Direction) New programs should be directed by local school personnel.	Teachers	151	104	6	X^2 = 65.23055
	Students	87	161	54	sig.= 0.0000
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Teachers	192	69	0	X^2 = 8.95875
	Students	241	56	5	sig.= 0.0113
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Teachers	148	110	3	X^2 = 32.45572
	Students	106	175	21	sig.= 0.0000

Table 4.18D.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Teachers	188	72	1	X^2 = 21.68840
	Students	165	126	11	sig.= 0.0000
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Teachers	179	82	0	X^2 = 47.80721
	Students	123	169	10	sig.= 0.0000
Two 8 (Decision making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Teachers	156	105	0	X^2 = 63.94588
	Students	87	195	20	sig.= 0.0000
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Teachers	73	185	3	X^2 = 3.25762
	Students	76	216	10	sig.= 0.1962
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment and evaluation.	Teachers	195	66	0	X^2 =106.55064
	Students	105	144	53	sig.= 0.0000

less need for community involvement and support, although they perceive greater need for parental and student input into curriculum development than do the teachers. In general, rural students perceive external forces to be more important in curriculum development than do the instructional personnel.

The summation of the perceptions of how change should be undertaken as expressed by teachers of rural-urban communities and by students of these communities (Table 4.18B) does not differ significantly (X^2 = 22.6755, d.f. = 15, P > 0.05). However, for four sub-hypotheses significant differences in perceptions do exist; that is, teachers and students do not agree on these issues. Teachers of rural-urban communities perceive a uniform program or curriculum across the province to be more necessary than do rural teachers but less necessary than do rural-urban students. The students perceive the direction of a new program should not be carried on by local school personnel, while the teachers believe this is the method that should be used (X^2 = 6.9676, d.f. = 2, P < 0.05). The students express preference for discovery and renewal as an emphasis in curriculum, but the teachers express less desire for this emphasis (84.7 percent vs. 61.4 percent). In general, rural-urban teachers and students agree more closely on how curriculum change should be made than do groups who are entirely rural or entirely urban.

Analyses of responses from teachers and students from northern schools indicate a difference in the overall perceptions of how curriculum change should be made (X^2 = 22.8333, d.f. = 11, P < 0.05). Teachers favour cooperative decision-making procedures based on local

needs slightly more than do the students. However, only on a very limited number of sub-hypotheses do significant differences occur. As with rural students, northern students see curriculum uniformity to be more essential than do the teachers; also, northern students do not perceive the decision-making process in curriculum matters to be of concern to the whole community.

Urban teachers and students demonstrate very little agreement on the issue of how change should be made; only on the role of the change agent do no differences occur. Urban teachers do not perceive curriculum uniformity to be important in planning; the students do not agree (72.8 percent vs. 24.8 percent). The teachers perceive curriculum change being initiated at the local level; again the students do not agree (71.3 percent vs. 54.6 percent agreement). Similar differences are noted for the direction of change, evaluation of results, and support for innovation. In general, urban teachers perceive cooperative, democratic procedures of decision making based on local student needs to be important. The students believe that more centralized and authoritative procedures should be used.

In Table 4.18E, the chi-square values for each variable crossed with each type of community are presented. The general degree of congruency of perceptions of how to change for urban teachers and students is much lower than for teachers and pupils from the other types of communities.

Table 4.18E.--Summary of levels of significance of differences of perceptions of how curriculum change should be made as expressed by teachers and students from four types of communities.

Design Statement		Rural	Rural-Urban	Northern	Urban
Two	1	0.0000*	0.0015*	0.0012*	0.0000*
	2	0.0021*	0.1551	0.5866	0.0000*
	3	0.0073*	0.0307*	0.0546	0.0000*
	4	0.0005*	0.0063*	0.5313	0.0113*
	5	0.3536	0.7977	0.0985	0.0000*
	6	0.4063	0.2728	0.2158	0.0000*
	7	0.0001*	0.1308	0.0766	0.0000*
	8	0.0132*	0.1108	0.0063*	0.0000*
	9	0.1510	0.2176	1.0000	0.1962
	10	0.0000*	0.0000*	0.0007*	0.0000*

*Significant at the .05 level.

Hypothesis IID: Instructional personnel who represent four types of communities agree on how curriculum change should be undertaken.

In the analysis of Hypothesis ID, differences in perceptions of the need for curriculum change were noted across four types of communities. It is now hypothesized that no differences in perceptions of how curriculum change should be undertaken exist across the instructors in four types of communities. The analyses of responses are presented in Tables 4.19A and B. The analysis of variance is presented in Tables 6.6A and B (Appendix B).

Table 4.19A.--An analysis of summation of perceptions of how curriculum change should be made as expressed by instructional personnel from four types of communities.

Group	Responses		Statistics
	Agree	Do Not Agree	
Rural	75	26	X^2 = 11.45705
Rural-Urban	31	26	d.f.= 3
Northern	13	5	sig.= 0.0219
Urban	192	70	P < .05

Findings: The analysis presented in Table 4.19A indicates that a significant difference exists among the perceptions of instructional personnel representing four types of communities (X^2 = 11.471, d.f. = 3, P < 0.05). Personnel employed in rural-urban communities perceive cooperative decision making based on local student needs to be less essential than do the representatives of rural, northern or urban communities. To investigate this difference more carefully, an analysis of variance was applied to the perceptions of teachers only. The results of this analysis presented in Tables 6.6A and 6.6B indicate a significant difference (F ratio = 4.226, F probability = 0.006); the rural-urban teachers perceive cooperative decision making not to be as necessary as do other teachers. Investigation of the chi-square results for the design statements reveals that the rural-urban teachers perceive a lesser degree of acceptance of: locally designed curriculum, initiation of innovation based on local needs, as well as curriculum decision making based on local student and community needs.

Table 4.19B.--An analysis of perceptions of how curriculum change should be made as expressed by instructional personnel from four types of communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity)	Rural	74	26	1	X^2 = 12.15919
Curriculum uniformity need not be	Rur-Urban	33	21	3	
maintained across the province.	Northern	15	2	1	sig.= 0.1442
	Urban	190	63	9	
Two 2 (Initiation)	Rural	85	16	0	X^2 = 20.42217
Local school people (teachers,	Rur-Urban	30	27	0	
administrators, pupils and	Northern	10	8	0	sig.= 0.0004
parents) should initiate change.	Urban	187	75	0	
Two 3 (Direction)	Rural	62	34	5	X^2 = 12.69756
New programs should be directed	Rur-Urban	23	33	1	
by local school personnel.	Northern	10	8	0	sig.= 0.1227
	Urban	151	105	6	
Two 4 (Involvement)	Rural	73	27	1	X^2 = 9.74345
Teachers, pupils and parents should	Rur-Urban	35	22	0	
be involved in curriculum renewal.	Northern	14	4	0	sig.= 0.2835
	Urban	192	70	0	
Two 5 (Evaluation)	Rural	53	47	1	X^2 = 9.23911
Local school personnel (teachers,	Rur-Urban	26	28	3	
pupils and parents) should be	Northern	9	8	1	sig.= 0.32225
responsible for evaluation.	Urban	148	111	3	

Table 4.19B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support)	Rural	64	36	1	X^2 = 7.32148
Curriculum innovation should be	Rur-Urban	36	21	0	
supported by parents, students,	Northern	14	4	0	sig.= 0.5024
local boards and governments.	Urban	188	73	1	
Two 7 (Student Needs)	Rural	69	32	0	X^2 = 8.91636
Student needs should be the	Rur-Urban	29	28	0	
major basis for curriculum	Northern	11	7	0	sig.= 0.0632
decision making.	Urban	179	83	0	
Two 8 (Decision Making)	Rural	61	40	0	X^2 = 15.65009
Democratic, cooperative procedures	Rur-Urban	19	38	0	
of decision making should be em-	Northern	11	7	0	sig.= 0.0035
ployed in curriculum development.	Urban	156	106	0	
Two 9 (Change Agent)	Rural	42	59	0	X^2 = 13.76252
The change agent should be a	Rur-Urban	13	43	1	
consultant who works in or	Northern	3	14	1	sig.= 0.0882
close to the classroom.	Urban	73	180	9	
Two 10 (Roles)	Rural	76	24	1	X^2 = 7.41541
Curriculum change requires develop-	Rur-Urban	39	18	0	
ment of skills in design, diffusion,	Northern	13	5	0	sig.= 0.4925
experiment and evaluation.	Urban	195	67	0	

Hypothesis IIE: Students from four types of communities agree on how curriculum change should be undertaken.

Findings: Analyses of responses of students from four types of communities (Table 4.20A) reveal significant differences among the perceptions of how curriculum change should be undertaken ($X^2 = 13.6859$, d.f. = 6, $P < 0.05$). Students from northern schools perceive cooperative decision making based on local student needs to be less essential than do students from other types of communities. Specifically, northern students perceive less need for community involvement in curriculum development, they believe that support for innovative programs need not involve a wide support base, and they perceive change to be more centrally inspired and directed than do students from other areas.

Table 4.20A.--An analysis of summation of perceptions of how curriculum change should be made as expressed by students from four types of communities.

Group	Responses			Statistics
	Agree	Neither	Disagree	
Rural	37	58	0	$X^2 = 13.68590$
Rural-Urban	17	42	0	d.f.= 6
Northern	0	18	0	sig.= 0.0333
Urban	79	222	1	P < .05

Table 4.20B.--An analysis of perceptions of how curriculum change should be made as expressed by students from four types of communities.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity)	Rural	29	54	12	X^2 = 2.43732
Curriculum uniformity need not be	Rur-Urban	15	36	8	
maintained across the province.	Northern	4	10	4	sig.= 0.8754
	Urban	75	178	49	
Two 2 (Initiation)	Rural	59	34	2	X^2 = 3.92231
Local school people (teachers,	Rur-Urban	34	22	3	
administrators, pupils and	Northern	10	7	1	sig.= 0.6872
parents) should initiate change.	Urban	165	130	7	
Two 3 (Direction)	Rural	38	45	12	X^2 = 8.39655
New programs should be directed	Rur-Urban	23	27	9	
by local school personnel.	Northern	7	6	5	sig.= 0.2105
	Urban	87	161	54	
Two 4 (Involvement)	Rural	88	6	1	X^2 = 12.51216
Teachers, pupils and parents should	Rur-Urban	50	8	1	
be involved in curriculum renewal.	Northern	12	5	1	sig.= 0.0515
	Urban	241	56	5	
Two 5 (Evaluation)	Rural	41	53	1	X^2 = 10.41228
Local school personnel (teachers,	Rur-Urban	25	32	2	
pupils and parents) should be	Northern	3	14	1	sig.= 0.1083
responsible for evaluation.	Urban	106	175	21	

Table 4.20B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support)	Rural	68	26	1	X^2 = 14.36193
Curriculum innovation should be	Rur-Urban	40	17	2	
supported by parents, students,	Northern	10	6	2	sig.= 0.0258
local boards and governments.	Urban	165	126	11	
Two 7 (Student Needs)	Rural	38	55	2	X^2 = 4.70299
Student needs should be the	Rur-Urban	23	33	3	
major basis for curriculum	Northern	5	11	2	sig.= 0.5824
decision making.	Urban	123	169	10	
Two 8 (Decision Making)	Rural	38	55	2	X^2 = 11.71902
Democratic, cooperative procedures	Rur-Urban	13	43	3	
of decision making should be em-	Northern	2	15	1	sig.= 0.0685
ployed in curriculum development.	Urban	87	195	20	
Two 9 (Change Agent)	Rural	31	62	2	X^2 = 4.02024
The change agent should be a	Rur-Urban	14	42	3	
consultant who works in or	Northern	4	14	0	sig.= 0.6739
close to the classroom.	Urban	76	216	10	
Two 10 (Roles)	Rural	41	47	7	X^2 = 17.86624
Curriculum change requires develop-	Rur-Urban	18	30	11	
ment of skills in design, diffusion,	Northern	3	7	8	sig.= 0.0066
experiment and evaluation.	Urban	105	144	53	

Hypothesis IIF: Instructional personnel from small schools and those from large schools agree on how curriculum change should be undertaken.

To investigate the effect of school size on the perceptions of staff of curriculum change procedures, the schools were classified as small, that is having an enrollment of 499 students or less, and large, that is, having an enrollment of 500 students or more. It was hypothesized that no differences exist between the perceptions of how change should be undertaken as expressed by personnel from small schools and by personnel from large schools.

Findings: The analysis reported in Table 4.21A reveals no difference in the perceptions of instructional personnel from small schools with those from large schools. Both groups of personnel believe that open decision-making procedures based on local student needs are important (X^2 = 0.05469, d.f. = 1, P > 0.05). However, analyses of the sub-hypotheses (Table 4.21B) indicate small but significant differences between the perceptions of the two groups on the role of the school, and the skills needed by the change agent in the renewal process.

Table 4.21A.--An analysis of summation of perceptions of how curriculum change should be made as expressed by instructional personnel from small and large schools.

Group	Responses		Statistic
	Agree	Do Not Agree	
Small Schools	35	16	X^2 = 0.05469 d.f.= 1
Large Schools	276	111	sig.= 0.8151 P > 0.05

Table 4.21B.--An analysis of perceptions of how curriculum change should be made as expressed by instructional personnel from small-large schools.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Small	34	15	2	X^2 = 0.59695
	Large	278	97	12	sig.= 0.7419
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Small	42	9	0	X^2 = 2.89604
	Large	270	117	0	sig.= 0.0888
Two 3 (Direction) New programs should be directed by local school personnel.	Small	27	20	4	X^2 = 5.64358
	Large	219	160	8	sig.= 0.0595
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Small	37	13	1	X^2 = 7.73228
	Large	277	110	0	sig.= 0.0209
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Small	26	24	1	X^2 = 0.19559
	Large	210	170	7	sig.= 0.9068

Table 4.21B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Small	30	20	1	X^2 = 5.12100
	Large	272	114	1	sig.= 0.0773
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Small	36	15	0	X^2 = 0.38082
	Large	252	135	0	sig.= 0.5372
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Small	25	26	0	X^2 = 0.95922
	Large	222	165	0	sig.= 0.3274
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Small	15	36	0	X^2 = 1.53167
	Large	116	260	11	sig.= 0.4649
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment and evaluation.	Small	35	15	1	X^2 = 8.04718
	Large	288	99	0	sig.= 0.0179

Hypothesis IIG: Students attending small schools and students attending large schools agree on how curriculum change should be undertaken.

In order to ascertain the existence of a relationship between the size of school and the student perceptions of how change should be undertaken, an analysis of student responses against school size was made. Schools of fifteen classrooms or less were classified as small. It was hypothesized that no significant differences exist between the perceptions of students from small schools and the perceptions of students from large schools.

Findings: The analysis as presented in Table 4.22A reveals that significant differences do exist between students from small schools and those from large schools on how change should be made ($X^2 = 6.3843$, d.f. = 2, $P < 0.05$). Students from small schools perceive cooperative decision making based on student needs to be more desirable than do students from large schools. Further, analyses of the sub-hypotheses reveal that students from small schools perceive that change should be directed by school personnel, and supported by local groups, more frequently than do students from large schools.

Table 4.22A.--An analysis of summation of perceptions of how curriculum change should be made as expressed by students from small and large schools.

Group	Responses			Statistic
	Agree	Neither	Disagree	
Small Schools	26	37	0	$X^2 = 6.38427$ d.f.= 2 sig.= 0.0411 $P < 0.05$
Large Schools	107	303	1	

Table 4.22B.--An analysis of perceptions of how curriculum change should be made as expressed by students from small-large schools.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 1 (Uniformity) Curriculum uniformity need not be maintained across the province.	Small	20	34	9	X^2 = 1.27099
	Large	103	244	64	sig.= 0.5297
Two 2 (Initiation) Local school people (teachers, administrators, pupils and parents) should initiate change.	Small	43	19	1	X^2 = 4.10622
	Large	225	174	12	sig.= 0.1283
Two 3 (Direction) New programs should be directed by local school personnel.	Small	29	27	7	X^2 = 6.20497
	Large	126	212	73	sig.= 0.0449
Two 4 (Involvement) Teachers, pupils and parents should be involved in curriculum renewal.	Small	57	5	1	X^2 = 3.42205
	Large	334	70	7	sig.= 0.1807
Two 5 (Evaluation) Local school personnel (teachers, pupils and parents) should be responsible for evaluation.	Small	30	32	1	X^2 = 4.74347
	Large	145	242	24	sig.= 0.0933

Table 4.22B.--Continued.

Design Statement	Group	Responses			Statistic
		Agree	Neither	Disagree	
Two 6 (Support) Curriculum innovation should be supported by parents, students, local boards and governments.	Small	46	16	1	X^2 = 5.45764
	Large	237	159	15	sig.= 0.0653
Two 7 (Student Needs) Student needs should be the major basis for curriculum decision making.	Small	25	37	1	X^2 = 0.87199
	Large	164	231	16	sig.= 0.6466
Two 8 (Decision Making) Democratic, cooperative procedures of decision making should be employed in curriculum development.	Small	24	36	3	X^2 = 2.55813
	Large	116	272	23	sig.= 0.2783
Two 9 (Change Agent) The change agent should be a consultant who works in or close to the classroom.	Small	18	43	2	X^2 = 0.18376
	Large	107	291	13	sig.= 0.9122
Two 10 (Roles) Curriculum change requires development of skills in design, diffusion, experiment and evaluation.	Small	30	29	4	X^2 = 7.86953
	Large	137	199	75	sig.= 0.0196

Hypothesis III

The third major hypothesis seeks to correlate the perceptions of instructional personnel with their demographic variables. The responses to each of the design statements of the need-for-curriculum-change variable and of the how-change-may-be-made variable are tested against each of the demographic variables giving seven pairs of sub-hypotheses. These hypotheses are presented in pairs for each personal characteristic.

A. Age

1. Teachers who are classified as young and those who are classified as old agree on the degree of desirability of curriculum change.

2. Teachers who are classified as young and those who are classified as old agree on how curriculum change should be undertaken.

Findings: Teachers who are classified as young, that is, those who are less than forty years of age, perceive a greater degree of desirability of curriculum change than do teachers who are classified as old (44.9 percent vs. 41.3 percent). However, the data presented in Table 4.23 indicate that the difference in perceptions of this issue is not significant ($P > 0.05$). Significant differences do occur in the perceptions of the extent to which the school system is currently meeting community needs. The young teachers perceive the needs of the total community not to be met to the degree that is expressed by older teachers ($X^2 = 11.1146$, d.f. = 2, $P < 0.05$).

With respect to how curriculum change should be undertaken, young teachers express preference for cooperative and democratic decision making (73.1 percent vs. 64.4 percent), but again the

Table 4.23.--Analyses of need-for-change variable to demographic characteristics (chi-square value and significance).

Dependent Variable	Age	Sex	Teaching Experience	Marital Status	Professional Preparation	Continuing Education	In-Service Leadership
Should change be made?	1.5100 0.4772	5.4140* 0.0667	1.4156 0.493	0.3290 0.6500	0.6569 0.7200	10.9218* 0.0012	10.841* 0.004
1. System not meeting community needs	11.1150* 0.0039	1.1927 0.5508	0.9995 0.6070	10.4731* 0.0053	1.4641 0.4810	0.7283 0.6950	10.0506 0.9750
2. Tolerant of alternatives	3.4779 0.1757	4.6826 0.0962	6.5892* 0.0371	3.2151 0.2004	7.1090* 0.0290	9.0830* 0.0107	8.6782* 0.0130
3. Experience with change	0.5342 0.7283	3.4808 0.1755	1.9370 0.3797	4.9280 0.0851	0.7741 0.6790	5.9066 0.0522	2.5900 0.2709
4. Role of school	3.3580 0.1870	1.4610 0.4817	2.2188 0.3298	2.5771 0.2760	10.3298* 0.0057	12.7219* 0.0017	5.8057 0.0550
5. Forces causing change	0.3810 0.8266	0.8139 0.6657	1.6690 0.4341	6.1540* 0.0461	1.9692 0.3738	1.0075 0.6043	1.8184 0.4028

*Significant at the 0.05 level.

difference is non-significant. Only in the area of involvement in curriculum change, that is, "Teachers, pupils, and parents should be involved in the process of curriculum renewal," did significant differences appear. The older teachers perceive less need for total community involvement in curriculum change than do their younger colleagues.

B. Sex

1. Male teachers and female teachers agree on the degree of desirability of curriculum change.

2. Male teachers and female teachers agree on how curriculum change should be undertaken.

Findings: Female teachers perceive curriculum change to be more desirable than do male teachers (47.1 percent vs. 42.7 percent), but the difference in perception is not statistically significant. The extent to which the system is meeting the total needs of the community is judged identically by female and male teachers; less than 10 percent of both men and women indicate that these needs are not being met. Female teachers believe the system to be more tolerant and supportive of alternatives than do male teachers.

Analysis of the second hypothesis reveals that female teachers perceive cooperative and democratic forms of decision making in curriculum development to be more essential than do male teachers ($X^2 = 7.3868$, d.f. = 1, $P < 0.05$). The female teachers indicate that the agent of change should be closely associated with classroom activities or even a classroom teacher rather than a specialist who is external to the classroom.

Table 4.24.--Analyses of how-to-change variable to demographic characteristics (chi-square value and significance).

Dependent Variable	Age	Sex	Teaching Experience	Marital Status	Professional Preparation	Continuing Education	In-Service Leadership
How should change be undertaken?	2.4655 0.1164	7.3768* 0.0066	5.5523* 0.0185	0.3642 0.5462	0.0018 0.9666	0.87115 0.3506	0.0000 0.9984
1. Uniformity of curriculum	3.4371 0.1793	1.9192 0.3830	0.7266 0.6954	4.0328 0.1331	2.6006 0.2724	10.7475* 0.0046	4.3922 0.1112
2. Initiation of change	1.2920 0.2557	1.6456 0.1996	4.0874* 0.0432	0.0837 0.7724	1.7891 0.1810	2.5946 0.1072	0.0071 0.9330
3. Direction	0.7863 0.6741	1.7811 0.4104	0.2758 0.8712	1.2910 0.5244	0.0040 0.9980	3.1605 0.2059	0.6249 0.7317
4. Involvement	9.4794* 0.0087	0.7259 0.6956	2.3006 0.3165	2.8138 0.2449	0.3509 0.8391	1.3165 0.5178	1.9265 0.3817
5. Evaluation	2.5353 0.2815	1.7401 0.4189	3.7415 0.1540	1.5904 0.4515	1.3930 0.4983	1.8589 0.3948	0.7471 0.6883

Table 4.24.--Continued.

Dependent Variable	Age	Sex	Teaching Experience	Marital Status	Professional Preparation	Continuing Education	In-Service Leadership
6. Curriculum support	3.9743 0.1371	2.5966 0.2730	6.4409* 0.0399	0.8809 0.6438	1.2631 0.5318	1.2756 0.5285	2.5346 0.2816
7. Decision basis student needs	0.3355 0.2478	0.7480 0.1861	1.7741 0.1829	0.0652 0.7984	0.5982 0.4393	3.7806 0.0519	0.0719 0.7885
8. Cooperative decision making	2.6201 0.1055	0.1414 0.7069	0.7999 0.3711	2.5660 0.1092	0.0039 0.9502	2.4497 0.1176	1.1204 0.2898
9. Curriculum change agent	2.6011 0.2724	12.5119* 0.0019	9.2791* 0.0097	5.6195 0.0602	0.2612 0.8776	0.6904 0.7081	0.1480 0.9287
10. Roles to be filled	3.8612 0.1451	1.5631 0.4577	7.2934* 0.0248	1.3044 0.5209	1.0335 0.5965	1.3331 0.5135	0.5943 0.7429

C. Teaching Experience

1. There is agreement between teachers who have not had extensive teaching experience and those who have had such experience on the degree of desirability of curriculum change.

2. There is agreement between teachers who have not had extensive teaching experience and those who have had such experience on how curriculum change should be undertaken.

Findings: The data reveal no significant difference between the perceptions of the need-for-curriculum-change as expressed by teachers who have taught less than ten years and the perceptions of teachers who have had ten or more years experience. Both groups of teachers indicate the same degree of desire to effect change, but less-experienced teachers perceive the educational system to be more tolerant and supportive of alternatives than do more experienced teachers (60.7 percent vs. 50.3 percent).

Analysis of the how-to-change-curriculum variable and years of experience reveals a significant difference between the perceptions of teachers whose experience in the classroom is of different duration. Teachers with fewer years of experience favour cooperative forms of decision making and wide community involvement in curriculum development. They also perceive that support for innovative projects should be the responsibility of the school, the community, and of various levels of government. The less-experienced teachers also perceive the role of the change agent should include direct classroom involvement, while their more experienced colleagues perceive this role to be less classroom oriented and perhaps independent of the school. In general, the less-experienced teachers believe that curriculum change should be initiated, effected, and evaluated close to the classroom setting, but

the more experienced teachers perceive it to be less closely related to classroom activities.

D. Marital Status

1. There is agreement between unmarried teachers and married teachers regarding the degree of desirability of curriculum change.

2. There is agreement between unmarried teachers and married teachers regarding how curriculum change should be undertaken.

Findings: Analysis of the data related to the need for curriculum change indicates several significant differences between the perceptions of married teachers and the perceptions of unmarried teachers. Only 17 percent of the married teachers indicate that they believe the school system is not meeting the total needs of the community, in contrast to 30 percent of the unmarried teachers. A substantial majority of married teachers perceive the system to be tolerant and supportive of curriculum change, while less than half of their unmarried colleagues perceive this to be true. Married teachers believe past experience with change to have been more successful than do unmarried teachers, and more married than unmarried teachers indicate they believe the school should encourage discovery and renewal. The married teachers appear to perceive local needs as the major determinant of need for curriculum revision, while unmarried teachers perceive external forces to be the major causes for change.

With respect to how curriculum change may be undertaken, the perceptions of married and unmarried teachers are not significantly different. Both groups believe in cooperative decision making and

classroom-oriented innovation. None of the sub-hypotheses reveals a significant difference.

E. Professional Preparation

1. There is agreement between teachers who have had minimum professional preparation and those who have had more extensive professional preparation on the degree of desirability of curriculum change.

2. There is agreement between teachers who have had minimum professional preparation and those who have had more extensive professional preparation on how curriculum change should be undertaken.

Findings: Analysis of the summations of the perceptions of the need for curriculum change as expressed by teachers who have had minimum professional training, that is, twelve credit hours of methodology course work, and by teachers who have had more extensive training, produces no significant difference. Approximately 45 percent of each group express agreement with regard to the general need for curriculum revision. Consideration of the responses to design statements for the sub-hypothesis reveals that teachers who have had more extensive training perceive the school system to be more tolerant and supportive of alternatives in curriculum than do teachers who have had minimal training ($X^2 = 7.1088$, d.f. = 2, $P < 0.05$). A similar difference is noted with regard to the role of the school; the more highly trained teachers perceive the school should facilitate discovery and renewal, but those who have less professional training do not perceive this function to be highly significant ($X^2 = 10.3299$, d.f. = 2, $P < 0.05$).

No statistically significant differences and few general differences are noted between the perceptions of how change should be undertaken as expressed by teachers who have had minimal professional

preparation and those who have had extensive preparation. Both groups of teachers express general agreement that curriculum revision should involve the total community and that cooperative, democratic decision-making procedures should be employed.

F. In-Service Education

1. There is agreement between teachers who have had little in-service education and teachers who have had extensive in-service education regarding the degree of desirability of curriculum change.

2. There is agreement between teachers who have had little in-service education and teachers who have had extensive in-service education regarding how curriculum change should be undertaken.

Findings: The perceptions of teachers who have had little in-service education, that is, curriculum development workshops of six hours of less duration, and the perceptions of teachers who have had much in-service experience, differ significantly on the matter of the need for change ($X^2 = 13.4628$, d.f. = 2, $P < 0.05$). Teachers who have had much in-service education perceive curriculum change to be more desirable than do their colleagues who have had little in-service education. Of the teachers who have had much in-service experience, 66.2 percent perceive the system to be tolerant and supportive of alternatives, while only 52 percent of those who have not had this experience perceive the system in this way. In addition, many more of those who have had this type of experience view the changes of the past to be successful and important to the school program. For those who have had extended in-service experience, the role of the school is perceived to include facilitation of discovery and renewal; a much

smaller proportion of teachers who have little in-service education perceive the school's role in this manner.

Analysis of the how-to-change variable and in-service education reveals less striking contrasts. Teachers who have had little in-service education and those who have had much such training express similar perceptions of how curriculum change should be made. Only on the need for uniformity of curriculum across the province do the perceptions of these two groups differ significantly ($X^2 = 10.7475$, d.f. = 2, $p < 0.05$). The teachers who have had much in-service education perceive uniformity to be more important than do the teachers who have had little such training.

G. In-Service Leadership

1. There is agreement between teachers who have not served and those who have served as leaders of in-service workshops with regard to the degree of desirability of curriculum change.

2. There is agreement between teachers who have not served and those who have served as leaders of in-service workshops with regard to how curriculum change should be undertaken.

Findings: Teachers who have not served as leaders of in-service workshops and those who have led or directed differ significantly in their perceptions of the degree of desirability of curriculum change ($X^2 = 10.8407$, d.f. = 2, $P < 0.05$). Teachers who have had leadership experience perceive curriculum change to be more desirable than do other teachers. They believe the system to be more tolerant of alternatives and they perceive discovery and renewal to be part of the functions of the school.

As for the second hypothesis, no significant difference is noted between the perceptions of workshop leaders and other teachers

with respect to how change should be undertaken. None of the sub-hypotheses related to the how-to-change variable when tested with the leadership variable produced a significant difference between the groups.

Summary

In Chapter IV the data associated with the study were presented and analyzed. This was accomplished by providing: first, a description of the variables of the study and means by which these were quantified; second, a survey of the perceptions of school personnel of the need for and means by which curriculum change may be achieved; and third, an analysis of the data through statistical testing of hypotheses relating the variables of the study.

In the final chapter a summary of the study along with conclusions and implications will be presented.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The final chapter of the study is presented in three sections. The first section is a summary of the study containing a statement of the problem investigated, the instrument and methodology, a description of the sample, and a review of the analyses conducted. A summation of the findings and the resultant conclusions make up the second section. The third and final section contains some implications of the study and recommendations for further research.

Summary of the Study

The Purpose

The study was designed to investigate selected perceptions of school personnel regarding curriculum change in a centralized school system. In order to conduct the investigation three objectives or purposes were stated.

The first objective was to survey and record selected perceptions of school supervisors, administrators, teachers, and pupils regarding the necessity for and the processes of curriculum change. The second was to conduct statistical analyses suitable to compare and contrast the perceptions of change as expressed by school personnel. The third objective was to analyze the relationships between certain personal demographic data variables of instructional personnel and

their perceptions of the need for curriculum change and how it should be undertaken.

Instrumentation and Methodology

In order to achieve the first objective of surveying and recording selected perceptions of school personnel with regard to curriculum change, it was necessary: (1) to formulate fundamental questions for which answers were desired, (2) to construct a study design around these questions, and (3) to develop data-gathering instruments which would provide collection and sorting of respondents' reactions.

The fundamental questions were (1) should curriculum change be made? and (2) how should curriculum change be undertaken? For each of these questions a study design was constructed consisting of sub-questions and related design statements judged to further probe and extend the issue raised by the fundamental question. Finally, two questionnaires were constructed to gather data from instructional personnel and students on each of the design statements.

Each questionnaire contained three sections to collect data related to:

1. the personal background of the respondent,
2. the respondent's perceptions of the need for curriculum change,
3. the respondent's perceptions of how curriculum change should be undertaken.

Data collected in section one provided the description of the sample and served as the demographic data variables for analysis. The

information provided by sections two and three became the survey data and the dependent variables of the study.

The second objective of the study, to compare and contrast the perceptions of change as expressed by school personnel, was achieved by analyzing the data related to the need-for-change variable and the how-to-change variable with the variables of role in school, size of school, and type of community. Chi-square and analysis of variance procedures were employed.

Analyses of the need-for-change variable and the how-to-change variable across the demographic variables served as a means of achieving the final objective. Similar statistical procedures were employed.

The Sample

Four hundred and thirty-eight teachers, supervisors, and administrators made up the sample of instructional personnel, while 477 students selected at random from the same schools as the teachers formed the student sample. All were selected from ten school divisions in the province of Manitoba and were judged to represent four types of communities, namely, rural, rural-urban, northern, and urban.

The Analyses

Hypothesis 1 states that "Instructional personnel and students agree on the degree of desirability of curriculum change." This hypothesis was tested by applying a chi-square test of significance to the data of the need-for-change variable generated by the sample of instructional personnel and similar data generated by the sample of

students. Additional information was gleaned by application of the same technique to the data for each of the related design statements.

Hypothesis I, A through G were tested by application of the chi-square test and/or analysis of variance to the need-for-change variable:

A. Across four categories of supervisory personnel,

B. Across two categories of classroom teachers,

C. Across instructional personnel from each of four types of communities and students,

D. Across teachers from four types of communities,

E. Across students from four types of communities,

F. Across teachers from small and large schools,

G. Across students from small and large schools.

Hypothesis II states that "Instructional personnel and students agree on how curriculum change should be undertaken." This hypothesis was tested by applying the same tests as used in the analyses of Hypothesis I to data included in the how-change-should-be-made variable. Sub-hypotheses IIA through IIG are parallel forms of the sub-hypothesis developed in conjunction with Hypothesis I.

The third major hypothesis correlates the perceptions of instructional personnel with their demographic variables. Analyses were conducted to correlate seven demographic variables with the need-for-change and the how-change-should-be-made variable.

For statistical comparisons of the study the 0.05 level of probability was used; that is, hypotheses for which the statistical

tests gave a significance level of less than 0.05 or 5 percent were rejected.

Interpretations of Findings

Based on the premise that achievement of educational goals will be facilitated if continuing and orderly curriculum development is maintained, the investigation was designed to assess current perceptions of curriculum change, and to provide insights derived from these perceptions which may be of benefit to curriculum leaders. It remains to examine the implications of the data and their analyses and to draw conclusions from which such continuing and orderly curriculum development may result.[1]

Survey of Perceptions

One-1. Design statement: The school program currently in action is not meeting the perceived needs of the total community.

Instructional Personnel	Students
Instructional personnel perceive the current program in the schools to be meeting the needs of the total community; however, 19.4 percent perceive it not to be meeting the needs.	Students perceive the current program in the schools to be meeting the needs of the total community; however, 11 percent believe it not to be meeting community needs.

[1]For observations based on single items of the questionnaire, means are presented; for observations based on several items, no means are given.

Instructional Personnel	Students
Believe that the current program of study should be revised (M = 2.402).	Do not perceive that teachers believe that the program of studies should be revised (M = 2.732).
Perceive that students do not regard the curriculum as relevant and useful (M = 3.014).	Perceive the school program not to be relevant and useful (M = 2.642); however, more than 40 percent do perceive it to be relevant.
Perceive that parents do not regard the program to be satisfactory (M = 2.509).	Believe that parents regard the school program to be satisfactory (M = 2.379).
Do not perceive that school graduates are well prepared for college but believe them to be relatively well prepared for employment.	Do not perceive that the graduates are well prepared for college or for employment.

One-2. Design statement: The system is tolerant and supportive of alternatives in curriculum.

Instructional Personnel	Students
Perceive the school system to be tolerant and supportive of alternatives (M = 2.445).	Perceive the school system not to be tolerant and supportive of alternatives (M = 2.759).

Instructional Personnel	Students
Believe teachers and administrators are tolerant of new ways of teaching (M = 2.253).	Believe teachers and administrators not to be tolerant of new ways of doing things (M = 2.769).
Perceive province-wide programs to be necessary in order to accommodate student transfers (M = 2.320).	Perceive province-wide programs to be essential (M = 1.943).
Believe student needs to be more important than a uniform curriculum (M = 2.027).	Believe strongly that student needs are more important than uniformity (M = 2.002).

One-3. Design Statement: Significant curriculum change has taken place recently.

Instructional Personnel	Students
Perceive revision of programs of study to have been conducted on an on-going basis for many years (M = 2.260).	Perceptions do not agree that revision has been conducted regularly (M = 2.727).
Do not agree with the statement, "Too many changes in curriculum have been attempted in the last few years" (M = 3.162).	Do not perceive that too many changes have been made (M = 3.358).
Perceive systematic revision of educational program to be motivating to teachers and students (M = 2.388).	Believe systematic revision to motivate students (M = 2.2281).

Instructional Personnel	Students
Perceive that many changes of the past years have not been beneficial to students (M = 2.847).	Perceive most changes that have taken place to have been beneficial (M = 2.495).

One-4. Design Statement: The school system should facilitate discovery and renewal.

Instructional Personnel	Students
Perceive that one function of the school program is to develop positive attitudes toward change and renewal in school and society (M = 2.313).	Express strong support for discovery and renewal as function of school (M = 2.226).
Perceive that transmission of culture to a new generation is not the prime function of schools (M = 2.660).	Perceive transmission of culture not to be prime function of schools; however, the mean score on this issue is not far from the agree level (M = 2.516).
Teaching respect for law, order and the traditional forms of society not perceived to be the major purpose of the schools (M = 3.352).	Development of respect for law and order not expressed as a major purpose of schools (M = 3.055).

Instructional Personnel	Students
Perceive the teaching task to include a continual search for new methods and materials in an effort to motivate children to think (M = 1.596).	Believe teachers should search for new methods and materials to encourage children to think (M = 1.908).
Perceive "discovery" teaching to be very important (M = 1.811).	Believe that students should be provided with "discovery" opportunities (M = 1.740).
Perceive schools should develop built-in mechanisms for renewal (M = 2.315).	Express strong belief that schools should search continually for mechanisms for change (M = 2.231).

One-5. Design Statement: There are forces in society which make curriculum change inevitable.

Instructional Personnel	Students
Perceive societal change as inevitable and although agreement is expressed on curriculum changes as essential, teacher responses do not indicate that they perceive it taking place as rapidly in schools as in society (M = 2.507).	Perceive forces which necessitate change in society but do not perceive these to be producing curriculum change (M = 2.656).

Instructional Personnel	Students
Believe employment requirements to have considerable impact on curriculum development.	Believe employment requirements are important but not major determiners of curriculum.
Perceive that new courses of study at colleges are not major forces in causing school curriculum revision (M = 3.269).	Perceive that new college programs compel schools to change their programs regularly (M = 2.417).
Believe the "knowledge explosion" of the post-war years has made curriculum upgrading essential (M = 1.852).	Perceive the "knowledge explosion" to be the prime cause for curriculum revision (M = 1.952).
Perceive that new needs in society militate for regular curriculum revision (M = 2.066).	Do not perceive that new needs in society indicate a need for curriculum revision (M = 3.166).

Two-1. Design Statement: Curriculum uniformity need <u>not</u> be maintained across the province.

Instructional Personnel	Students
Perceive that as a basic working principle of how change should take place, curriculum uniformity across the province is not necessary (M = 2.210).	Perceive that a high degree of curriculum uniformity across the province is desirable (M = 2.874).

Instructional Personnel	Students
Believe that teachers within a school division should be permitted to develop the program of studies for use in the schools of the division (M = 2.379).	Believe that teachers within a school should be permitted to alter curriculum of a particular grade.
Perceive that groups of teachers and students in a school should have freedom to alter the program of studies to more adequately meet student needs (M = 2.001).	Believe strongly that local teacher groups should have freedom to alter programs of study to meet student needs (M = 1.935).
Believe that provincial authorization of one textbook for each subject and grade is unnecessary (M = 2.037).	Do not perceive need for authorization of one textbook per subject (M = 2.411).
Express view that colleges should not be in a position to insist on a uniform program of studies at the school level (M = 3.249).	Believe that colleges should not attempt to set standards of curriculum for schools (M = 2.681).

Two-2. Design Statement: Local personnel (teachers, administrators, pupils, and parents) should initiate change.

Instructional Personnel	Students
Perceive that all local groups should be able to initiate changes in curriculum to meet needs (M = 2.267).	Agree that local groups should be able to initiate curriculum revision (M = 2.409).
Believe that the classroom teachers should be the judges of what is best for their classes (M = 2.267).	Agree with the statement that the classroom teacher is the best judge of class needs (M = 2.474).
Perceive that curriculum consultant at the division level should not choose the innovations for the division (M = 2.868).	
Believe that parents should be involved in all curriculum committees (M = 2.180).	Express agreement that parents should be involved in curriculum planning (M = 2.465).
Believe that the classroom teachers should continually try and test new ideas (M = 1.831).	Believe that the classroom teacher should continually initiate new plans and programs (M = 1.975).
Perceive the role of the Curriculum Branch of the Department of Education to be more than a designer of curriculum guides (M = 2.753).	

Instructional Personnel	Students
Believe the school administration to be no better qualified to initiate curriculum change than teachers (M = 3.904).	Believe the school administration to be no better qualified to initiate change than other school personnel (M = 3.730).

Two-3. Design Statement: New programs should be directed by local school personnel.

Instructional Personnel	Students
Mean responses indicate that local school personnel should be responsible for directing any new or innovative programs (M = 2.429).	Do not agree that a new or innovative program should be directed by local school personnel (M = 2.845).
Do not believe that direction of a curriculum project by the Department of Education guarantees a high success rate (M = 3.475).	Do not agree that new or innovative projects work best when directed by the Department of Education (M = 3.403).
Do not believe that a specialist should be employed to direct a new program (M = 3.475).	Student perceptions of who should direct new programs are unclear.

Two-4. Design Statement: Local personnel (teachers, students, parents, and community) should be involved in curriculum revision.

Instructional Personnel	Students
Perceive that local personnel should be involved in the processes of school curriculum revision (M = 2.263).	Express strong agreement for involvement of local personnel in revision (M = 1.948).
Believe that curriculum development committees should include a few parents (M = 2.180).	Agree that parents should be members of curriculum committees (M = 2.465).
Perceive a need for direct student input by student representation on curriculum committees; however, students are rated as less essential than parents (M = 2.413).	Believe strongly that students should be members of curriculum committees (M = 1.883).
Believe that teachers should be involved at every level of curriculum development, that is, planning, testing, supporting, and evaluating (M = 1.831).	Believe that classroom teachers should be involved at all levels (M = 1.975).

Two-5. Design Statement: Local school personnel (teachers, students, and parents) should be responsible for evaluation.

Instructional Personnel	Students
Perceive that evaluation of new and existing programs should involve teachers, parents, and students (M = 2.459).	Perceive that a wide base or involvement of teachers, parents and students is not necessary (M = 2.671).
Do not perceive a need for external evaluation of new programs prior to trying it in the classroom (M = 3.169).	Do not believe that proposals for new or revised programs need be screened by provincial curriculum committee (M = 2.730).
Perceive a need for local school evaluation of every pilot project (M = 2.203).	Believe that every project should be evaluated by teachers and students before implementation on a regular basis (M = 2.164).
Perceive the classroom teacher to be best judge of what is best for the class (M = 2.435).	Perceive a need for evaluation of programs by recent graduates (M = 2.461).

Two-6. Design Statement: Curriculum innovation should be supported by teachers, students, parents, school boards and governments.

Instructional Personnel	Students
Believe that support for innovative curriculum projects should	Believe that all groups, i.e., teachers, students, parents,

Instructional Personnel	Students
be forthcoming from all groups associated with schools (M = 2.283).	government should support curriculum change (M = 2.396).
Federal government support for curriculum renewal perceived to be possible through summer education programs for teachers and students (M = 2.358).	Perceive that summer projects may serve as a means of securing federal government financial support (M = 2.419).
Perceive most teachers not willing to contribute out-of-school time to develop new methods of teaching (M = 2.674).	Perceive many students ready to work on curriculum projects.
Perceive local teachers' groups to be willing to assist in funding curriculum projects (M = 2.397).	Believe that school student associations should support the development of a good library (curriculum section) (M = 2.134).
Believe most parents willing to support curriculum projects, especially those in which they have shared in planning (M = 2.073).	Believe that parents would support locally planned curriculum projects (M = 2.329).
Do not perceive in-service programs to be of support in curriculum development (M = 2.888).	

Two-7. Design Statement: Student needs should be a major basis for curriculum decision making.

Instructional Personnel	Students
Perceive student needs to be of prime concern in decision making on curriculum matters (M = 2.320).	Believe student needs should be of prime consideration (M = 2.481).
Believe administrative convenience should not be of major importance in curriculum planning (M = 3.731).	Believe administrative convenience should not be a major factor in curriculum decision making (M = 3.019).
Perceive the teacher to be the best authority on student needs but believe that the total community should provide input (M = 2.167).	Believe strongly that teachers and the community should participate in curriculum decision making (M = 2.199).

Two-8. Design Statement: Democratic, cooperative decision-making processes should be employed in developing curriculum.

Instructional Personnel	Students
Perceive that open, cooperative procedures in making curriculum decisions are essential (M = 2.425).	Perceive participation by various groups to be necessary for information purposes but do not perceive final decision making to involve more than a limited group (M = 2.744).

Instructional Personnel	Students
Do not believe that curriculum planning should be adjusted to match the personal views of school administrators (M = 3.559).	Believe strongly that teachers must be involved in all planning and decision making on curriculum matters (M = 2.132).
Believe that curriculum materials should be readily available to assist teachers and the community make decisions on curriculum matters (M = 1.900).	Do not believe that curriculum decisions should be made by teachers only (M = 2.987).
	Perceive provincial authorization of programs and materials not to be an effective means of revising curriculum (M = 3.075).

Two-9. Design Statement: The change agent should be a consultant who works in or close to the classroom.

Instructional Personnel	Students
Do not perceive the most effective change agent to be a consultant (M = 2.705).	Perceive an external change agent not to be effective in revising curriculum (M = 2.767).
Believe that the external consultant can serve best by collecting, screening, and making	Believe strongly that the divisional consultants should make materials and methods known to

Instructional Personnel	Students
innovative ideas available to the classroom teacher (M = 2.379).	teachers and let them do the innovating (M = 1.908).
Believe that any change agent should teach at least part time (M = 1.918).	

Two-10. Design Statement: Curriculum change requires development of skills in design, diffusion, experimentation and evaluation.

Instructional Personnel	Students
Perceive that leadership in curriculum development requires a wide range of skills beyond those necessary for regular classroom instruction (M = 2.249).	In general perceive curriculum development requires skills common to individuals outside of the school (M = 2.811).
Believe that divisional curriculum planners should collate and investigate innovative ideas but not choose those to be used (M = 2.858).	Believe that curriculum planning personnel have the required skills and should decide on programs, provided student and teacher opinions are used.

Comparisons of Perceptions of Need for Change

The perceptions of instructional personnel of the need for curriculum change differ significantly from the perceptions of students.

Analysis of data gathered by use of the two instruments indicated rejection of the first major hypothesis. The total sample of instructional personnel perceived curriculum change to be more desirable than did the students. The educational system was seen by teachers and supervisors to be more tolerant and supportive of alternatives in curriculum than by the students; the teacher responses tended to reinforce the conclusion reached by Kornberg in 1973 when she stated, "Teachers want to improve education and perceive the community supportive."[1] However, the students expressed greater desire for a school curriculum in which "discovery" and renewal or rejuvenation of both school and society are stressed than was evident from teacher responses.

Teachers and students expressed agreement that there are forces in society which make curriculum change necessary. This opinion is reinforced by Goble of the Canadian Teachers' Federation.

> The side-effects of the present thrust of societal change place demands upon the school to revise and update their programs, to improve their accessibility, and to make special provisions for those who are in various ways disadvantaged.[2]

In general, instructional personnel believe curriculum revision to be necessary now; students believe change to be desirable but not imperative. This difference in degree of necessity may be related to teacher-student roles in the school and/or to the length of contact with

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[1] Kornberg, op. cit., p. 48.

[2] Norman Goble, "Implications of Social Change for the Administrator," in Revolution to Resolution, ed. T. Sawchuk and G. McIntosh (Edmonton: Council on School Administration, Alberta Teachers Association, 1971), p. 18.

secondary education. The greater time span over which teacher perceptions have developed would undoubtedly have revealed more curriculum changes than could be available to the students, a fact which might explain the differences in perceptions of the number of curriculum changes already made and of the community support available.

It was hypothesized that department heads, school principals, subject-area consultants, and professional development chairmen agree on the degree of desirability of curriculum change. The analysis showed no significant differences in responses across these groups; that is, this hypothesis was accepted. Therefore, it was concluded that specific administrative or supervisory roles are not significant variables in influencing perceptions of the need for change.

The degree of teaching specialization was also used as a variable for analysis. The overall perceptions of the need for curriculum change as expressed by single-subject teachers were found not to differ significantly from the perceptions of those who instruct in several subjects. In the analysis of the responses to the sub-questions related to the role of the school in society and to the existence of forces which tend to produce change, significant differences were evident. Single-subject teachers perceive the schools' role to include an emphasis on change both in the institution itself and in society, and that there are strong forces in modern society pressing for curriculum change. Teachers of many subjects do not agree with single-subject teachers on either of these issues.

Marked variations in perceptions of the need for curriculum change were found in the teacher-student contrasts for four types of

communities. As noted in the findings, rural teachers perceived the school system not to be meeting total community needs, while the rural students believed it to be moderately satisfactory; the teachers believed rural communities to be tolerant and supportive of change, but the students do not see this to be true. In rural-urban and northern communities fewer differences between perceptions of instructional personnel and teachers were found. Urban students and their teachers exhibited significantly different perceptions of almost all aspects of the need for change. The role of the school proved to be the only issue upon which urban teachers and students demonstrated congruent perceptions.

As the overall perceptions of instructional personnel of the need for change were found to differ from the perceptions of students, it was not surprising that similar contrast for four types of communities provided marked differences. However, it is noteworthy that such differences were more pronounced for two types of communities, namely, rural and urban. In rural-urban and northern settings fewer differences were revealed. No parallel findings were reported in the literature, but on the basis of the analysis of this study, the type of community appears to be a significant variable in relation to differences in perception of need for change between teachers and students.

The perceptions of the need for curriculum change differ significantly across the instructional personnel from four types of communities.

Analyses of the need-for-change variable across teachers from schools representing four types of communities indicated significant

differences, with the northern and urban teachers indicating change to be more desirable than did rural or rural-urban teachers. On the basis of these observations, it is concluded that the type of community is related to teachers' perceptions of the need for curriculum change.

Students from four types of communities demonstrated no significant differences in their overall perceptions of the need of curriculum change. However, rural students gave strong indication that they believe significant changes have taken place recently, and expressed a somewhat higher degree of desire for change. For this reason it is concluded that the type of community is related to student perceptions of need-for-change and rural students believe curriculum change to be desirable at this time.

The size of the school was used as a variable for analyses of teachers and students' perceptions of the need for curriculum change. No significant differences were found between the perceptions of either teachers or students when classified on the basis of school size. In addition, none of the sub-hypotheses was rejected for either group. Therefore it was concluded that the size of the school is a variable which is not related to perceptions of school personnel of the need for curriculum change.

Comparisons of Perceptions of How Change Should Be Undertaken

The perceptions of instructional personnel of how curriculum change should be undertaken differ significantly from the perceptions of students.

Analyses of the how-to-undertake-curriculum-change variable for instructional personnel and students showed both groups to favour democratic, cooperative procedures of curriculum decision making, but the desire for these procedures was demonstrably greater on the part of the instructional personnel. The teachers expressed confidence in their own members as curriculum leaders and reinforced the idea of total community involvement in program development. In this respect their perceptions agreed with Reimer and Bean, who in 1974 wrote: "Teachers have the professional competence to design and experiment with innovations."[1]

Analyses of the responses for each design statement related to the how-curriculum-change-should-be-undertaken variable revealed a number of subtle differences in teacher-student perceptions which may have implications for curriculum leaders. The degree of uniformity of curriculum desired for all schools in a system proved to be a variable for which major differences exist. Students perceive a high degree of uniformity to be necessary for convenience of those who transfer from school to school. On the issues of change initiation and involvement, teachers perceived need for direct committee representation of the total community, while students perceived that curriculum committees might receive advice from the community but the final decisions should be made by a committee of teachers, administrators and curriculum persons. In this respect the perceptions of students were similar to those of elementary teachers as reported in the literature. Sources

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[1]Reimer and Bean, op. cit., p. 79.

of curriculum leadership also proved to be an issue which separated teachers and students. Some of the reports in the literature tended to reinforce the teachers' beliefs that the leadership required for innovation is already present in the schools; student responses indicated that they perceive such leadership coming from sources external to the school.

In summary, the analyses of responses provided by instructional personnel and students for all of the design statements indicated that the teacher role and student role are significant variables in relation to perception of how curriculum change should be undertaken.

The perceptions of how curriculum change should be made as expressed by provincial curriculum consultants, department heads, professional development chairmen, and administrators do not differ significantly.

On the basis of analysis of responses from four categories of supervisory personnel it is concluded that specific supervisory role was not related to perception of how curriculum change should be undertaken. It should be pointed out, however, that although the differences were non-significant, personnel who are school based, that is, administrators and department heads, demonstrated a consistently higher response to cooperative decision making based on student needs than did the two classes of consultants.

Teachers who specialize in one subject and teachers who instruct in several subjects expressed significant differences in their perceptions of how curriculum change should be undertaken.

Analysis of the responses for the two groups of teachers revealed consistent differences for each design statement. The single-subject teachers perceived a greater desire for cooperative decision making involving the whole community. Therefore, it is concluded that the degree of teaching specialization is related to the perception of how curriculum change should be undertaken; specialized teaching in one subject area appears to be related to open community-based decision making.

The type of community was found to be a variable which should be considered in relationship to differences in perceptions of instructional personnel and students of how curriculum change should be undertaken.

Analysis of teacher-student differences in perceptions of how change should be made for four types of communities showed that for rural-urban communities few differences were noted in contrast to other types of communities. For this reason it is concluded that the type of community is related to the degree of difference in perceptions of teachers and students concerning how curriculum change should be undertaken.

The perceptions of how curriculum change should be made as expressed by instructional personnel from four types of communities differ significantly.

Analysis of responses for personnel from four types of communities revealed that differences did exist and that teachers in a rural-urban setting perceived cooperative decision making to be less desirable than did other teachers. It is concluded that the type of

community is a significant variable in relation to perceptions of how to change.

Students from four types of communities expressed differing perceptions of how curriculum changes should be undertaken.

Responses from students of four types of communities revealed that northern students perceive significantly less need for cooperative decision making which involves the total community than do other students. Because of the difference noted, it is concluded that the type of community is a significant variable in this analysis.

School size was reported to be a significant variable in connection with innovation and change as reported in the literature. However, in the study, school size did not appear to be a significant variable with respect to the perceptions of instructional personnel. Analysis of student responses did indicate significant differences in student perception for respondents from schools of different sizes. For this reason, it is concluded that size of school may be a significant factor with regard to perceptions of how curriculum change should be undertaken, and should be considered especially when student opinions are being used.

Relationships Between Dependent and Demographic Variables

On the basis of the findings of the study, there is evidence to support the following conclusions with respect to the relationships between the demographic characteristics of the sample of instructional personnel and the dependent variables.

Age.--The age of teachers and supervisors was found to be a significant variable in relation to perceptions of the extent to which the school system was meeting the needs of the total community and in relation to who should be involved in the process of curriculum change. Instructional personnel who were less than forty years of age perceived the educational system not to be meeting the needs of the community and expressed more concern for total community involvement in curriculum development.

However, in spite of the fact that significant differences were noted between old and young teachers on these two issues, the age of the respondent was not found to be a significant variable in relation to the summation of the need-to-change or the how-to-change-curriculum variable.

Sex.--The degree of desirability of curriculum change and the sex of the respondent were not found to be significantly related. However, in response to "How should change be undertaken?" female teachers expressed a significantly greater desire for cooperative decision-making procedures based on needs of local students than did male teachers. It is concluded that the sex of the respondent is related to perception of how curriculum change should be undertaken.

Teaching experience.--Teachers and supervisors who have less than ten years experience perceived the educational system to be more tolerant and supportive of curriculum alternatives than did teachers with more teaching experience. Less experienced teachers also perceived the total community to have responsibility for the initiation

and support of change and that a wide range of skills is needed in order to facilitate educational change. In summary, teaching experience was found to be a significant variable in how curriculum change should be undertaken; less experienced teachers perceive cooperative decision making which involves the total community to be more desirable than do teachers who have more experience.

This finding and the conclusion reached may reflect the fact that the more experienced teachers have found wide community involvement either to be inefficient or simply unnecessary; in any event, more experienced teachers tend to see decision making on curriculum issues as an in-house process, while less experienced teachers believe it should involve the total community.

Marital status.--Married and unmarried teachers did not exhibit significant differences in their overall perceptions of the need for curriculum change. A larger percentage of unmarried teachers than married teachers perceived the system not to be meeting the needs of the total community and that societal forces were pressing for curriculum revision; for all other design statements related to need for change the proportions of respondents were reversed. Married teachers are more likely to perceive local needs to be a major determinant of need for curriculum revision, while unmarried teachers believe external forces to be the major causes of change.

With respect to how curriculum change should be undertaken, the perceptions of married and unmarried teachers were not significantly different. Therefore, it is concluded that marital status is not a significant variable with regard to how curriculum change is made.

Professional preparation.--Although the amount of professional preparation was not found to be a significant variable in relation to overall perception of the need for curriculum change, for two design statements, teachers who have had extensive professional preparation did perceive a significantly greater degree of need-for-change than did teachers who had not had extensive training. Therefore it is concluded that teachers who have had extensive professional experience perceive the school system to be more open to and supportive of curriculum alternatives than do teachers who have had less extensive preparation. Also it is concluded that discovery teaching and consideration of renewal of both school and society are considered to be important aspects of school programs by teachers who have more extensive professional preparation.

No significant differences in perceptions of how curriculum change should be made were noted between teachers whose professional preparation was extensive or less extensive. It is concluded that the extent of professional preparation is not related to perception of how curriculum change should be undertaken.

In-service continuing education.--Continuing education was found to be a significant variable in relation to the perceptions of instructional personnel of the degree of desirability of curriculum change. Not only did the respondents who have had extensive in-service education perceive greater overall need for curriculum change than did those who have had less such experience, the findings showed that they believed more strongly that the system was more tolerant and supportive of curriculum alternatives and that the school program

should provide opportunities for discovery learning. Therefore, it is concluded that the amount of continuing education is a variable related to perception of the need for curriculum change.

No significant differences in perceptions of how curriculum change should be undertaken as expressed by teachers who have had extensive continuing education and those who have not had such training were found except for the design statement on curriculum uniformity. For this issue the conclusion reached is that teachers who have had extensive in-service or continuing education perceive less need for curriculum uniformity than do teachers who have not had such education.

In-service leadership experience.--Significant differences were found between the perceptions of the need for change of teachers who have had leadership experience with in-service programs and the perceptions of those who have not had this experience. However, the perceptions of these groups were not significantly different with regard to how curriculum change should be undertaken, and therefore it is concluded that in-service leadership experience is related to teacher perception of the need for curriculum change. Teachers who have had in-service leadership experience perceive curriculum revision to be more desirable than do those who have not had such experience.

Summary of Comparisons

A. Need for Curriculum Change

1. Instructional personnel perceive curriculum change to be more desirable than do students.

2. Department heads, administrators, consultants, and professional development chairmen agree on the degree of desirability of curriculum change. All four groups perceive curriculum change to be moderately desirable.

3. Single-subject teachers and teachers who instruct in several subjects agree on the need for curriculum change; however, single-subject teachers perceive the system to be more tolerant of alternatives than do other teachers.

4. In rural and urban communities, the perceptions of the need for change as expressed by teachers differ from the perceptions of students. In general, teachers perceive curriculum change to be more desirable than do students. For rural-urban and northern communities the difference is not marked.

5. Teachers from northern and urban communities perceive change to be more desirable than do rural or rural-urban teachers.

6. Students from four types of communities agree on the degree of desirability of curriculum change. All students perceive curriculum change to be necessary but not imperative at this point in time.

7. Teachers from large schools and those from small schools agree on the need for curriculum change. A large proportion of all teachers believe curriculum change to be necessary.

8. Students from large schools and those from small schools agree on the need for curriculum change.

B. How Curriculum Change Should Be Made

1. In relation to curriculum development, instructional personnel favour cooperative decision making based on local needs more than do students.

2. Department heads, administrators, consultants and professional development chairmen agree on how curriculum change should be undertaken. Instructional personnel assigned to these roles perceive cooperative decision making based on local needs to be highly desirable.

3. In relation to curriculum revision, single-subject teachers perceive cooperative decision making based on local needs to be more desirable than do teachers of several subjects.

4. For each of four types of communities, instructional personnel and students differ in their perceptions of how curriculum change should be made; for rural-urban communities the differences are significant but less striking than for the other communities.

5. Instructional personnel from rural-urban communities perceive cooperative decision making to be less desirable than do teachers from other types of communities.

6. Students from northern communities perceive cooperative decision making based on local needs to be less desirable than do students from other types of communities.

7. Instructional personnel from small schools and those from large schools agree on how curriculum change should be undertaken; however, teachers from large schools perceive a greater need for total

community involvement in curriculum development than do teachers from small schools.

8. Students from small schools perceive cooperative decision making based on local needs to be more desirable than do students of large schools.

C. Demographic Variables

1. Young teachers and old teachers agree on the degree of desirability of curriculum change. However, young teachers perceive that the total needs of the community are not being met to the degree expressed by older teachers.

Young teachers perceive a greater need for total community involvement in curriculum decision making than do older teachers.

2. Female teachers perceive the school system to be more tolerant and supportive of curriculum alternatives than do male teachers. Female teachers also perceive that persons responsible for curriculum development should be classroom teachers or at least in close contact with the classroom setting; male teachers do not perceive close classroom contact to be essential for the curriculum consultant or change agent. Different aspirations of upward mobility or promotion may be related to these differences between male and female teachers.

3. Less experienced teachers perceive the school system to be more tolerant and supportive of alternatives than do more experienced teachers.

Less experienced teachers favour wide community involvement in curriculum decision making plus total community involvement more strongly than do experienced teachers.

4. Unmarried teachers believe more strongly than married teachers that the school system is not meeting the needs of the total community and that there are external forces pressing for curriculum change. Married teachers perceive curriculum change to be necessary and indicate fewer reservations about how it may take place than do unmarried teachers.

5. Teachers who have had extensive professional preparation believe that the system is tolerant and supportive of alternatives in curriculum more strongly than do teachers who have less professional preparation.

Also, more highly trained teachers believe the school programs should emphasize renewal and rejuvenation of both school and society; less highly trained do not see this as a prime function of the school.

6. Teachers who have had extensive in-service education perceive curriculum change to be more desirable than those who have not had such training.

Teachers who have had extensive in-service education do not perceive a high degree of curriculum uniformity to be essential.

7. Teachers who have played leadership roles in continuing in-service education perceive curriculum revision to be more desirable than do teachers who have not been leaders.

Implications and Recommendations

The findings of the study appear to suggest implications for curriculum leaders, school boards, and professional educational associations. Need for further research in a number of related areas is also suggested.

Implications for Curriculum Leaders

"Achievement of educational goals will be facilitated if continuing and orderly curriculum development is maintained within the educational systems of a nation," was stated as a premise basic to the study. In order to achieve continuing and orderly development, it is assumed that curriculum leaders will be evident at several levels in the system and that these leaders will seek ways to stimulate concern for curriculum improvement both in the school and in the community.

It would appear that the curriculum leader at the school level should attempt to determine the perception of need for and means of achieving curriculum change for the total community. He should make every effort to keep the school and community aware of the impact of changes in society which tend to make curriculum change necessary. Furthermore, the curriculum leader should ensure that the differences in perceptions of instructional personnel and students are recognized by curriculum committees in order that perceived needs and procedures may be accommodated. Finally, the local curriculum leader might develop a program through which teachers and students could cooperate in developing curriculum plans.

The findings of the present study have implications for the provincial curriculum consultants. It would appear that instructional

personnel and students believe that curriculum development should be a school-based activity which involves the school and community, drawing on outside resources when necessary. Provincial consultants ought to be aware of these perceptions in order to provide input where needed and avoid either a dominating or non-supportive role. In addition, the differences in perceptions across types of communities indicate that the provincial consultants require considerable understanding of socio-economic conditions and of the need for alternative approaches to curriculum development suitable for application in different areas. Finally, teacher perception of the role of curriculum leaders indicates that the provincial curriculum consultants ought to maintain two-way communication with resource sources, such as publishers, film producers and manufacturers, to ensure: (1) that new materials are available to local committees, and (2) that local needs are made known to those who develop curriculum resources.

The findings of the study suggest implications for the teacher-training institutions and for agencies concerned with continuing education programs. The data indicate that teachers do not perceive either pre-service or in-service training programs to be effective in assisting teachers to develop programs suitable to meet local needs. It would appear that the teacher-training institutions, in cooperation with the professional associations, should strive to develop pre-service and in-service teacher education programs geared to prepare professionals with flexibility and independence to cope with on-going curriculum revision based on local needs.

Implications for School Boards

Practical implications for school boards are also forthcoming from the findings and conclusions of the study. Students and teachers perceive curriculum change to be desirable and seek cooperative means of achieving such change. This appears to suggest that school boards might seek means to provide time and facilities for curriculum planning which could involve the school and the community. Furthermore, both student and teacher responses indicate that, when innovative curriculum plans are developed, provision should be made for support of pilot studies, adequate evaluation, and refinement of the program prior to regular implementation.

Although there is no direct statement in the findings, there is some evidence that teachers perceive a need for broader input than is frequently available. This may suggest that school boards might also consider providing local curriculum leaders with opportunities to stimulate curriculum creativity through sabbatical leave, release time or exchange of personnel.

Finally, the evidence relating to need for curriculum uniformity and to textual resources suggests that uniformity of curriculum is not helpful; therefore, school boards in cooperation with the Department of Education might make significant changes in the availability of textbook and resource materials. Resource materials available to teachers and students should be expanded even to the extent that provincial authorizations might be eliminated.

Implications for Educational Associations

A number of significant relationships and statements of agreement in the evidence suggest possible implications for students' and teachers' organizations.

Perceptions of student involvement in planning, support, and evaluation of curriculum innovation suggest that school students' councils might give serious consideration to direct participation in curriculum development through active membership on committees and through purchase of resource materials for innovative projects within schools.

The positive relationships between involvement in professional association activities and desire to achieve renewal in school curriculum would seem to have implications for the professional development programs of educational associations. It would seem that professional associations should encourage and assist their members to advance their professional education, to take part in in-service education to the fullest, and to encourage leadership in continuing education wherever possible. A specific suggestion for in-service participation and leadership might involve a body of the best curriculum leaders. These teachers would be freed part-time, first to plan for curriculum revision and later to help other teachers to effect change in their own classroom.

Recommendations for Further Research

The current study has implications for further related research. Related research might add support to the validity and reliability of

the current study. It might also develop the dimensions of understanding of change in the school system and of means by which it may be achieved.

In the limitations of the study, a number of factors relative to the validity and reliability of the study were listed. It would seem worthwhile to conduct cross-validation and replication studies employing different samples of respondents. It would be beneficial to explore the effects of the terminology used, the impact of design variations in the research instruments, and the effect of the role of the researcher on expressed perceptions of school personnel.

By the delimitations of the study, research related to curriculum change was restricted to a school system in which decision making in curriculum matters has been highly centralized. It would appear to be worthwhile to conduct parallel investigations in a system which is characterized by a high degree of decentralization and by so doing determine the extent to which centralization affects perceptions of curriculum change as expressed by school personnel.

The final delimitation noted for the study restricted the investigation to those school divisions whose superintendents expressed willingness to have staff and students involved. The extent to which approval for research granted by the superintendent might affect the research findings of a study of this nature requires further careful study.

The evidence and conclusions of the study point to a number of related ideas which would also seem to suggest further research. These ideas are:

1. Instructional personnel perceive curriculum change to be taking place more rapidly than do students. Is this difference in perception a function of age or is it related to the role of each respondent?

2. Teachers' attitudes toward the need for curriculum change are influenced by the cultural climate of the community in which they teach. Research is needed to ascertain if teacher attitudes change significantly with change of location of employment.

3. Curriculum change takes place when school personnel see a need for change. What are the necessary requisites for teachers to perceive change to be necessary?

4. Instructional personnel perceive cooperative decision making in curriculum development to be more essential to the process than do students. Do schools teach students to believe change can most readily be effected through authority?

5. Teacher attitudes toward how curriculum change should be undertaken are influenced by the degree of specialization of teaching assignment. Is specialization of assignment related to perception of how curriculum change should be made or is specialized preparation for teaching the determining variable?

6. Curriculum revision takes place when school personnel know how to effect change.

7. Total community needs are of major importance in relation to the perceptions of the desirability of curriculum change as expressed by instructional personnel.

8. It is possible to select a set of demographic variables which will correlate highly with perceptions of the need for curriculum change.

9. Teachers' attitudes toward the processes by which change may take place are congruent with those of supervisory personnel.

APPENDICES

APPENDIX A

PARTICIPATING SCHOOLS AND INVITATIONS TO RESPONDENTS

APPENDIX A

PARTICIPATING SCHOOL DIVISIONS AND SCHOOLS

School Division	Schools
1. St. James #2	St. James Collegiate Westwood Collegiate Bruce Junior High School
2. Assiniboine South #3	Charleswood Collegiate Westdale Collegiate
3. St. Vital #6	Glenlawn Collegiate Hastings Junior High School
4. Norwood #8	Nelson McIntyre Collegiate Queen Elizabeth School
5. River East #9	River East Collegiate Kildonan East Regional School Chief Peguis Junior High School
6. Lakeshore #23	Fisher Branch Collegiate Eriksdale High School Ashern Collegiate Lundar Collegiate
7. Portage La Prairie #24	Portage Collegiate Yellow Quill Junior High School
8. Tiger Hills #29	Treherne Collegiate Glenboro Collegiate Baldur High School Pilot Mound Collegiate
*9. Souris Valley #42	Souris Collegiate Hartney Collegiate Wawanesa Collegiate
10. Turtle Mountain #44	Killarney Collegiate Cartwright High School
11. Mystery Lake #2355	R.D. Parker Collegiate

*Pilot Study

School Divisions &Districts

Map of Southern Manitoba shows School Divisions & Districts south of 53°N latitude except portions of Frontier Division No. 48

- Northern School Divisions & Districts
- Locations of Frontier School Division No. 48

Information dated 1973

SOUTHERN MANITOBA

The University of Manitoba
Faculty of Education

June, 1974

Dear Staff Member:

I thank you for agreeing to participate in the Curriculum Development Survey.

For the schools in Southern Manitoba I have decided to distribute and pick up the questionnaires personally rather than by mail. This necessitates some operational instructions different from those provided in the questionnaire. Please be guided by the following steps:

1. Fill out the questionnaire, answering all questions to the best of your knowledge without prior discussion with your colleagues.

2. When finished, return the booklet unsigned to the principal's office.

3. Initial the attached card in the space provided and give the card to the principal's secretary. This will provide me with the names of those who have completed the survey.

Thanks again. Your assistance is appreciated.

Yours sincerely,

Murray McPherson
Professor of Education

The University of Manitoba
Faculty of Education

June, 1974

Dear Staff Member:

Re: Curriculum Development Survey

This is a request for your professional assistance in a research project being conducted as part of a doctoral program at Michigan State University. While this project is primarily concerned with curriculum development in Manitoba, the questions raised are relevant to school programs in general.

You are invited to participate by responding to a questionnaire designed to obtain data from classroom teachers, curriculum consultants, and administrators. Your perceptions of the need for ongoing curriculum revision and means by which this may be achieved, will be invaluable. It is hoped that you will take sufficient time to provide a considered response to each item. (Total time required approximately 30 minutes.)

If you are willing to assist in this project please fill in the reply form at the bottom of the page and return it to your principal or his/her designate.

Your response and support in this modest venture is greatly appreciated. I thank you for participating and regret the demand on your time and energy.

Yours sincerely,

Murray McPherson, Professor
Department of Curriculum:
Mathematics and Natural Sciences

I (would) (would not) like to participate in the Curriculum Development Survey by completing the questionnaire.

Name_____

School_____

Room Number_____

APPENDIX B

CURRICULUM DEVELOPMENT IN MANITOBA

APPENDIX B

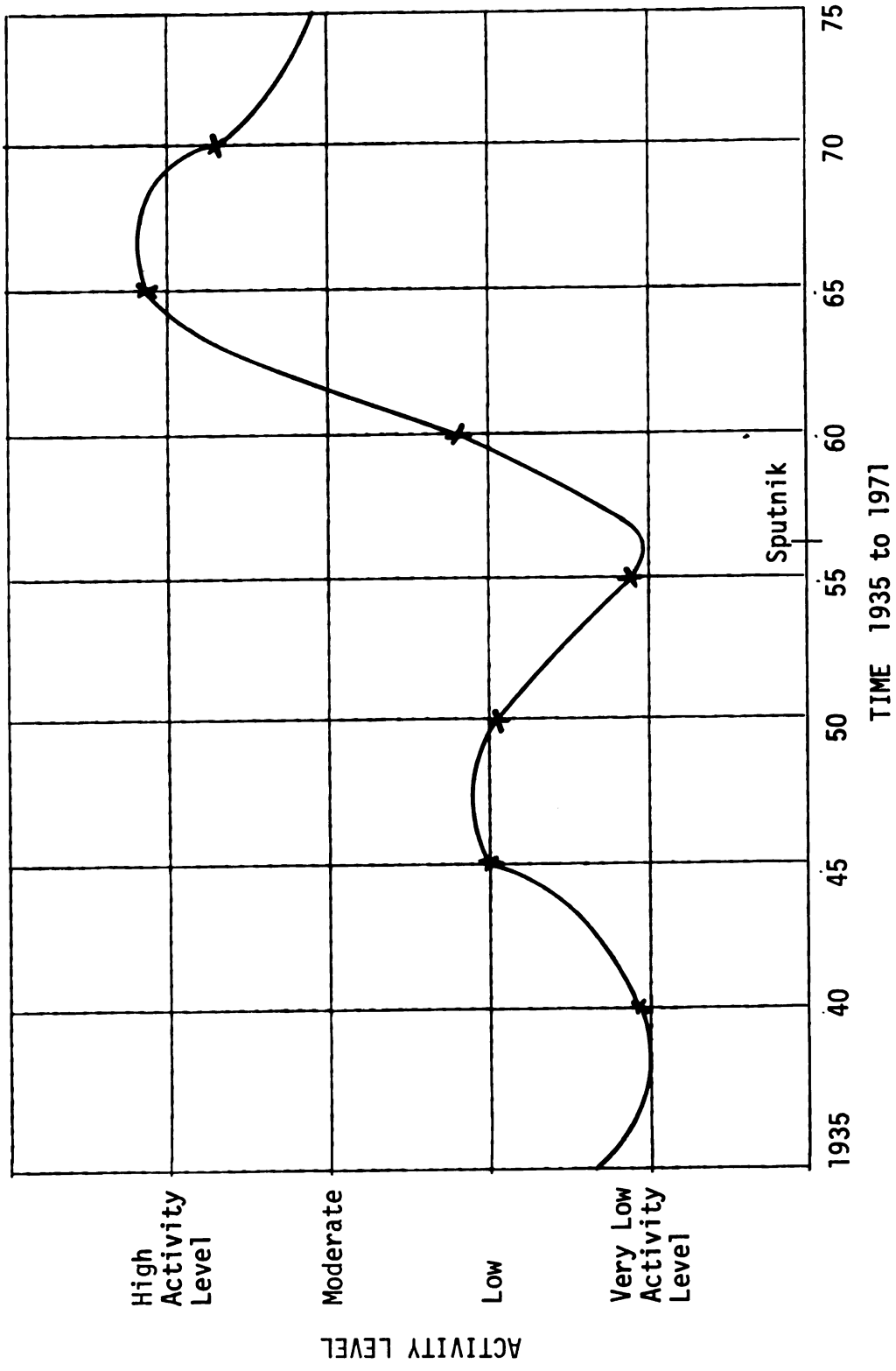

Figure 3.--Activity related to curriculum change in Manitoba schools.

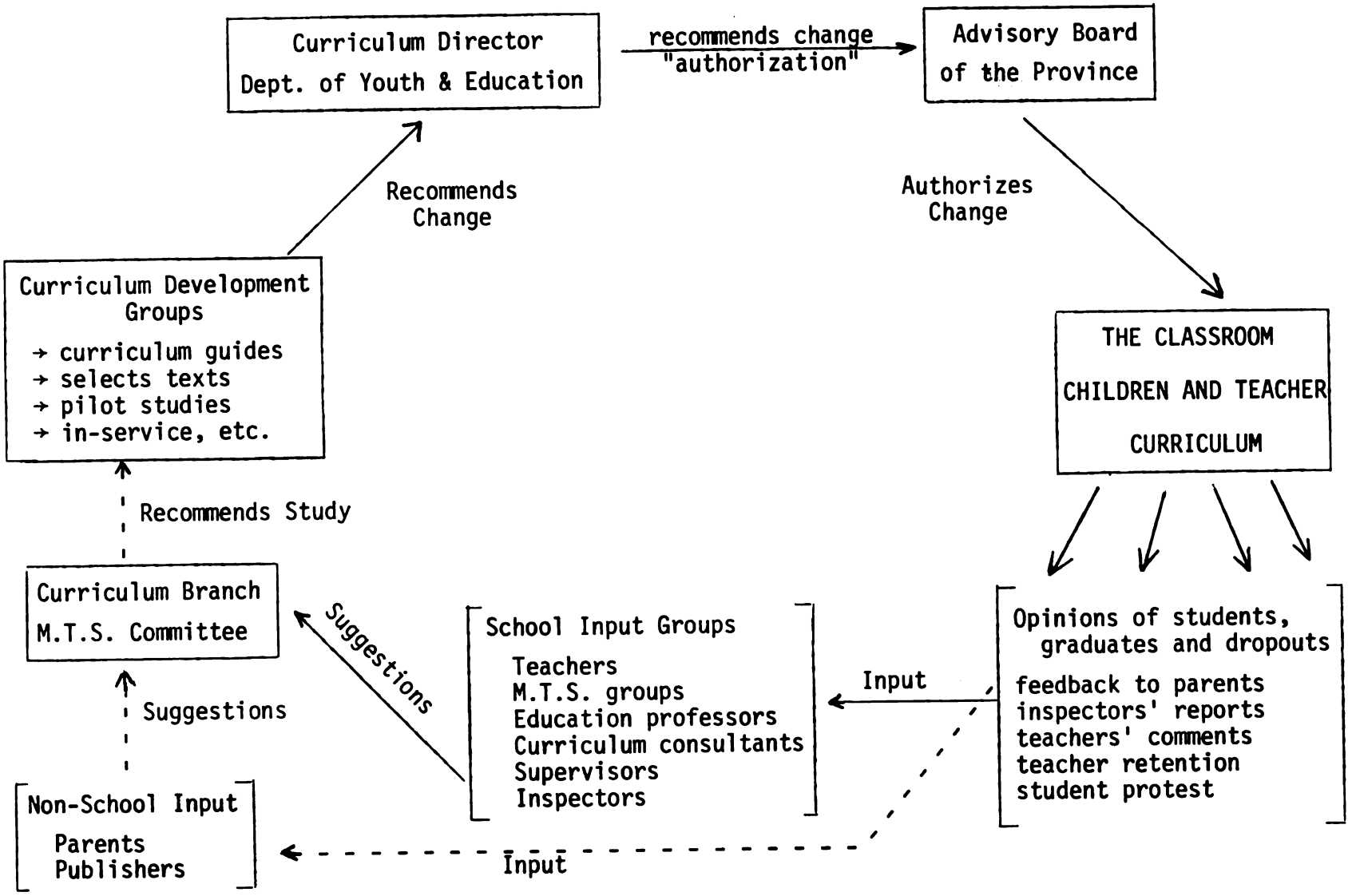

Figure 4.--Centralized structure for authorization of curriculum guides and texts.

APPENDIX C

SUPPLEMENTARY DATA AND CALCULATIONS

APPENDIX C

SUPPLEMENTARY DATA AND CALCULATIONS

Table 6.1A.--Perceptions of need for curriculum change of administrators and supervisors.

Category	Number	Mean	Standard Deviation
Department Head	50	12.6142	1.1410
Principals	47	12.3711	1.2192
Consultants	8	13.1049	1.1881
Professional Development Chairmen	20	12.4420	1.4257

Table 6.1B.--Analysis of variance of need-for-change scores of administrators and consultants.

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	4.3359	1.4453	0.968	0.412*
Within Groups	121	180.6641	1.4931		
Total	124	185.0000			

*F ratio non-significant at .05 level.

Table 6.2A.--Perceptions of need for curriculum change of teachers (single-subject vs. multi-subject)

Category	Number	Mean	Standard Deviation
Single-subject teachers	134	12.7633	1.0479
Multi-subject teachers	177	18.8772	1.2049

Table 6.2B.--Analysis of variance of need-for-change scores of teachers (single-subject vs. multi-subject).

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	0.9883	0.9883	0.760	0.388*
Within Groups	309	401.5742	1.2996		
Total	310	402.5625			

*F ratio non-significant at .05 level.

Table 6.3A.--Perceptions of classroom teachers from four types of communities of variable One-1: "The school program is not meeting the needs of the total community."

Category	Number	Mean	Standard Deviation
Rural	75	2.8218	0.4123
Rural-Urban	45	2.9825	0.3978
Northern	11	2.5555**	0.3821
Urban	182	2.8434	0.4205

**Significantly less agreement than other groups.

Table 6.3B.--Analysis of variance of variable One-1: "The school program is not meeting the needs of the total community."

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	3.4974	1.1242	3.111	0.041
Within Groups	309	111.7652	0.3617		
Total	312	115.2626			

Table 6.3C.--Perceptions of classroom teachers from four types of communities of Variable One-2: "The system is tolerant and supportive of alternatives."

Category	Number	Mean	Standard Deviation
Rural	75	2.5238	0.3861
Rural-Urban	45	2.7333**	0.4093
Northern	11	2.2857	0.4607
Urban	182	2.4403	0.4206

**Significantly less agreement than other groups.

Table 6.3D.--Analysis of variance of variable One-2: "The system is tolerant and supportive of alternatives."

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	3.6436	1.2145	7.141	0.000*
Within Groups	309	52.5513	0.1701		
Total	312	56.1949			

*F ratio is significant at .05 level.

Table 6.4A.--Perceptions of how curriculum change should be made as expressed by administrators and supervisors.

Category	Number	Mean	Standard Deviation
Department Heads	50	22.9036	2.7027
Principals	47	22.6458	2.3293
Consultants	8	23.3643	2.4370
Professional Development Chairmen	20	23.6635	3.4298

Table 6.4B.--Analysis of variance of how-curriculum-change-should-be-made scores of administrators and supervisors.

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	16.0625	5.3542	0.742	0.531
Within Groups	121	872.5625	7.2113		
Total	124	888.6250			

Table 6.5A.--Perceptions of how curriculum change should be made as expressed by teachers (single-subject vs. multi-subject).

Category	Number	Mean	Standard Deviation
Single-subject teachers	134	23.2314	2.9206
Multi-subject teachers	177	23.9788	2.8305

Table 6.5B.--Analysis of variance of how-curriculum-change-should-be-made scores of teachers (single-subject vs. multi-subject).

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	42.6875	42.6875	5.184	0.022
Within Groups	309	2544.5625	8.2348		
Total	310	2587.2500			

Table 6.6A.--Perceptions of how curriculum change should be made as expressed by classroom teachers from four types of communities.

Category	Number	Mean	Standard Deviation
Rural	75	2.3227	0.5549
Rural-Urban	45	2.5244	0.5140
Northern	11	1.9455	0.5373
Urban	182	2.2406	0.6111

Table 6.6B.--Analysis of variance of how-curriculum-change-should-be-made scores of classroom teachers from four types of communities.

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	4.3035	1.4345	4.226	0.006*
Within Groups	309	104.8955	0.3395		
Total	312	109.1990			

*F ratio is significant at .05 level.

APPENDIX D

STUDY DESIGN AND QUESTIONNAIRES

APPENDIX D

THE STUDY DESIGN

Question I. Should curriculum change be made?

I - 1. Is the school program currently in action meeting the perceived needs of the total community? (Is the current program perceived to be relevant?)

a. Is it accepted by the students?

b. Are the parents satisfied?

c. Is it accepted by the teachers?

d. Are the graduates of the schools suitably equipped to meet the needs of employers and/or of the post-secondary institutions?

I - 2. Is the system tolerant and supportive of alternatives in curriculum?

a. Is deviation from tradition viewed as a threat?

b. Will a non-standard curriculum cause unnecessary hardship for the graduates?

I - 3. What is the past experience with change?

a. Has curriculum change taken place recently?

b. Has change produced an improvement?

I - 4. What is the role of the school program?

a. Is the school program or curriculum designed to maintain the "status quo"? Should the curriculum tend to stabilize society?

b. Should the school program teach reform?

I - 5. What forces in society tend to make change inevitable?

a. Are employment requirements changing?

b. Are the admission requirements of post-secondary institutions changing?

c. Are the "Joneses" doing it?

Question II. How should curriculum change be undertaken?

II - 1. To what extent is the school system or sub-system (division or district) tolerant and accepting of alternatives? Does uniformity have to be maintained?

a. Should all students in the province have the same program of studies?

b. Should all classes in one school use the same text?

II - 2. Who should initiate change?

a. classroom teacher

b. P.T.A. or local groups

c. administration

d. provincial authority

e. publishers

f. all of the above

g. others

II - 3. Who should direct change?

a. the Curriculum Branch

b. consultants and specialists

c. curriculum committees

II - 4. Who should be involved in the process?

a. teachers

b. teachers and pupils

c. school and community

II - 5. Who should evaluate it?

a. Who should evaluate the initial proposal?

b. Who should evaluate the pilot study?

c. Who should evaluate the final study?

II - 6. Who should support change?

a. Who should support curriculum research?

b. Who should support pilot studies?

c. Who should support the full study?

II - 7. On what basis or background should curriculum decisions be made?

a. student needs

b. local community needs

c. national or provincial philosophy

d. teaching practice

e. discipline oriented

f. administrative needs

II - 8. What is the procedure to be followed in decision making?

a. cooperative

b. authoritarian

c. externally imposed

d. trial and error

e. systems approach

II - 9. What is the "modus operandi" of the change agent?

a. demonstration of innovative ideas

b. publication of bulletins

c. consultation

II -10. What roles have to be filled?

a. the curriculum designer

b. the experimenter

c. the evaluator

d. the support role

QUESTIONNAIRE FOR INSTRUCTIONAL PERSONNEL

DISTRIBUTION OF ITEMS IN STUDY DESIGN

Framework Index	Items Principal	Items Auxiliary
I - 1-a	18, (23)	
b	(25)	
c	13	
d	(27), 31, 36	
I - 2-a	14, (19), 24, (28), 32	
b	(37), 41	
I - 3-a	15, (26)	
b	20, 29, 33, 38, (42)	
I - 4-a	16, (21), (30)	(42)
b	34, 39, 43	24
I - 5-a	(17)	31
b	22	
c	35	27
d	40, 44	36
I - 6	87	
II - 1-a	45, 53, 60, (77)	
b	(67)	
II - 2-a	46, 68	
b	(47), 54	
c	(80)	
d	78	
e	61	
f		
II - 3-a	(55)	
b	(79)	
c	81	
II - 4-a		68, 70, 81
b	62, 69	64
c		54, 82

Framework Index	Items Principal	Items Auxiliary
II - 5-a	(48), 56	
b	63	
c		46, (80)
II - 6-a	49	
b	64, 70, 71	
c	57, 82	
II - 7-a	50	53
b	84	56
c	(65)	
d	(58)	
e	(83)	
f	(72)	(51)
II - 8-a	59	
b	(51), 85, 86	
c	(66), (73)	(55)
d	74	
e		71, (79)
II - 9-a	52	47
b	75	
c		79
II -10-a	76	
b		81
c		47, 69
d		57, 71, 75

◯ Reverse Score

OPINION SURVEY OF
CURRICULUM DEVELOPMENT
IN MANITOBA

MICHIGAN STATE UNIVERSITY

1974

Form E

OPINION SURVEY OF CURRICULUM DEVELOPMENT IN MANITOBA SCHOOLS

"Our future holds two certainties: one, that it is ahead of us; the other, that it will arrive.

"Knowledge indicating where present trends may lead is both a prerequisite to, and a stimulus for, the definition of alternative futures. The definition and assessment of alternative futures is a responsibility that belongs to each of us."

A Choice of Futures

Commission on Educational Planning (Alberta)

October 1972

INFORMATION ABOUT THE STUDY

A. WHAT IS THE PURPOSE OF THE STUDY? The survey is part of the research for a doctoral dissertation being conducted at Michigan State University. The study attempts to assess the perceptions of school personnel of curriculum change.

B. WHO APPROVED THE STUDY? The Manitoba Department of Education, the Manitoba Teachers' Society and the Faculty of Education of the University of Manitoba have been consulted and have approved the research procedures.

C. WILL THE ANSWERS BE CONFIDENTIAL? Very much so. Your name or the name of the school are not required and should not be written on the response form. All answers will be coded on I.B.M. cards and grouped with answers from other teachers. Your anonymity is secure.

D. HOW LONG WILL IT TAKE? Some people have filled it out in twenty minutes. Most respondents take half an hour.

E. WHAT WILL BE DONE WITH THE RESULTS? After coding on cards, all responses will be fed into the computer for appropriate analysis. A final report will be based on these results.

Directions

WHAT TO DO: Inside the booklet are some questions and statements about school programs in Manitoba. There are no "correct" or "incorrect" answers because everyone has the right to his/her own views. To be able to get the best advice from your results, you will want to answer exactly and truly.

Answer by placing a check mark in the appropriate space. Please do not omit items as no response will make interpretation difficult.

Do not discuss the items with other persons before you complete the questionnaire. Scientific accuracy and comparability depend upon each person meeting the items "cold," as you are doing.

WHEN YOU ARE FINISHED: After you have completed the questionnaire, place it, unsigned, in the enclosed self-addressed envelope and return it to me. At the same time please mail the attached postcard. I will then know that your questionnaire has been mailed and can check on any that may be missing.

The information is needed now. Please make every effort to return the questionnaire promptly.

WE WANT TO BEGIN BY ASKING SOME QUESTIONS ABOUT YOU, THE RESPONDENT, AND ABOUT THE SCHOOL IN WHICH YOU TEACH. PLEASE ESTIMATE IN CASES WHERE YOU ARE NOT CERTAIN OF PRECISE NUMBERS.

1. Sex:

___1. Male ___2. Female

2. Your age:

___1. under 24 years ___2. 25-32, ___3. 33-39

___4. 40-44 ___5. 45 or over

3. For how many years have you been teaching?

___1. one year or less ___2. 2-4 years ___3. 5-9 years

___4. 10-14 years ___5. 15 years or more

4. Marital status:

___1. unmarried ___2. married with spouse employed

___3. married with spouse not employed ___4. divorced or separated

5. What is the size of the school in which you teach or supervise?

___1. 1-99 students ___2. 100-249 students

___3. 250-499 students ___4. 500-999 students

___5. 1000 or more students

6. Your position in the school system is: (check more than one if necessary)

___1. classroom (teacher single subject)

___2. classroom (teacher more than one subject)

___3. department head ___4. administrator

___5. consultant ___6. professional development chairman

7. How would you classify the area served by your school?

___1. Rural (rural communities including towns of 2500 persons or less)

___2. Rural-urban (towns of 2500 persons or more plus adjoining rural areas)

___3. Northern (all cities and towns north of the 53rd parallel)

___4. Urban (cities of 10,000 persons or more)

8. How many university courses in your major teaching area have you taken? (Do not include methods courses)

___1. none ___2. one ___3. 2-3

___4. 4-5 ___5. six or more

9. How many methods courses (how to teach) have you taken in your major teaching area?

___1. none ___2. one ___3. two

___4. three ___5. four or more

10. How many workshops of 6 hours or more duration on curriculum development or general education topics have you taken part in during the last two years?

___1. none ___2. one ___3. two

___4. three ___5. four or more

11. Please mark the number of professional educational associations in which you have held membership at one time or another during the last two years.

___1. none ___2. one ___3. two

___4. three ___5. four or more

12. Which category indicates the type of workshop or in-service session which you have <u>directed</u> during the past 5 years? (Select only one)

___1. none ___2. local or school division

___3. Department of Education ___4. M.T.S.

___5. a combination of the above or other

WE NOW WANT TO ASK YOU SOME QUESTIONS PERTAINING TO THE DESIRABILITY OF CURRICULUM CHANGE IN THE SCHOOL SYSTEM IN WHICH YOU TEACH. YOU SHOULD NOTE THAT THE TERM "CURRICULUM" IS USED IN A VERY BROAD SENSE, AND IT MAY BE DEFINED AS "THE SUM TOTAL OF THE SCHOOL'S EFFORT TO INFLUENCE LEARNING, THAT IS, IT INCLUDES PROGRAMS OF STUDY AND CURRICULUM GUIDES AS WELL AS ALL OF THE ACTIVITIES OF THE CLASSROOM." IN SOME STATEMENTS THE WORDS "EDUCATIONAL PROGRAM" OR "PROGRAM OF STUDIES" ARE USED TO CONVEY THE SAME BROAD MEANING.

IN THIS SECTION YOU ARE ASKED TO PLACE A CHECK MARK (✓) IN THE COLUMN AT THE RIGHT WHICH BEST DESCRIBES YOUR OPINION ON EACH OF THE FOLLOWING STATEMENTS.

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
13. Many teachers with whom I work believe that the current programs of study should be revised.					
14. If a teacher in my school proposes a novel program, most colleagues would support his/her efforts.					
15. Revision of the programs of study for Manitoba schools has been conducted on an on-going basis for many years.					
16. The prime function of the school program is to transmit the essentials of our culture to a new generation.					
17. Changes in employment requirements have little bearing on the need for program changes in the school.					
18. I find it extremely difficult to make the topics in our program relevant to today's society and world.					
19. When I get used to doing things one way, it is disturbing to have to change to a new method.					
20. Some of the programs currently in use in our school were adopted as complete packages from publishers without sufficient consideration of local needs.					
21. People who plan and make up programs of study have a lot of reckless ideas.					
22. New course studies at universities and colleges compel schools to change their programs regularly.					
23. The program of studies currently being used in our school is regarded by most students as relevant and useful.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
24. Teachers and administrators with whom I work are usually tolerant of new ways of doing things.					
25. Most parents with whom I discuss school problems regard the program to be satisfactory.					
26. Too many changes in curriculum have been attempted in our schools in the past few years.					
27. The graduates of our school program are well prepared for courses at the universities and colleges.					
28. I feel hostile to those who suggest that I change the way I teach.					
29. Most curriculum changes of the past few years have proved to be beneficial for students.					
30. The major purpose of the school program is to turn out citizens who respect law, order and traditional forms of society.					
31. Employers frequently say that the graduates of our schools are ill-prepared for the jobs available.					
32. I feel that I would receive strong support from my superiors if I attempted any significant teaching changes.					
33. Systematic revision of educational programs tends to stimulate and motivate teachers.					
34. The challenge for educators is to develop schools with built-in mechanism for constant renewal.					
35. Many changes in school programs are initiated simply because other schools are changing.					
36. New developments in knowledge and new needs in society dictate that the school programs must change regularly.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
37. Provincial programs of study are essential to ensure that students who transfer from one school to another will not be penalized.					
38. Most changes in school programs which have been implemented in the last few years have been successful.					
39. Teachers should continually search for new methods and materials in an effort to motivate children to think for themselves.					
40. The "knowledge explosion" of the post-war years has made curriculum upgrading an essential part of educational planning.					
41. Schools should be concerned more about meeting the needs of students than about a uniform program.					
42. The trouble with teaching is that you just get used to doing things one way and then they want you to do them differently.					
43. Pupils should be provided with opportunities for discovering new ways of doing things.					
44. The great movement toward curriculum review and development of the past few years was a result of a combination of social and economic forces rather than the result of a planned attempt to improve education.					

IN THE NEXT SECTION OF THE QUESTIONNAIRE WE ARE INTERESTED IN YOUR OPINIONS OF "HOW CURRICULUM CHANGE SHOULD BE UNDERTAKEN?" PLEASE CHECK THE RESPONSE WHICH BEST DESCRIBES YOUR OPINION WITH REGARD TO EACH STATEMENT.

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
45. Teachers in a school division should develop programs of study for use in the schools of the division.					
46. The classroom teacher should be the judge of what is best for his/her class.					
47. I believe it is the responsibility of the curriculum planners of the school division to investigate innovative ideas and to choose those to be used in our division.					
48. Every proposal for revision of a program of studies should be evaluated by a provincial curriculum committee before it is tried in a classroom.					
49. On-going curriculum research should be supported by each school division.					
50. The prime basis for decision-making regarding school programs should be the needs of the students involved.					
51. Teachers should adjust their planning and teaching to the administration's view of good educational practice.					
52. Some of the novel methods I use in my classes would be effective for other teachers.					
53. Groups of teachers and pupils within a school should have freedom to alter the program of studies to meet the needs of pupils.					
54. Curriculum development committees should include a few parents.					
55. New or innovative programs usually work best when they are directed by the curriculum Branch of the Department of Education.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
56. Innovative curriculum projects should be evaluated by teachers, pupils and parents before they are implemented as part of the regular program.					
57. The federal government through summer employment programs should involve teachers and students in curriculum-building programs.					
58. In time of crisis in my classroom I frequently rely on techniques similar to those used by my teachers when I was in school.					
59. Teachers should be included by principals in planning and policy-making decisions which may affect school operation.					
60. All classes in the same grade in a school need not have the same program of studies.					
61. Publishers should listen to teacher-consultant teams and produce materials to meet classroom needs.					
62. Local or school curriculum development committees should include student representatives selected from the grades involved.					
63. School personnel(teachers and pupils) should have freedom to try a new program on a pilot basis without having it evaluated by authorities outside the school.					
64. Most teachers in my school are willing to contribute their time to develop new methods of teaching.					
65. "How" students learn is not as important as "what" they learn.					
66. Prescription of goals and course content by an authority outside the school should ensure that the right things are taught.					
67. It is preferable that one text be authorized for each subject and grade for all schools in Manitoba.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
68. It is the duty of each teacher to try or test new methods of presentation in the hope of improving teaching and learning.					
69. Student opinion should be considered through reaction to pilot studies before a new program or text is authorized.					
70. Local and provincial teachers' associations should support curriculum development by funding pilot projects proposed by teachers.					
71. Comprehensive curriculum libraries should be developed and maintained to enhance the availability of current resource materials to prospective and in-service teachers.					
72. In the process of decision-making on school programs, administrative convenience should be a major factor.					
73. Changes in program usually work best when they are authorized by the Curriculum Branch for implementation by the schools.					
74. In-service meetings and workshops have produced significant changes in school programs over the past ten years.					
75. The most effective manner in which a curriculum consultant can effect change is to make new material available and let teachers devise means by which these materials may be used.					
76. Curriculum consultants and change agents should teach part-time.					
77. Universities and colleges should insist on a uniform program of studies so that they will know the standard of achievement of high school graduates.					
78. The curriculum authority of the Department of Education should be limited to matters of course objectives and minimum content.					
79. If a school decides to try an innovative program of studies, a curriculum consultant or specialist should be employed to direct it.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
80. The school administration is usually better qualified than the teacher to judge what is best in developing curricula.					
81. Most new programs that I know about have worked best when directed by school personnel, i.e. teachers and principal.					
82. Parents are likely to support a program in which they have had a share in planning.					
83. Subject matter (content) should be the prime consideration in developing school programs.					
84. Participation by teachers and the community should be ensured in planning school programs.					
85. Each school should be required to report on changes in the educational program to the division board and to the public at least once per year.					
86. Since the classroom teacher must be the instructional leader, curriculum decision-making must be teacher oriented or even teacher dominated.					

87. In your judgment, are curriculum changes necessary?

___1. Yes ___2. No

Please elaborate on the reason for your answer. The space on the back of the opposite page may be used for written comment.

THANK YOU VERY MUCH INDEED!!

THE INFORMATION YOU HAVE GIVEN IS MUCH APPRECIATED. IT WILL BE USED TO IMPROVE THE PROCESS OF CURRICULUM DEVELOPMENT IN THIS PROVINCE. PLEASE REMEMBER THAT THIS FORM IS CONFIDENTIAL AND YOUR RESPONSES SHOULD NOT BE DISCUSSED WITH ANYONE. IF YOU HAVE COMMENTS OR QUESTIONS PLEASE WRITE THEM ON A SEPARATE SHEET AND RETURN THEM TO ME. SUCH COMMENTS WOULD BE HELPFUL AND WILL BE DISCUSSED IN THE REPORT.

PLEASE MAIL IMMEDIATELY!!

QUESTIONNAIRE FOR STUDENTS

DISTRIBUTION OF ITEMS IN STUDY DESIGN

Framework Index	Items	Number
Un - 1	(8) (13) 18, 24, (30),	5
2	(9) (14) 19, 23, 28,	5
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5	12, 17, (22), 27, 32	5
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2	38, 40, (45), 51,	4
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6	35, 52, 57, 61,	4
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8	(42), 56, 58, 60,	4
9	41, 50, 62, 63,	4
10	(37), 59,	2
Q 67	67	1

( ) reverse score

STUDENT

OPINION SURVEY

OF

CURRICULUM DEVELOPMENT

INFORMATION ABOUT THE STUDY

WHAT IS THE PURPOSE OF THE STUDY? The survey is part of a research project being conducted at Michigan State University. The study attempts to assess the perceptions of students and teachers of curriculum development.

WILL THE ANSWERS BE CONFIDENTIAL? Very much so. Your name or the name of your school are not required and should not be written on the booklet. All responses will be coded on I.B.M. cards and groups with the responses of other students. Your anonymity is secure.

HOW LONG WILL IT TAKE? Some students have filled out the questionnaire in twenty minutes. Most respondents take half an hour.

MICHIGAN STATE UNIVERSITY

1974

Form E.

Directions

WHAT TO DO: Inside the booklet are some questions and statements about school programs in Manitoba. There are no "correct" or "incorrect" answers because everyone has the right to his/her own views. To be able to get the best advice from your results, you will want to answer exactly and truly.

Answer by placing a check mark in the appropriate space. Please do not omit items as no response will make interpretation difficult.

Do not discuss the items with other persons before you complete the questionnaire. Scientific accuracy and comparability depend upon each person meeting the items "cold," as you are doing.

WHEN YOU ARE FINISHED: After you have completed the questionnaire, place it, unsigned, in the enclosed self-addressed envelope and return it to me. At the same time please mail the attached postcard. I will then know that your questionnaire has been mailed and can check on any that may be missing.

The information is needed now. Please make every effort to return the questionnaire promptly. Mail to:

A. M. McPherson
740 Lanark St.
Winnipeg, Manitoba R3N 1M3

WE WANT TO BEGIN BY ASKING SOME QUESTIONS ABOUT YOU, THE RESPONDENT, AND ABOUT THE SCHOOL WHICH YOU ATTEND. PLEASE ESTIMATE IN CASES WHERE YOU ARE NOT CERTAIN OF PRECISE NUMBERS.

1. Sex:

___1. Male ___2. Female

2. Your age:

___1. under 12 years ___2. 13-15 ___3. 16-18

___4. 19-20 ___5. 21 or over

3. Your grade level:

___1. eight or below ___2. nine

___3. ten ___4. eleven

___5. twelve

4. What grades are taught in your school? (select only one category)

___1. one to twelve ___2. seven to twelve

___3. nine to twelve ___4. ten to twelve

___5. other

5. What is the size of the school you attend? (estimate if you are unsure)

___1. three classrooms or less

___2. four to six classrooms

___3. seven to ten classrooms

___4. eleven to fifteen classrooms

___5. sixteen classrooms or more

6. How would you describe the community served by your school?

___1. Rural (rural communities including small towns of 2500 persons or less)

___2. Rural-urban (towns of 2500 persons or more, plus the adjoining rural areas)

___3. Northern (all communities located north of the 53rd parallel)

___4. Urban (cities of 10,000 persons or more)

7. What do you plan to do when you finish your high school program?

___1. take a job ___2. attend a community college

___3. enrol at a college or university

___4. other activity (specify)

___5. not known at this time

WE NOW WANT TO ASK YOU SOME QUESTIONS PERTAINING TO THE DESIRABILITY OF CURRICULUM CHANGE IN YOUR SCHOOL PROGRAM. YOU SHOULD NOTE THAT THE TERM "CURRICULUM" IS USED IN A BROAD SENSE, AND IT MAY BE DEFINED AS "THE SUM TOTAL OF THE SCHOOL'S EFFORTS TO INFLUENCE LEARNING," THAT IS, IT INCLUDES PROGRAMS OF STUDY AS WELL AS ALL THE ACTIVITIES OF THE CLASSROOM. IN SOME STATEMENTS, THE WORDS "EDUCATION PROGRAMS" OR "PROGRAM OF STUDIES" ARE USED TO CONVEY THE SAME MEANING.

IN THIS SECTION YOU ARE ASKED TO PLACE A CHECK MARK (✓) IN THE COLUMN AT THE RIGHT WHICH BEST DESCRIBES YOUR OPINION ON EACH OF THE FOLLOWING STATEMENTS:

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
8. The program of studies currently being used in our school is regarded by most students as relevant and useful.					
9. Provincial programs of study are essential to ensure that students who transfer from one school to another will not be penalized.					
10. New programs of study and new teaching methods tend to motivate students to do better work.					
11. The biggest task for teachers and administrators is to develop schools in which there is on-going improvement in the program of study.					
12. The "knowledge explosion" of the last ten years has made it necessary for schools to change the courses they offer.					
13. My parents regard the school program as being satisfactory.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
14. I feel hostile to those who suggest that school programs and methods of teaching should be changed.					
15. Revision of the programs of study for Manitoba schools has been conducted on a regular basis for many years.					
16. The prime purpose of the public school program is to transmit the essentials of our culture to a new generation.					
17. New courses of study at universities and colleges compel schools to change their programs regularly.					
18. Many of my teachers believe that the current program of studies should be revised.					
19. I feel that I would receive strong support from other students if I suggested any significant change in our program of studies.					
20. Too many changes in curriculum have been attempted in our schools in the past few years.					
21. Teachers should continually search for new methods and materials in an effort to motivate students to think for themselves.					
22. Changes in the requirements of employment seldom have any effect on the program we are taught in school.					
23. Teachers and school administrators are usually tolerant of new ways of doing things.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
24. Employers frequently say that the graduates of our schools are ill-prepared for the jobs available.					
25. The trouble with going to school is that you just get used to doing things one way and then they want you to do them differently.					
26. Pupils should be provided with opportunities for discovering new ways of doing things.					
27. Many school programs are changed simply because the students believe the old ones to be inappropriate or irrelevant.					
28. Schools should be more concerned about meeting the needs of students than about a uniform program for all.					
29. Most changes in school programs that have been implemented in the last few years have been beneficial to students.					
30. Graduates of our school program are well prepared for courses at universities and colleges.					
31. The major purpose of the school program is to turn out citizens who respect law, order and traditional forms of society.					
32. Many changes in school programs are made simply because other schools are changing.					
33. Groups of teachers and pupils within a school should have freedom to alter the program of studies to meet the needs of pupils.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
34. A new or innovative course of study or program of studies would work best if it were directed by someone outside the school, such as the Department of Education.					
35. On-going curriculum research should be supported by each school division.					
36. The needs of students should be the major concern in decision-making on curriculum matters.					
37. Experimental programs should be restricted to those classes who are not intending to go to university.					
39. Each classroom teacher should try or test new methods of presentation in the hope of improving teaching and learning.					
39. It is preferable that one text be authorized for each subject and grade for all schools in Manitoba.					
40. Committees which develop school programs should include a few parents.					
41. Most teachers get new and innovative ideas about teaching through in-service sessions.					
42. Changes in programs of study usually work best when they are authorized by the Department of Education for implementation in the schools.					
43. Every proposal for revision of a program of studies should be evaluated by a provincial curriculum committee before it is tried in a classroom.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
44. All classes in the same grade in a school need not have the same program of studies.					
45. The school administrators (principal and vice-principals) are usually better qualified than the teachers to judge what is best in developing curricula.					
46. "How" students learn is not as important as "what" they learn.					
47. Universities and colleges should insist on a uniform secondary school curriculum so that they will know the standard of achievement of high school graduates.					
48. School personnel (teachers and pupils) should have freedom to try a new program or course on a trial basis without having it evaluated by authorities outside the school.					
49. A new or innovative program of studies would work best if it were directed by school personnel, i.e., teachers and principal.					
50. Most innovative or new methods of teaching are made known to teachers through school magazines.					
51. The classroom teacher should be the judge of what is best for his/her class.					
52. The federal government through summer employment programs should involve teachers and students in curriculum-building programs.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
53. Student opinion of new programs should be considered by asking for student evaluation of new courses.					
54. An innovative or new program of studies should be evaluated by teachers, pupils and parents before it is authorized for regular use.					
55. Committees which are set up to develop new programs of studies should include student representatives selected from the grades involved.					
56. Teachers should make the major decisions regarding the school program of study.					
57. The student council should support the development of a good library (particularly new material) in the school.					
58. Teachers should be included by principals in planning and policy-making decisions which may affect school operation.					
59. Schools should develop programs of study designed to meet student needs rather than to prepare students for university courses.					
60. Schools should try new programs of study regularly and thereby find the one best suited to the students.					
61. Parents are more likely to support programs in which they had a share in planning.					
62. Curriculum advisors (department heads and Department of Education consultants) are responsible for promoting most new programs in our school.					

	I agree strongly	I agree	I neither agree nor disagree	I disagree	I disagree strongly
63. The most effective way in which a teacher can make a new program known is to demonstrate its use in his/her classroom.					
64. All programs of study should be evaluated by recent graduates on a regular basis.					
65. In the process of decision-making on school programs, administrative convenience should be a major factor.					
66. Participation by teachers and by the community should be ensured in planning school programs.					

67. In your judgment, are changes in the school program of studies necessary?

_____Yes _____No

THE INFORMATION YOU HAVE GIVEN IS MUCH APPRECIATED. WE THANK YOU FOR THE TIME YOU HAVE TAKEN TO RESPOND TO THE QUESTIONS.

PLEASE RETURN IMMEDIATELY.

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BIBLIOGRAPHY

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