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Implementation
in Manitoba:
Technical
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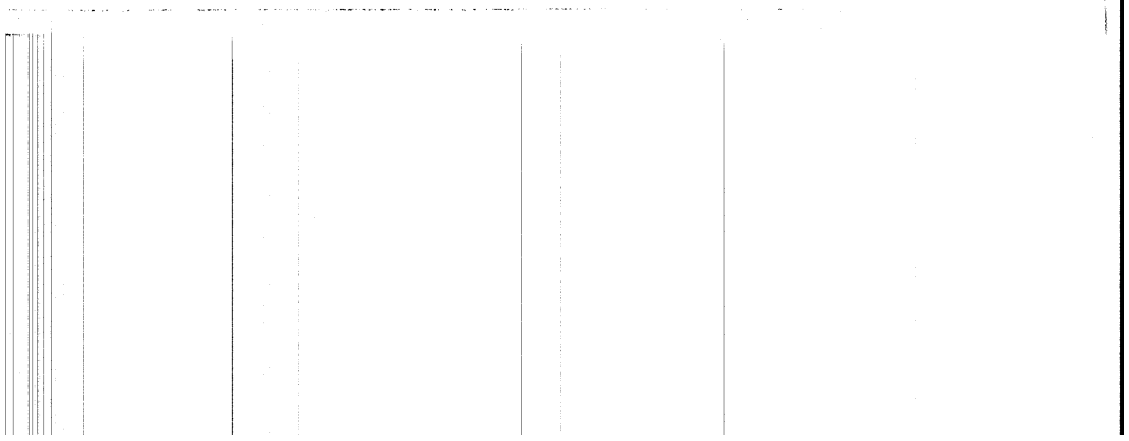

CURRICULUM IMPLEMENTATION IN MANITOBA: TECHNICAL REPORT

SUMMARY

With a number of new curricula being introduced in Manitoba over the last few years, the issue of curriculum implementation has gained increasing importance. It has become an issue of concern not only for Manitoba Education, but also for school division administrators, principals, and teachers.

In response to this concern, the Planning and Research Branch, with the co-operation of the Curriculum Development and Implementation Branch, conducted a major study centered on the issue of curriculum implementation. The study was designed to examine and explore the process of curriculum implementation as it operates in Manitoba, to improve the effectiveness, and to suggest strategies to improve the process. Emphasis was placed on the implementation process and its elements, not on the evaluation of specific curricula.

This report includes an examination of the process of curriculum implementation, with reference to the results of province-wide surveys of principals and teachers, as well as ten case studies.

All principals in the province were surveyed, and a 90% response rate was achieved. Teachers at both the elementary and secondary levels were surveyed; the focus of the elementary survey being social studies, and the focus of the secondary survey being science 100 and 101. Both these curricula were regarded as being old enough to have widespread familiarity, yet recent enough that elements in the process of implementation could still be remembered. Teacher response rates were 68% at the elementary level, and 77% at the secondary level.

As a follow-up to the surveys, ten case studies were conducted at the elementary level. The case studies were designed to focus on issues raised by the survey data, and to provide a description of how implementation of social studies occurred in specific situations. For this latter reason, the ten schools illustrated diverse situations (ie. geographic location, size of school, student background, etc.) across Manitoba.

L'IMPLANTATION DES PROGRAMMES SCOLAIRES AU MANITOBA :

RAPPORT TECHNIQUE

RÉSUMÉ

Compte tenu du nombre de nouveaux programmes scolaires introduits au Manitoba depuis quelques années, le sujet de l'implantation des programmes prend de plus en plus d'importance. C'est une question qui préoccupe non seulement les membres du ministère de l'Éducation, mais également les administrateurs des divisions scolaires, les directeurs et les enseignants.

Pour répondre à cette préoccupation, la Direction de la planification et de la recherche en collaboration avec la Direction du développement et de l'implantation des programmes a mené une étude majeure sur l'implantation des programmes scolaires. L'étude portait sur le processus actuel de l'implantation des programmes au Manitoba, et visait à en évaluer l'efficacité et à suggérer des stratégies aptes à l'améliorer. L'accent a été mis sur le processus de l'implantation et tout ce qu'il comporte, et non sur l'évaluation de programmes particuliers.

Ce rapport fait état des résultats de dix études de cas en plus de l'étude du processus de l'implantation mené auprès de directeurs et d'enseignants partout dans la province.

Le sondage a été fait auprès de tous les directeurs de la province; le taux de réponse s'est élevé à 90 %. Les enseignants aux niveaux élémentaires et secondaires ont également fait l'objet d'un sondage. Cependant, au niveau élémentaire, le sondage portait sur les sciences humaines tandis qu'au secondaire, il portait sur les programmes de sciences 100 et sciences 101. Ces programmes avaient le mérite d'être assez bien établis pour être connus de tous tout en étant assez récents pour qu'on se souvienne de certains éléments de leur implantation. Le taux de réponse a été de 68 % au niveau élémentaire et de 77 % au niveau secondaire.

En guise de suivi aux sondages, dix études de cas ont été menées au niveau élémentaire. Ces études portaient surtout sur les problèmes souligné dans le sondage et avaient pour but de décrire comment s'était faite l'implantation du programme de sciences humaines dans des situations précises. À cette fin, les dix écoles ont été choisies en fonction de leur situation propre (endroit, grandeur, milieu social, etc.).

I. INTRODUCTION

A short note on the implementation of elementary social studies and 100/101 science will be presented. This will be followed by a discussion of teachers' apparent level of implementation. Findings concerning the process of implementation, material supports, professional development, and other influencing factors can then be related to level of implementation. All presentation of findings includes results from both the survey and case study data. (1)

1. Departmental Implementation Practices

(a) Elementary Social Studies

The new social studies curriculum was developed by the Curriculum Development and Implementation Branch through the use of a CPRC working group. It was first introduced into a number of pilot schools across the province in 1981-82. The interim guide, which provides an overview of the entire curriculum, was used in the pilot schools.

Specific grade level guides were available for the elementary grades in 1982. Manitoba Education sponsored general awareness inservices around this time. Not all teachers, however, would have had the opportunity to attend these sessions. In a number of school divisions, specific principal inservices were held. Implementation across the province is scheduled for completion in 1985.

(b) Science 100/101

These science curricula were introduced at the grade 10 level in pilot schools during 1981-82. Again, development of the curriculum had occurred through use of a CPRC working party. The revised guides appeared in 1982.

Manitoba Education provided extensive inservicing for grade 10 science teachers across the province. Implementation across the province is scheduled for completion in 1984.

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(1) In addition, frequencies of response for each survey have been included in the Appendix.

II. THE LEVEL OF CURRICULUM IMPLEMENTATION

Actual level of implementation is a key issue addressed not only in literature reviews of curriculum implementation, but also in both surveys and case studies conducted by the Planning and Research Branch.

The literature concerning curriculum implementation outlines three stages: awareness, adoption, and actual implementation. Following the literature, an attempt was made in the surveys and, to a lesser extent in the case studies, to discuss implementation using these stages. It became apparent, however, that in practice the stages were neither so clear-cut, ordered, or defined.

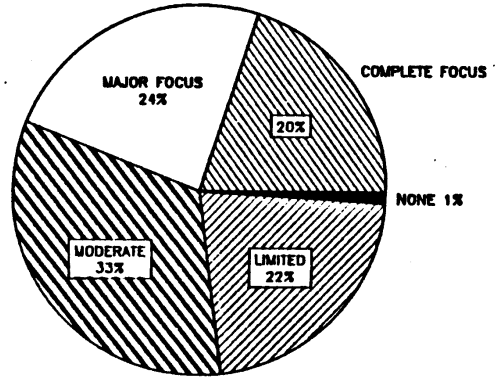
Teachers tend to feel an immediate obligation to begin "using" new curricula as soon as curriculum guides appear. Consequently, some content is used and a certain form of implementation has begun with minimal awareness, and no real adoption. The process is more an interactive one where the three stages mix according to the teacher's growth in understanding, commitment, and classroom use. A teacher's intellectual commitment may have to catch up to classroom implementation, after which time a fuller implementation, incorporating both the internalization of the curriculum goals and actual classroom use, may occur.

In both the surveys and the case studies, an attempt was made to determine the degree to which teachers were implementing a particular curriculum. Results showed great variability among teachers in the reported degree of implementation, ranging from almost total to very limited. There were differences in the survey data between the elementary and secondary teachers. Approximately 20% of elementary teachers stated that the new social studies curriculum was their complete focus, as compared to 13% of secondary science teachers. The degree of implementation for the majority of science teachers was towards a major focus. However, there was also a smaller percentage of science teachers at the lower end of the continuum, with 15% "trying out one or two ideas to a limited extent" as opposed to 22% of elementary teachers, (Graph 1).

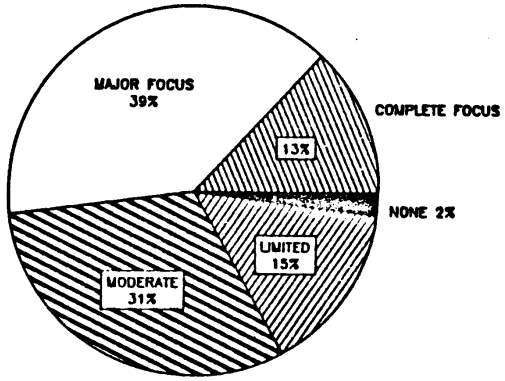
Most survey respondents - about three-quarters of elementary social studies teachers, and approximately two-thirds of secondary science teachers - felt their level of implementation would change over time. This trend towards further change was also reflected in the comments of the case study teachers, most of whom felt their implementation level would change. The majority of teachers felt changes would serve to increase their level of implementation.

GRAPH 1

CURRENT LEVEL OF IMPLEMENTATION



ELEMENTARY SOCIAL STUDIES



GRADE 10 SCIENCE

PLANNING & RESEARCH

Part of implementing curricula is the modification of the curriculum to suit the teacher's own style, the needs of particular student population/culture and/or different classroom organization (eg. multi-graded settings). This development is, in fact, necessary at the classroom level if any level of implementation is to be achieved.

In accordance with literature on curriculum implementation, not all teachers will, or should achieve what has been referred to as "full" implementation, as full implementation implies no further adoption.

III. THE CURRICULUM IMPLEMENTATION PROCESS

1. The Curriculum Itself

(a) Need for Curricular Change

Need for curricular change and awareness of the change are important factors influencing implementation. Teachers may not always see the need or value for a change that is being advocated. Even where there is a potential need, change may not be presented in a way that is perceived as helpful.

Survey data indicated that there was strong feeling that change in each curriculum was needed, with approximately 90% of principals supporting the changes, 68% of science teachers, and 74% of social studies teachers. This was reinforced by case study interviews where approximately two-thirds of elementary teachers felt there was a need for change in the social studies curriculum. The most oft-cited reason for changes in social studies material and topics were outdated and not abreast with contemporary society.

Lack of awareness could discourage teachers from using new curricula. In Manitoba, almost all teachers and principals were aware of the recent social studies or science curricula.

Although most principals and teachers were aware of the existence of new curriculum, the case studies found a somewhat general awareness existed. In many cases, the new content has been adopted and was being used. The important steps of understanding and commitment to the goals and methodologies of the program did not necessarily follow.

This finding has implications for teacher participation in the critical stages of curriculum planning and development. It cannot be taken for granted that all teachers will make the same assumptions as the curriculum developers. Teachers who have been involved in the process of curriculum development are more likely to be active in adopting, implementing, and evaluating a curriculum. Awareness of the guidelines, policy, and basic assumptions of the curriculum should be fostered. However, understanding and commitment by teachers is necessary if teachers are to move towards successful and effective implementation.

Elementary teachers most often indicated they had been informed of the new curriculum by their principal (56%), while for secondary science teachers, the person most likely to inform them was a Manitoba Education consultant (46%). Both groups felt that this was the person who should inform them.

(b) Quality and Accessibility of Curriculum Guides

Both the quality of the curriculum and teacher access to curriculum guides affect the likelihood that implementation will occur. Based on case studies and survey data, most teachers had access to both the interim and specific grade level guides. In a few cases, a teacher had never seen any guide or thought that a text constituted the curriculum guide. The majority of teachers had seen the interim guide, but many thought that with the advent of the grade level guides, the interim guide became obsolete. However, some teachers had reservations about both the interim and specific grade level guides.

Some of the reasons cited included "hard to implement", "too vague", and, "content too repetitious." It appears that in future, better communication and direction regarding the purposes of different guides is necessary. It is noteworthy that the recent science and health curriculum guides for elementary schools were often mentioned as model guides.

Goals and objectives were important to teachers in the classroom. Although all stated that the goals and objectives were important for directing their teaching in the classroom, many felt the need to modify them according to their students' needs and their own teaching styles.

In summary, the need for change, awareness, and intent to follow the guidelines of the curricula are factors necessary to effective implementation.

(c) Flexibility/Timing

Based on case studies and surveys, most teachers viewed implementation of new curricula as a teacher-based process that allowed for individual flexibility. Many teachers indicated that they had adopted a pragmatic and concrete approach to the process of curriculum implementation. They stressed a "hands on" pragmatic and concrete orientation. As time progressed, teachers gained more confidence in having their own individual approach to, and adoption of, the new curriculum. Teachers who did not play an active role during initial implementation, developed their strategies through modelling and observation. Field research demonstrates that, for teachers, part of effective implementation of curricula is the modification of the curriculum to suit the teacher's own style, needs of students, and different classroom organizations. This sense of personal ownership and flexibility is necessary for teachers if implementation is to be successful.

Developing and using a plan is itself an implementation problem. As with any new innovation, a new curriculum cannot simply be imposed. People must learn to use it and modify it over a period of time. In practical terms, however, curricula are developed and timelines are set for their implementation. Most of the people interviewed - superintendents, principals, elementary and secondary teachers - expressed time/scheduling problems. They had indicated that implementation of too many curricula was expected at the same time. Better planning at both the provincial and divisional levels is required.

2. Organization of Curriculum Implementation

(a) Structure

It was difficult in the survey data to discern whether implementation of the targetted curriculum had occurred within a formal structure. This, however, was explored in the case studies where the presence of a formal structure at the divisional level assisted the implementation process. Where a structured process was in existence, processes did operate to varying degrees, with the common feature being the active and well defined role of the school division. The role of the school division usually emphasized professional development for teachers, mapping out time schedules for implementation, as well as providing encouragement and support for teachers and principals. It also should be noted that in some cases, a structured process would exist for one curriculum but not for another, depending on the priorities of the division. It appeared that where there was a division-initiated structure, more effective implementation and reduced teacher frustration occurred.

In contrast to those having formal divisional processes or plans for implementation, in some schools the implementation process consisted of new curriculum guides arriving in teachers' mailboxes. This was the teacher's indication that a new curriculum was to be introduced in the classroom. This example serves to highlight the diversity of the curriculum implementation "process" aeross the province.

Few teachers view curriculum implementation in process terms, and in fact, they may not need to do so. However, it is important that school divisions move towards a planned and structured process which includes timelines, roles, support, and monitoring for the implementation of new curricula. If such a process is thoughtfully planned taking into consideration factors such as unique school situations, less teacher frustration should result. Such a process provides clarity and direction. Professional development activities and acquisition of support materials and resources receive a focus.

(b) Actors/Organizations Outside the Classroom Setting

Implementing the "implementation plan" will probably be a more difficult change than implementing a single curriculum because it involves defining, clarifying, and altering roles and relationships across several levels of the school system (eg. school divisions, Manitoba Education, superintendents, principals). In the case studies and general survey, principals and teachers expressed general agreement about the actual and potential roles of some groups and organizations, while in other cases, there was diversity of opinion.

When teachers and principals were asked their feelings concerning roles and responsibilities of various organizations, they indicated each organization had a specific role to play, however, they felt each organization could offer more services. Overall, teachers and principals tended to see Manitoba Education's role and responsibility as one of developing curricula and promoting initial awareness; the Division as providing support when needed; the faculties of education and the Manitoba Teachers' Society as having very limited roles.

In terms of providing professional development activities, principals and teachers surveyed were most likely to feel it was chiefly a Manitoba Education responsibility; (over 70% of secondary teachers, vs. about 65% of principals, and about 50% of elementary teachers). A similar question was asked secondary science teachers and elementary social studies teachers about who should sponsor inservices/workshops for their specific subjects. Science teachers still ranked Manitoba Education first, followed by the school division, whereas elementary teachers reversed this order. This is consistent with the elementary teachers' perceptions from the case studies in which they also, saw the division as primarily responsible for professional development.

Concerning the issue of providing individualized assistance to teachers, principals and elemenatary teachers viewed it as primarily a divisional responsibility. Rural teachers, however, were more likely to view it as a Manitoba Education responsibility (34% of rural teachers, as compared to 17% of northern, and 10% of urban teachers). Secondary teachers also perceived this as a Departmental role. Manitoba Education was viewed by teachers from the case studies as a developer and supplier of curriculum, with some responsibility for inservicing.

Different perceptions of the various groups of teachers indicate a need for the definition and clarification of roles in curriculum implementation at the regional/local level.

(c) Actors/Organizations Within the Classroom Setting

Principals: In the survey of elementary and secondary teachers, principals were ranked second behind "other teachers" as being helpful by offering encouragement and advice. In the case study findings as well, the importance of support and encouragement from the principal and other colleagues were often mentioned as factors assisting implementation.

Approximately three-quarters of principals believed they should be involved in professional development activities and in implementing curriculum guidelines. About 70% felt they should be involved in providing individualized assistance to teachers.

The principal was also viewed by teachers in the case studies as a person providing access to resources and facilitating teacher attendance at inservices. It appeared that the principal adopted a liaison role between the teachers and the school division. Elementary principals indicated a more active role than did secondary principals. In the survey data, the majority of principals felt they had great influence over the allocation of teaching time. Elementary principals were more likely to feel they had great influence over textbooks and supplies choice (40%) than did secondary principals (19%). Approximately 40% of urban elemenatary principals felt they had great influence over teachers' professional development, as compared with 18% of principals in rural areas, and 17% of principals in northern centres. Elementary principals with 15 or more years experience felt they had greater influence over teaching strategies than did principals with less than 5 years experience (80% vs. 62%).

The reality of a principal's situation (eg. northern or elementary school) affects the influence, and hence the role of the principal, concerning certain aspects of implementation. Suggestions regarding the appropriate and realistic roles of the school principal in the curriculum implementation process would be useful to teachers, division administrators, and to principals themselves.

Teachers: Derived from the case studies, most of the teachers indicated a pragmatic approach as to their role in curriculum implementation. All felt they were active delivers of the new curriculum. A few described their role in process terms. They felt it was their responsibility to teach the curriculum, evaluate it, analyze it, and change the curriculum to make it relevant for the students.

As they gained more familiarity and experience with the curriculum, the teachers indicated that they could allow their own individuality, creativity, and "personality" into the curriculum. Dealing with any new curriculum, whether it be science or social studies was a gradual classroom learning process for teachers.

This classroom perspective was also relected in the survey data. Both elementary social studies teachers and secondary science teachers felt they had the greatest influence over their own teaching strategies (79% social studies, 81% science) and the allocation of time for specific curriculum topics (68% social studies, 65% science). As a result of high school vs. elementary timetabling, more elementary (social studies) teachers felt they had great influence over the allocation of time for the subject areas as a whole (38% social studies, 8% science).

Overall, it appears that a number of actors are viewed as having roles to play in the process of curriculum implementation, and that some differences in perception exist depending on the respondent's school role (ie. principal vs. teacher), geographic location, and school level.

3. Supports of Curriculum Implementation

Professional development and material factors (ie. texts, curriculum guides, supplementary resources) have a very significant effect on the implementation of curricula. It has been argued that availability of adequate materials and effective professional development are critical to effective implementation.

Principals, and elementary and secondary teachers, were questioned as to what they felt were the most important elements in the implementation of any curricula. All three groups were most likely to feel Manitoba Education curriculum guides were the most important element (84% of principals, 80% of elementary teachers, and 74% of secondary teachers). Teachers and principals differed, however, as to what

would rank second in importance. Principals felt professional development workshops/inservices were very important (80%), while the second choice of both elementary (76%) and secondary (54%) teachers was supplementary/resource material for classroom use. Principals having elementary grades in their schools were more likely than secondary principals (64% vs. 54%) to perceive resource materials as being very important.

These two major areas (ie. professional development and material factors) will be discussed separately.

(a) Professional Development

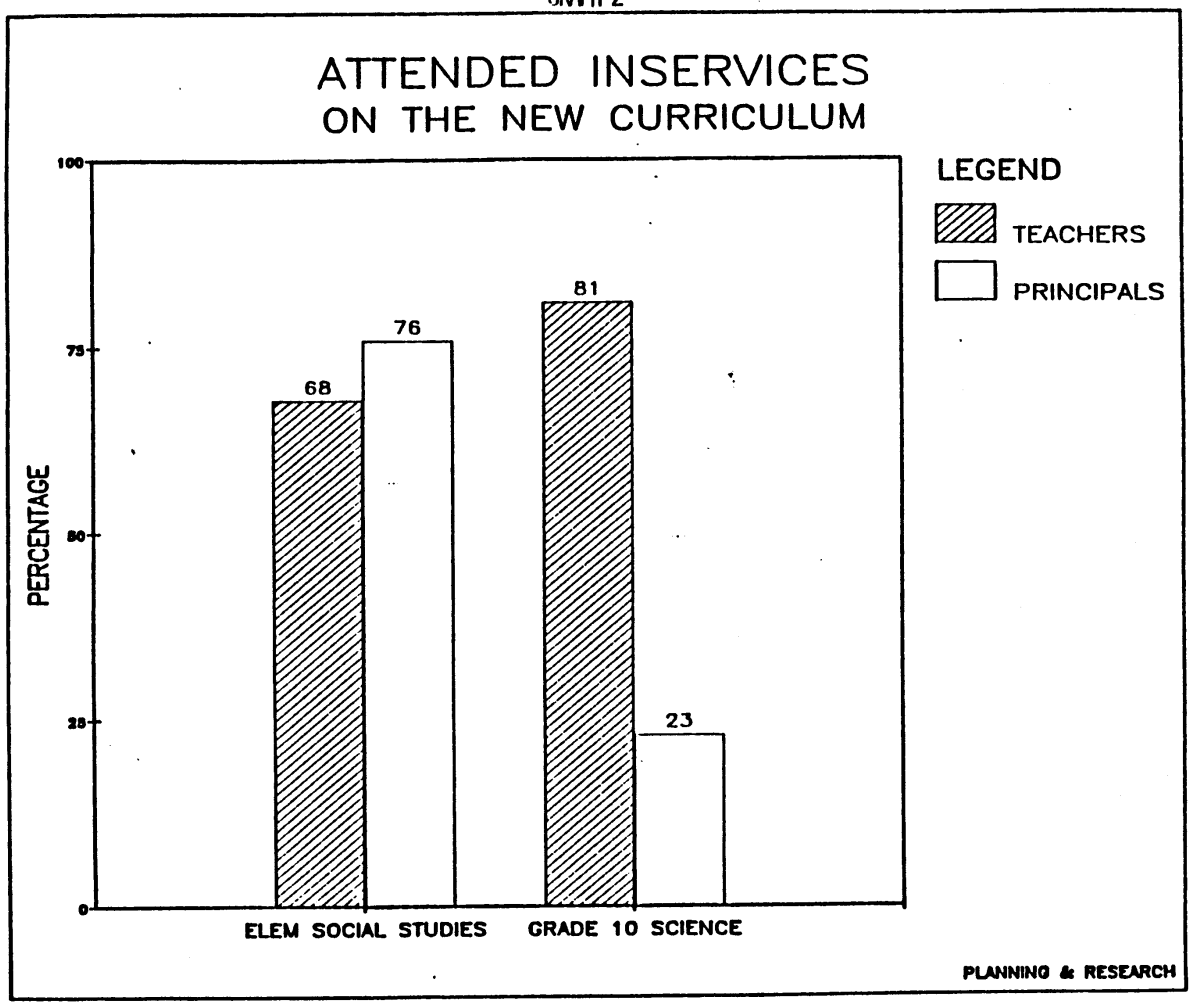
Professional development was an area examined in both the survey and case studies. Discussion was not limited to professional development for teachers; the issue of principal inservicing was also explored.

Principals: There was a major difference between the elementary and secondary principals surveyed. Whereas 23% of secondary principals had attended science inservices, 76% of elementary principals had attended social studies inservices (Graph 2). Of those elementary principals who had attended social studies sessions, approximately one-third had attended for ten hours or more.

Distinct differences emerged for elementary principals according to location. Urban (85%) and rural (77%) principals demonstrated higher degrees of attendance at social studies sessions than did northern principals (37% had attended). This same pattern did not hold true for secondary principals, where between 20% and 25% had attended, regardless of geographic location.

Inservicing of principals appeared important when examining case study findings. In cases where the principal had participated in inservices (usually this was where a formal process has been, or was being established), effective implementation seemed to be aided.

GRAPH 2


ATTENDED INSERVICES
ON THE NEW CURRICULUM
LEGEND
TEACHERS
PRINCIPALS
PERCENTAGE
100
75
50
25
0
68
76
81
23
ELEM SOCIAL STUDIES
GRADE 10 SCIENCE
PLANNING & RESEARCH

Teachers: Unlike the principal survey results, elementary teachers were less likely to have attended inservices than secondary science teachers (68% vs. 81%). Even for those elementary teachers who had participated in inservice activities, 57% had attended for six hours or fewer, as compared to 28% of science teachers.

Generally, there did not appear to be a relationship between attendance at inservices and the degree of implementation teachers reported. However, of the elementary social studies teachers who indicated the program was their complete focus of attention, 83% had attended inservice. For teachers at all other levels, approximately 65% had attended inservices. No correlation was evident for secondary teachers. It was noteworthy that there was no relationship between the actual number of hours spent at inservices/workshops and teachers' reported implementation level. Discussion with teachers from the case studies did not reveal any relationship between attendance at inservice sessions and degree of implementation.

Secondary teachers had most often attended Manitoba Education inservices/workshops, whereas elementary teachers had most often attended divisional workshops, followed closely by Department-sponsored workshops. Both groups indicated a preference for future professional development focussing on classroom activities. For a second preference, secondary teachers rated teaching strategies more highly than did elementary teachers, who were more likely to indicate the development of teaching units as a priority for professional development.

The issue of teaching unit development figured prominently in the findings of the case studies. Elementary teachers who had participated in orientation sessions and then worked in grade level groupings or with a colleague to develop units, felt most confident and most committed to the new curriculum. This type of activity appeared to be more closely related to level of implementation than was the total number of hours teachers had spent at social studies inservices.

Although level of implementation was not usually affected, the survey data indicated that 80% of social studies teachers who felt very well prepared had attended some type of inservicing, as compared to 46% of teachers who did not feel well prepared at all. Again, there was no correlation between the number of hours of inservicing and teachers' sense of preparedness.

The type of professional development activity is important for effective implementation. Some teachers who initially did not feel well prepared, gained confidence and knowledge when implementation became part of a structured process, and when they could actively participate in relevant professional development activities. As teachers try out new ideas, they can explore, examine and discuss ideas, but only if there is an opportunity to do this through an interactive, and participatory process.

(b) Material Factors

A number of elements have been identified as materials designed to support effective implementation. They include: curriculum guides, texts, recommended teacher resources, and other supplementary materials.

Curriculum Guides: Virtually all teachers had received curriculum guides for all subjects recently implemented. For science and social studies specifically, approximately 95% of both science and social studies teachers indicated they had ready access to their grade level guides. In addition, approximately 90% of both social studies and science teachers found their respective guides useful for teaching, easy to understand, well organized, and easily modifiable.

Student Texts and Supplementary Material: Approximately 85% of science teachers, as compared to 60% of social studies teachers, had access to approved text materials. Access to supplementary material was lower for both groups, at 61% for science teachers and 48% for social studies teachers.

When survey respondents were questioned generally about concerns, both elementary social studies and secondary science teachers most often cited textbook and supplies choice (63% and 65% respectively). The major reason for concern, however, differed between the two groups. Social studies supplies were viewed as inadequate or unavailable, while science teachers expressed concern over continuity among module materials. Elementary principals also cited the issues of textbooks and materials most frequently (68%). Secondary principals saw it as their most frequent concern, along with teacher dissatisfaction, with each concern cited by 26% of the secondary principals.

Case study interviews also revealed real concern by elementary teachers about the lack of available material for elementary social studies. Not only were materials perceived as non-existent, or at best, difficult to acquire and understand, it was also felt that some available materials were either costly or inappropriate. The concern with lack of appropriate, or relevant material, was expressed in areas where there was a high native population.

Recommended Teacher Resources: Teachers were also questioned specifically about recommended teacher resources. As with other materials, they were more available to secondary teachers (63% for science vs. 50% for social studies). Approximately 70% of both groups felt they were appropriate, however, only about half of each group had used the materials. Of the non-users, about 45% of social studies non-users felt materials were neither appropriate, understandable, nor available, compared with 30% of science non-users.

In summary, although curriculum guides and texts were generally not a problem, the lack of other supplementary classroom and teacher resource materials was a real concern of teachers. This factor is one which has an impact on teachers' implementation of curricula.

IV. METHOD

The methodology for the surveys and case studies will be discussed separately.

1. Principal and Teacher Surveys

Questionnaires for the principal and teacher surveys were developed by the staff of the Planning and Research Branch with the assistance of staff from the Curriculum Development and Implementation Branch.

All principals in the province, excluding those in selected case study schools. were surveyed. Principals of schools, including grades K to 6, received questionnaires focussing on social studies, while principals of schools having high school but no elementary grades received basically the same questionnaires except that it focussed on the science curriculum. A random sample of about 800 elementary teachers was surveyed. This group was divided into teachers who taught social studies and those who did not. At the secondary level, 100/101 science teachers and 100/101 mathematics teachers were surveyed. Mathematics teachers were chosen as the comparative group. In total, approximately 550 secondary teachers were sent questionnaires.

The first mailout occurred in February 1984, followed by a second mailout two to three weeks later. The following table shows the response rates for the three groups surveyed. Response rates were high enough to produce a representative respondent group.

TABLE 1

SAMPLE SIZE AND RESPONSE RATES

Population	Projected Sample Size	Response Rates (N)	Response Rates (%)
Principal survey	552	495	90%
Secondary teachers	543	420	77%
Elementary teachers	814	556	68%

Analysis was conducted within each group according to various characteristics including: geographic location, years of experience, and age.

2. Case Studies

As follow-up to the surveys, ten case studies were conducted at the elementary level. They focussed on the social studies curriculum as an example of a recently instituted curriculum. In order to discover how implementation occurred in, and was affected by different situations, the ten schools were chosen to be as diverse as possible. Whereas survey data presented a representative look at attitudes towards and experience with curriculum implementation, the case studies were selected to illustrate the diversity found within the province. Table 2 provides an overview of some of the various characteristics of the school setting.

The case studies involved interviews with superintendents, the school principal, at least one teacher at each elementary grade level, and where applicable, divisional consultants and/or assistant superintendents concerned with curriculum. The interview instruments were developed by Planning and Research staff after preliminary analysis of the survey data. Revisions took place during and after the first case study.

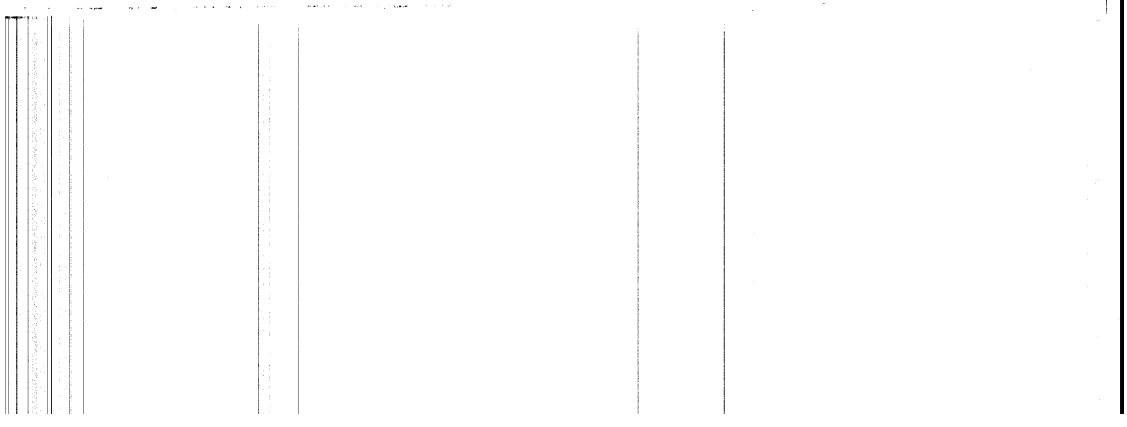
A team of four researchers conducted the interviewing. Usually two of the team would visit each school. In order to ensure consistency, a training session was held and while in the field, team combinations were altered. The case studies occurred during the month of May 1984.

3. Limitations

It should be remembered that the surveys and case studies focussed on the process of implementation. Neither was designed to provide an evaluation of a specific curriculum per se.

Secondary science teachers had apparently received intensive inservicing regarding the 100 curriculum. Therefore, attitudes towards the situation are useful, but perhaps not typical of the experience of secondary school teachers.

APPENDIX



FREQUENCIES:
CURRICULUM IMPLEMENTATION SURVEY
PRINCIPAL SURVEY

Division - 1-12 (urban	40%
- 13-44, 47 (rural)	50%
- 45,46,48,52 (north)	10%
	N = 492

Grades in School - K to 6, not 10 (elementary)	72%
- K-6, and 10 (elementary)	9%
- 10-12, not K-6 (secondary)	19%
	N = 492

NB: Social Studies = Elementary principals
: Science = Secondary principals

1. Is your school scheduled on a:

	Social Studies	Science	Overall
Yearly basis	94%	33%	83%
Semester	6%	67%	17%
Trimester	-	-	-
Total N =	397	89	486

2. How long have you been a principal?

	Social Studies	Science	Overall
5 years or less	33%	29%	32%
6-10 years	22%	24%	23%
11-15 years	19%	20%	19%
More than 15 years	26%	27%	26%
Total N =	391	86	477

3. How important should the following be in the implementation process of any new curricula?

	Overall				
	Very Important	Moderately Important	Slightly Important	No Importance	Total N=
Dept. of Education curriculum guides	84%	16%	-	-	488
Supplementary/resource materials for classroom use	62%	36%	2%	-	486
Professional development workshops/inservices	80%	18%	2%	-	489
Individualized assistance to teachers	43%	49%	9%	-	487
Informal interaction with colleagues	48%	46%	6%	-	486
School visitations among teachers	24%	52%	23%	1%	482

4. Do you think you should be involved in:

	Number of Times Cited
Professional development workshops/ inservices	362
Individualized assistance to teachers	345
Implementing curriculum guidelines	366

5. Which organization do you think should be chiefly responsible for providing the following for any new curricula?

	Overall				
	School Division	Department of Education	MTS	SAG	Total N=
Professional development workshops/inservices	30%	64%	2%	4%	481
Individualized assistance to teachers	73%	13%	3%	11%	477
Implementing curriculum guidelines	59%	38%	1%	2%	479

6. Overall, how satisfied are you with the process of curriculum implementation in Manitoba since 1980?

	Overall
Very satisfied	6%
Satisfied	62%
Dissatisfied	29%
Very dissatisfied	3%
Total N =	482

Reasons for dissatisfaction.

	Number of Times Cited
Not enough professional development	22
Too many changes made in too short a time	58
Not enough direction/follow-up by Department of Education	35

7. Are you aware that a new social studies/science curriculum has been introduced in Manitoba?

	Social Studies	Science
Yes	98%	99%
No	2%	1%
Total N =	393	89

8. Do you feel that there was a need for the change in the social studies/ science curriculum?

	Social Studies	Science
Yes	86%	91%
No	14%	9%
Total N =	356	75

Reasons change needed in curriculum.

	Number of Times Cited	
	Social Studies	Science
Curriculum outdated/texts outdated	50	37
More relevant to society's/children's needs	31	26
More emphasis on Canadian studies was needed	13	10
More continuity between grades	5	3
Greater structure needed	5	3

Reasons change not needed.	Number of Times Cited	
	Social Studies	Science
Changes not substantive	3	5
Content retention still important	-	2
Need was for more assistance to staff	-	4

9. Did you attend inservice/workshops concerning the new social studies/ science curriculum?

	Social Studies	Science
Yes	76%	23%
No	24%	77%
Total N =	384	89

10. Number of hours attended.

	Social Studies	Science
3 hours or less	21%	50%
4-6 hours	35%	22%
7-9 hours	11%	22%
10 hours or more	33%	6%
Total N =	286	18

11. Ways to best assist teachers to implement the new social studies/science curriculum.

	Number of Times Cited			
	Social Studies		Science	
	First	Second	First	Second
Membership on a curriculum committee	25	14	15	3
Workshops/seminars by specialists	155	64	37	19
University courses on the new curricula	7	9	3	1
Availability of current books, journals, etc.	18	32	3	9
Observation of lessons demonstrating strategies	38	72	7	14
Individual study of the new curricula	37	31	6	5
Availability of model units	90	137	13	25

12. What influence do you have regarding the decisions that are made on the following dimensions of the social studies/science curriculum in your school?

	Social Studies				Science			
	Great	Some	Slight	None	Great	Some	Slight	None
Allocation of time for teachers teaching	52%	35%	8%	5%	77%	14%	3%	6%
Allocation of time for specific topics	12%	40%	35%	13%	10%	39%	37%	14%
Textbooks/supplies choice	40%	52%	7%	1%	19%	56%	20%	5%
Teaching strategies for teachers	12%	56%	30%	2%	7%	69%	20%	4%
Professional development for teachers	28%	58%	11%	3%	23%	67%	6%	4%

13. Did the implementation of the social studies/science curriculum in your school cause you any:

	Social Studies			Science		
	Yes	No	Total N =	Yes	No	Total N =
Scheduling/time concerns	12%	88%	371	7%	93%	84
Class size concerns	11%	89%	370	12%	88%	84
Space allocation concerns	5%	95%	365	11%	89%	84
Textbook/supplies choice concerns	68%	32%	369	26%	74%	82
Expressed parental concerns	2%	98%	369	6%	94%	83
Teacher dissatisfaction	26%	74%	361	26%	74%	81

14. Overall, how satisfied are you with the process used to implement the new social studies/science curriculum?

	Social Studies	Science
Very satisfied	15%	14%
Moderately satisfied	68%	69%
Somewhat dissatisfied	16%	15%
Very dissatisfied	1%	2%
Total N =	361	84

Other Comments.	Number of Times Cited	
	Social Studies	Science
Extra funds needed during implementation	6	8
Too much at once/teachers overloaded	14	7
Department of Education provide resource personnel	5	11
Teachers must be aware/familiar with philosophy of new curricula	2	4
More specific inservicing needed	4	3
More inservicing for principals/ specialistis needed	3	3

FREQUENCIES:
CURRICULUM IMPLEMENTATION SURVEY
ELEMENTARY SCHOOL TEACHERS

1. Do you teach Social Studies?

	Number
Yes, teach Social Studies	287
No, other elementary teacher	167
Total N =	454

PART A: Non-Social Studies Teachers

2. Within the last three to four years, what new curricula have been introduced in any of the subjects you have taught?

	Number of Times Cited	Rank
Language Arts	52	1
Art	26	2
Health	25	3
Physical Education	24	4
French	15	5
Music	11	6
Science	8	7
Computer Awareness	7	8
Mathematics	6	9
Home Economics	4	10

3. (a) For the most recent curriculum, did you receive:

	Number Who Received	Rank
Department of Education curriculum guides	117	1
Professional development workshops/ inservices	87	2
Informal interaction with colleagues who teach in the same subject area	75	3
Supplementary/resource materials for classroom use	52	4
Individualized assistance from consultants	27	5

(b) How important should the following be in the implementation process of any new curriculum:

	Very Important	Moderately Important	Slightly Important	No Importance	Total N=
Department of Education curriculum guides	80%	18%	2%	-	126
Supplementary/ resource material for classroom use	76%	19%	5%	-	126
Professional development workshops/ inservices	66%	24%	3%	7%	130
Individualized assistance from consultants	26%	39%	25%	10%	118
Informal interaction with colleagues who teach in the same subject area	59%	28%	7%	6%	121
School visitation among teachers	32%	38%	23%	7%	124

4. (a) Do you feel you were able to implement successfully curriculum introduced since 1980?

Yes	76%
No	24%
Total N =	116

(b) If no, why not?

	Number of Times Cited
Not enough time to implement program	6
Adequate resources are not available	3
No professional development	2
Requires modification to make it appropriate to schools	2

Part B: Social Studies and Non-Social Studies Teachers

5. Which organization do you feel should be chiefly responsible for providing the following for new curricula?

	Social Studies	Non-Social Studies
(a) Professional development workshops/ inservices		
Your school	7%	4%
School division	29%	24%
Department of Education	53%	50%
Manitoba Teachers' Society	1%	2%
Special Area Groups	10%	20%
Total N =	307	135
(b) Individual assistance to teachers		
Your school	18%	15%
School division	48%	52%
Department of Education	22%	19%
Manitoba Teachers' Society	3%	1%
Special Area Groups	9%	13%
Total N =	293	123

6. (a) Overall, how satisfied are you with the process of curriculum implementation in Manitoba since 1980?

	Social Studies	Non-Social Studies
Very satisfied	8%	10%
Satisfied	71%	71%
Dissatisfied	19%	17%
Very dissatisfied	2%	2%
Total N =	316	126

(b) For those who are dissatisfied, why?

	Number of Times Cited	
	Social Studies	Non-Social Studies
Too much new curriculum at one time	10	21
Lack of assistance (ie. professional development and information)	7	21
Lack of resources and materials	3	8

Part C: Social Studies Teachers

7. On average, how many minutes per day do you teach the provincial social studies program?

15 minutes or less	24%
16 to 30 minutes	58%
31 to 45 minutes	14%
More than 45 minutes	4%
Total N =	297

Most often cited: 20 minutes (27%)

8. (a) Do you feel that there was a need for the change in the social studies curriculum?

Yes	74%
No	26%
Total N =	266

(b) Explain:

	Number of Times Cited	Rank
Needed more up-to-date ideas	50	1
Needed curriculum relevant to childrens' needs	40	2
Preferred the old curriculum	13	3
Needed greater emphasis on Canadian studies	12	4
Changes made were not substantial	9	5
Needed a better structure	8	6

9. Are you aware that a new social studies curriculum has been introduced in Manitoba?

Yes	97%
No	3%
Total N =	307

10. From whom were you first informed about new social studies curriculum?

Your principal	56%
Another teacher	10%
Department of Education consultant	14%
Divisional consultant	8%
Department of Education publications	6%
Other	6%
Total N =	283

11. Who do you think should have first informed you about the new social studies curriculum?

Your principal	53%
Another teacher	1%
Department of Education consultant	34%
Divisional consultant	8%
Department of Education publications	2%
Other	2%
Total N =	271

12. Which of the following were helpful to you in becoming familiar with the goals and the objectives of the new social studies curriculum?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Materials/resources from the Department of Education	18%	55%	6%	21%	250
Department of Education-sponsored workshops	10%	37%	7%	46%	231
MTS-sponsored workshops	6%	30%	4%	60%	209
School division-sponsored workshops	21%	44%	6%	29%	259
Faculty of Education-sponsored workshops	7%	7%	5%	81%	196
Courses in the Faculty of Education	5%	13%	7%	75%	176

13. Which of the following were helpful to you in becoming familiar with the resources and supplementary material of the new social studies curriculum?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Materials/resources from the Department of Education	11%	57%	5%	27%	241
Department of Education-sponsored workshops	5%	34%	8%	53%	208
MTS-sponsored workshops	1%	23%	6%	70%	192
School division-sponsored workshops	17%	44%	5%	34%	249
Faculty of Education-sponsored workshops	-	7%	8%	85%	185
Courses in the Faculty of Education	3%	11%	8%	78%	186

14. Which of the following were helpful to you in becoming familiar with the teaching strategies identified in the social studies curriculum guide?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Materials/resources from the Department of Education	13%	53%	8%	26%	242
Department of Education-sponsored workshops	6%	31%	7%	56%	203
MTS-sponsored workshops	2%	22%	6%	70%	189
School division-sponsored workshops	14%	46%	5%	35%	255
Faculty of Education-sponsored workshops	1%	8%	5%	86%	180
Courses in the Faculty of Education	4%	13%	7%	76%	177

15. Do you have ready access to:

	Yes	No	Total N =
Level 1 interim guide (K-12)	95%	5%	285
Specific guide for the grade(s) you teach	94%	6%	235
Approved text materials	60%	40%	249
Recommended supplementary material	48%	52%	242

16. Please indicate how satisfied you are with the specific grade level curriculum guide in terms of:

	Very Satisfied	Satis-fied	Dissat-isfied	Very Dissatisfied	Total N =
Clarity of organization	19%	73%	5%	3%	274
Appropriateness of contents	19%	67%	12%	2%	272
Appropriateness of objectives	19%	71%	9%	1%	270
Appropriateness of suggested learning activities	16%	64%	16%	4%	271

17. Please indicate whether the new social studies curriculum guide is:

	Yes	No	Total N =
Useful for teaching	90%	10%	264
Easy to understand	91%	9%	259
Well organized	90%	10%	258
Of value to me	92%	8%	254
Easily modifiable	93%	7%	253

18. For my classroom activities, the teacher resources (eg. supplementary reading) recommended by the new social studies curriculum guide are:

	Yes	No	Total N =
Available to me	50%	50%	252
Appropriate for class	72%	28%	170
Used in classes	49%	51%	201

19. Did you attend inservices/workshops concerning the new social studies curriculum?

Yes	68%
No	32%
Total N =	291

20. Please estimate the number of hours you spent attending inservices/ workshops for the new social studies curriculum.

1-3 hours	30%
4-6 hours	27%
7-9 hours	11%
10-12 hours	14%
13-15 hours	4%
More than 15 hours	14%
Total N =	198

21. Who sponsored these inservices/workshops?

	Number of Times Cited	Rank
Your division	166	1
Department of Education	79	2
Your school	67	3
Manitoba Teachers' Society	24	4
Special Area Groups	12	5
Other	4	6

22. Who do you think should sponsor inservices/workshops:

	Number of Times Cited	Rank
Your division	193	1
Department of Education	185	2
Your school	104	3
Manitoba Teachers' Society	64	4

23. In which of the following areas would you like inservices/workshops concerning the new social studies curriculum?

	Number of Times Cited	Rank
Classroom activities	217	1
Development of teaching units	211	2
Teaching strategies	154	3
Content	77	4
Explanation of objectives	38	5

24. Who, at the local level, was helpful in initiating the new social studies curriculum by offering encouragement and advice?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Principal	17%	41%	5%	37%	247
Department head	4%	6%	6%	84%	159
Superintendent	4%	17%	7%	72%	186
Other teachers	13%	55%	3%	29%	237
Local teachers' organizations	5%	22%	10%	63%	183

25. Please place a "1" beside the way that would best assist teachers to implement the new social studies curriculum. Place a "2" beside the second best way.

	Number of Times Cited as "1st"	Number of Times Cited as "2nd"
Membership on a social studies curriculum committee	11	9
Workshops and seminars by specialists	68	76
University courses on new curricula	7	3
Availability of current books, journals	19	44
Observation of lessons demonstrating strategies of the new curricula	29	52
Individual study of the new curricula	26	21
Availability of model units prepared specifically for the new approach at your grade level	134	70

26. What influence do you have regarding the decisions that are made on the following dimensions of the social studies curriculum in your class?

	Great Influence	Some Influence	Slight Influence	No Influence	Total N =
Allocation of time for teaching social studies	38%	30%	15%	17%	303
Allocation of time for specific topics	68%	25%	4%	3%	298
Textbook/supplies choice	35%	40%	20%	5%	297
Teaching strategies	79%	19%	1%	1%	302
Professional development	22%	45%	23%	10%	295

27. (a) Generally, I would say that I am implementing the new social studies curriculum as follows:

Making no attempts at implementation	1%
Trying out one or two ideas to a limited extent	22%
Trying out several new ideas fairly extensively	33%
The new approach is my major, but not complete focus of attention	24%
The philosophy and strategies of the new curriculum are the complete focus of attention in my teaching of social studies	20%
Total N =	303

(b) Do you see your level of implementation changing?

Yes	76%
No	24%
Total N =	275

Explain:

	Number of Times Cited
The level will continue to increase	83
There is no need for further change	25
Will use different approaches and strategies in the future	19

28. (a) Did the implementation of the social studies curriculum in your classroom cause you any:

	Yes	No	Total N =
Scheduling/time concerns	25%	75%	285
Class size concerns	22%	78%	282
Space allocation concerns	14%	86%	276
Textbook/supplies choice concerns	63%	37%	293
Expressed parental concerns	5%	95%	269

(b) Explanation of concerns:

	Number of Times Cited
Scheduling/time concerns	
- Not enough time available	17
- Problems in multi-graded classes	2
- Difficulties with timetabling	2
Class size concerns	
- Classes are too large	7
- Problems in multi-graded classes	4
Space allocation concerns	
- Limited space/room too small	7
Textbook/supplies choice concerns	
- Inadequate/unavailable materials/texts	21
- Shortage of money for materials	11
- Need to try new texts	8
Other concerns	
- Problems for teachers in multi-graded situations	6
- Resource materials are scarce	3
- Lack of preparation time	3

29. (a) Overall, how well prepared do you think you were to begin the process of implementing the new social studies curriculum?

Very well prepared	13%
Moderately well prepared	57%
Not well prepared	21%
Not very well prepared at all	9%
Total N =	308

(b) Why didn't you feel well prepared?

	Number of Times Cited
Inservicing was inadequate	17
Materials were insufficient	16
Not enough help provided (eg. with implementation strategies)	7
More practical information would have been useful	3
More preparation time was needed	3

30. (a) Overall, how satisfied are you with the process used to implement the new social studies curriculum?

Very satisfied	15%
Moderately satisfied	59%
Somewhat dissatisfied	21%
Very dissatisfied	5%
Total N =	307

(b) Why were you dissatisfied?

	Number of Times Cited
Not enough professional development provided	15
Not enough materials available	8
Workshops were not useful	6
Not enough direction provided	5
"Too much, too fast"	4

31. Additional comments:

	Number of Times Cited
Inservicing on new curriculum is necessary	9
Need help with specific teaching ideas/ strategies	8
Too many changes at the same time	8
Need more relevant materials	6
Workshops were not useful	4
Not enough time to cover the whole program in a year/"too heavy"	4

FREQUENCIES:
CURRICULUM IMPLEMENTATION IN MANITOBA
SECONDARY TEACHERS

1. Do you teach Science?

	Number
Yes, teach Science (100,101)	197
No, teach Mathematics (100,101)	215
Total N =	415

PART A: Mathematics Teachers

2. Within the last three to four years, what new curricula have been introduced in any of the subjects you have taught?

Subject	Number of Times Cited	Rank
Math 00	106	1
Math 01	34	2
Computer Science	5	3

3. (a) For the most recent curriculum, did you receive:

	Number Who Received	Rank
Department of Education curriculum guides	173	1
Professional development workshops/inservices about implementation	139	2
Information interaction with colleagues who teach in the same area	121	3
Supplementary/resource materials for classroom use	120	4
Individualized assistance from consultants	22	5

(b) How important should the following be in the implementation process of any new curriculum:

	Very Important	Moderately Important	Slightly Important	No Importance	Total N =
Department of Education curriculum guides	74%	8%	1%	17%	215
Supplementary/resource materials for classroom use		23%	3%	19%	215
Professional development workshops/inservices	47%	29%	4%	20%	215
Individualized assistance from consultants	16%	44%	32%	8%	215
Informal interaction with colleagues who teach in the same subject area	44%	31%	6%	19%	215
School visitation among teachers	18%	39%	32%	11%	215

4. Do you feel you were able to implement successfully curriculum introduced since 1980?

Yes	88%
No	12%
Total N =	215

Why not?

	Number of Times Cited
Too much of a change in a short period of time	10
Lack of money for materials	1
Not enough information	1
New version is "watered" down	2
Unsuitable tests/materials	4

5. Which organization should be chiefly responsible for providing:

	Your School	Your Division	Department of Education	MTS	SAG
Professional development/ workshops and inservices (Total N = 197)	3%	12%	71%	2%	12%
Individualized assistance to teachers	15%	31%	39%	4%	11%

6. Overall, how satisfied are you with the process of curriculum implementation in Manitoba since 1980?

Very satisfied	6%
Satisfied	64%
Dissatisfied	27%
Very dissatisfied	3%
Total N =	190

Why dissatisfied with curriculum implementation?

	Number of Times Cited
Courses are "watered" down	5
Lack of available money	7
Too many changes in too short a period of time	3
Changes too slow to implement	4
Not enough support nor involvement	13
Quality and expectation of science has deteriorated	3
Curriculum committee chosen by nepotism	1
Lack of information/bad organization	16

7 Is your school scheduled on:

Yearly basis	35%
Semester	64%
Trimester	1%
Total N =	194

PART B: Science and Mathematics Teachers

5. Which organizations do you feel should be chiefly responsible for providing the following for new curricula?

(a) Professional development workshops/ inservices

Your school	5%
School division	11%
Department of Education	74%
Manitoba Teachers' Society	2%
Special area groups	8%
Total N =	193

(b) Individual assistance to teachers

Your school	16%
School division	29%
Department of Education	37%
Manitoba Teachers' Society	2%
Special area groups	16%
Total N =	178

6. Overall, how satisfied are you with the process of curriculum implementation in Manitoba since 1980?

Very satisfied	11%
Satisfied	68%
Dissatisfied	20%
Very dissatisfied	1%
Total N =	207

Why dissatisfied?

	Number of Times Cited
Courses are watered down	2
Lack of available money	3
Curriculum guides verbose	4
Too many changes too fast	8
Changes too slow to implement	4
Not enough support and involvement	5
Quality and expectations of program deteriorated	5
Lack of available information/bad organization	6

7. Is your school scheduled on a:

Yearly basis	29%
Semester	70%
Trimester	1%
Total N =	211

PART C: Science Teachers

8. On average, how many minutes per day do you teach science?

40-159 minutes	35%
160-300+ minutes	65%
Total N =	197

9. (a) Do you feel there was a need for the change?

Yes	79%
No	21%
Total N =	169

(b) Explain the need for change:

	Number of Times Cited	Rank
Need to include modern topics and developments	87	1
Increase interest to students	10	2
Old curricula too difficult for students	2	3
Old curricula too easy for students	1	4

(c) Explain the reason for no change.

	Number of Times Cited	Rank
Existing program is fine	19	1

10. Are you aware that a new curriculum has been introduced in Manitoba?

Yes	96%
No	4%
Total N =	189

11. (a) From whom were you first informed about the new science curriculum?

Your principal	9%
Another teacher	19%
Department of Education consultant	46%
Divisional consultant	6%
Other	20%
Total N =	175

(b) Other:

	Number of Times Cited
Department head	8
Inservice meeting	7
Special area group	8
Printed material and information	8
University-Faculty of Education	8
Education Manitoba	2
Superintendent	1
Position on Curriculum Revision Committee	5
Other teachers	1

12. (a) Who do you think should have first informed you about the new science curriculum?

Your principal	11%
Another teacher	2%
Department of Education consultant	66%
Divisional consultant	10%
Other	11%
Total N =	197

(b) Other:

	Number of Times Cited
Department of Education workshops	5
Department head	2
Printed information	2
Teachers/professors	2

13. (a) Which of the following were helpful to you in becoming familiar with the goals and objectives of the new science curriculum?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Material/resources from Department of Education	27%	67%	2%	4%	168
Department of Education-sponsored workshops	33%	45%	4%	18%	164
MTS-sponsored workshops	6%	23%	7%	64%	146
School division-sponsored workshops	11%	27%	10%	52%	155
Faculty of Education-sponsored workshops	3%	9%	7%	81%	142
Course in the Faculty of Education	4%	6%	5%	85%	139

(b) Other:

	Number of Times Cited
School resource center	3
Faculty of education	3
Other teachers	2

14. Which of the following were helpful to you in becoming familiar with the resources and supplementary material of the new science curriculum?

	Very Helpful	Helpful	No Help	No Help Received	Total N =
Materials/resources from Department of Education	31%	55%	7%	7%	158
Department of Education workshops	30%	47%	3%	20%	157
MTS-sponsored workshops	9%	19%	10%	62%	137
School division workshops	10%	29%	12%	49%	143
Faculty of Education-sponsored workshops	2%	4%	7%	87%	135
Courses in the Faculty of Education	2%	8%	6%	84%	129

15. Which of the following were helpful to you in becoming familiar with the teaching strategies identified in the science curriculum guide?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Materials/resources from Department of Education	20%	58%	10%	12%	158
Department of Education-sponsored workshops	24%	45%	6%	25%	157
MTS-sponsored workshops	8%	20%	7%	65%	137
School division workshops	7%	21%	13%	59%	143
Faculty of Education-sponsored workshops	5%	7%	4%	84%	135
Courses in the Faculty of Education	3%	9%	4%	84%	129

16. Do you have ready access to:

	Yes	No	Total N =
Level 1 interim guide (K-12)	66%	34%	157
Specific guide for the grade(s) you teach	96%	4%	168
Approved text materials	86%	14%	176
Recommended supplementary material	61%	39%	173

17. Please indicate how satisfied you are with the specific grade level curriculum guide in terms of:

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Total N =
Clarity of organization	24%	70%	5%	1%	168
Appropriateness of contents	17%	64%	17%	2%	168
Appropriateness of objectives	15%	76%	9%	-	164
Appropriateness of suggested learning activities	14%	68%	18%	-	164

18. Please indicate whether the new science curriculum guide is:

	Yes	No	Total N =
Useful for teaching	92%	8%	166
Easy to understand	89%	11%	164
Well organized	88%	12%	161
Of value to me	91%	9%	161
Easily modifiable	89%	11%	151

19. For my classroom activities, the teacher resources (eg. supplementary reading) recommended by the new science curriculum guide are:

	Yes	No	Total N =
Available to me	63%	37%	162
Appropriate for class	72%	28%	123
Used in classes	51%	49%	142

20. Did you attend inservices/workshops concerning the new science curriculum?

Yes	81%
No	19%
Total N =	177

21. Please estimate the number of hours you spent attending inservices/ workshops for the new science curriculum.

1-3	8%
4-6	20%
7-9	11%
10-12	24%
13-15	8%
More than 15 hours	29%
Total N =	130

22. Who sponsored these inservices/workshops?

	Number of Times Cited	Rank
Department of Education	121	1
Your division	63	2
Manitoba Teachers' Society	28	3
Your school	19	4
SAG	6	5

23. Who do you think <u>should</u> sponsor inservices/workshops?

	Number of Times Cited	Rank
Department of Education	144	1
Your division	86	2
Manitoba Teachers' Society	41	3
Your school	33	4
Other	5	5

24. In which of the following areas would you like inservices/workshops concerning the new science curriculum?

	Number of Times Cited	Rank
Classroom activities	115	1
Teaching strategies	104	2
Development of teaching units	103	3
Content	81	4
Explanation of objectives	33	5

25. Who, at the local level, was helpful in initiating the new science curriculum by offering encouragement and advice?

	Very Helpful	Helpful	Not Helpful	No Help Received	Total N =
Principal	7%	36%	10%	47%	143
Department head	17%	31%	6%	46%	134
Superintendent	2%	17%	8%	73%	135
Other teachers	15%	47%	3%	35%	145
Local teachers' organizations	4%	12%	7%	77%	127

26. Please place a "1" beside the way that would best assist teachers to implement the new science curriculum. Place a "2" beside the second best way.

	Number of Times Cited as 1st	Number of Times Cited as 2nd
Membership on a science curriculum committee	5	3
Workshops and seminars by specialists	72	32
University courses on the new curricula	4	5
Availability of current books, journals	17	29
Observation of lessons demonstrating strategies of the new curricula	14	23
Individual study of the new curricula	13	19
Availability of model units prepared specifically for the new approach at your grade level	34	46

27. What influence do you have regarding the decisions that are made on the following dimensions of the science curriculum in your class?

	Great Influence	Some Influence	Slight Influence	No Influence	Total N =
Allocation of time for teaching science	8%	8%	18%	66%	179
Allocation of time for specific topics	65%	26%	6%	3%	179
Textbook/supplies choice	46%	34%	16%	4%	178
Teaching strategies	81%	15%	3%	1%	179
Professional development	20%	41%	31%	8%	172

28. (a) Generally, I would say that I am implementing the new science curriculum as follows:

Making no attempts at implementation	2%
Trying out one or two of the ideas to a limited extent	15%
Trying out several ideas fairly extensively	31%
The new approach is my major, but not complete focus of attention	39%
The philosophy and strategies of the new curriculum are the complete focus of attention in my teaching of science	13%
Total N =	176

(b) Do you see your level of implementation changing?

Yes	67%
No	33%
Total N =	157

Explain:	Number of Times Cited
I will become more experiential and more involved with new curricula	72
"I have made changes already that I'm happy with"	24
I will become more efficient	2
Retiring teacher	2
Too little time	2
Lack of available funds necessary to implement the curricula	1
No inservice help	1

29. (a) Did the implementation of the science curriculum in your classroom cause you any:

	Yes	No	Total N =
Scheduling/time concerns	23%	77%	197
Class size concerns	36%	64%	173
Space allocation concerns	20%	80%	164
Textbook/supplies choice concerns	65%	35%	170
Expressed parental concerns	8%	92%	160
Other concerns	78%	22%	188

(b) Explanation of concerns:

	Number of Times Cited
Scheduling/time concerns	
- Number of people had to rearrange schedule/insufficient time to complete program	6
Class size concerns	
- Classes too large	14
Space allocation concerns	
- More lab space needed	5
Textbook/supplies choice concerns	
- No continuity between modules	20
- Need new books	4
- Not enough money for appropriate text	2
Other concerns	
- Poor equipment/facilities	4
- No inservice support	2
- Too many changes in too short a time	1
- Lack of appropriate organization	2

30. (a) Overall, how well prepared do you think you were to begin the process of implementing the new science curriculum?

Very well prepared	23%
Moderately well prepared	63%
Not well prepared	11%
Not very well prepared at all	3%
Total N =	177

(b) Why didn't you feel well prepared?

	Number of Times Cited
No inservice support	3
Too many changes at one time	2
Lack of appropriate material	3

31. (a) Overall, how satisfied are you with the process used to implement the new science curriculum?

Very satisfied	21%
Moderately satisfied	56%
Somewhat dissatisfied	17%
Very dissatisfied	6%
Total N =	174

(b) Why were you dissatisfied?

	Number of Times Cited
Lack of equipment/facilities	3
No inservice help	2
Guides should be made available earlier	2
No involvement with teachers	9
Need more support re: professional development	5
Irregular and inconsistent development of program	7
Not enough money	3
Unsuitable text	1

32. General Comments.

	Number of Times Cited
Increased costs should be considered/ Lack of appropriate funds	9
Process is too slow	1
More emphasis should be placed on training teachers	3
Texts should be chosen more carefully and suitably	8
Process is too fast	6
Development of curriculum needs more organization	5
No input between Department of Education and the schools	3

Specific comments about the curricula.

	Number of Times Cited
Too much unproductive paperwork for the science curricula	2
A set of science exercises should accompany text	1
Science program too easy and non-challenging for students	4
Pleased with the science program	7
Department head should spend more time with teachers	3
Better/more resources for classroom use in science	15
Math program poorly planned	2