The purpose of this research was to examine how teachers' perceptions of five curricular characteristics—relative advantage, compatibility, trialability, observability, and complexity—affect implementation of the revised Manitoba Social Studies Curriculum. Twenty-two female teachers from a rural and urban school division from each of grades 1-6 were interviewed with the aid of a Likert-type instrument. The results indicated that teachers in this study perceived curricular characteristics as important factors in the implementation process. Significant differences between the two groups were noted for complexity and observability. Also, administrative support was found to be important in the implementation process.

Résumé

Ce projet de recherche avait pour objet d'analyser la façon dont la perception par les enseignants de cinq caractéristiques du programme d'études—avantage relatif, compatibilité, essayabilité, observabilité et complexité—affecte la mise en place du programme de sciences humaines révisé au Manitoba. Vingt-deux enseignantes de la première à la sixième année d'une commission scolaire rurale et d'une commission urbaine ont été interrogées à l'aide d'un instrument de type Likert. Il ressort de ce sondage que les enseignantes participant à cette étude perçoivent les caractéristiques du programme d'études comme des paramètres importants du processus de mise en place. Des différences significatives ont été constatées entre les deux groupes au chapitre de la complexité et de l'observabilité. Par ailleurs, on a constaté que le soutien administratif revêtait de l'importance dans le processus de mise en place.
The failure to implement curricular innovations in the recent past has been attributed by researchers to a lack of conception of the "characteristics" or attributes of the innovation. Curricular characteristics are thought to influence implementation. Fullan (1982), for example, noted that curricular "attributes causally influence implementation" (p. 56). Common (1981) observed that "the nature of the curriculum does affect directly and significantly the outcomes of implementation" (p. 43). Hunkins (1977) found that most of the research undertaken in social studies curriculum focused upon the characteristics of user and organization, and that the curriculum itself and its innovative characteristics have not received the attention they deserved.

Early Studies

Several studies have found that educators' perceptions of an innovation's attributes or characteristics are important to the success of the implementation. Rogers and Shoemaker (1971) theorized that it is the receiver's (user's) perception of the attributes that affects the degree of implementation. While there are other attributes that affect implementation, Rogers and Shoemaker identified five conceptually distinct characteristics that are particularly important and which are believed to account for most of the variance. These characteristics are (1) relative advantage, (2) compatibility, (3) trialability, (4) observability, and (5) complexity.

Several studies have examined curricular characteristics in the process of curriculum implementation. The works of Rogers and Shoemaker (1971), Carlson (1965) in Oregon, Clinton (1972) at the University of Toronto, and Crowther (1972) in Edmonton are very relevant, in that, each of these studies examined all five characteristics mentioned above and found them to be important factors contributing towards the success of the implementation of new curricula introduced in schools.

Commenting on the implementation failures of the Alberta Social Studies Program (ASSP) of the 1970s, Werner (1981) noted as negative factors "procedural and substantive assumptions about teaching social studies which were not understood nor accepted by practitioners... to any great extent" (p. 142). Downey (1975), in his evaluation of the ASSP, found that compatibility was a major negative factor. Skau (1988) and Foran (1981) made similar observations. It appears that developers were learning from the failures of the 1960s and 1970s because, as Skau (1988) noted, the revised curriculum introduced in Alberta "was more complete" (p. 217) than earlier versions.

Hahn (1974) studied the relationship of perceived characteristics of the "New Social Studies" materials to their adoption in four states in the
United States and concluded that factors such as costs in money, time, student interest, or materials were more important in the implementation of social studies than do one person’s perceptions of the innovation’s attributes.

Sanderson and Kratochvil (1972) found compatibility and cost to be important factors in the adoption of the Holt Social Studies Curriculum. In this case, relative advantage was negatively correlated with implementation. Cost was also found to be a major factor in the adoption of the Georgia Anthropology Curriculum Project (Richburg, 1969).

Complexity has also been advanced as a crucial factor in the implementation process (Clark, Lotto, & Astuto, 1984; Fullan & Steigelberger, 1991; Fullan & Pomfret, 1977; Berman & McLaughlin, 1976). Berman and McLaughlin noted three aspects of complexity. The first, structural complexity, is found when too many curricula are introduced all at once or cover many grade levels. Lee (1985) found structural complexity to be a negative factor in the implementation of the revised Manitoba Social Studies program. Another aspect of complexity involves instructional methodology. If the particular methodology suggested by the innovation demanded vast changes in teacher behaviour, resistance could occur. The third aspect of complexity, noted by Berman and McLaughlin, involves the integration of the curriculum into the school organization and the daily routine of the teacher. If the curriculum appears to be too complex, this could result in varied levels of usage (Rutherford, 1976).

Albert Shankar, President of the American Federation of Teachers, recently commented on the failures of educational reform in the United States and noted the reforms were “hijacked” or “watered down beyond recognition” (Shankar, 1990). The Manitoba study by Lee (1985) found no such watering down but noted that the characteristic of complexity was particularly problematic. Too many curricula came into the school at once; consequently, teachers did not implement “all the curriculum” but concentrated instead on those that “were given higher priority” (p. 12).

In the last decade massive amounts of revised or innovative curricula have been introduced into the schools in Manitoba. While some attempts have been made to examine the implementation of these curricula (Lee, 1985), to date very little effort has been made to evaluate how teachers’ perceptions of these curricula characteristics of the innovative program influence the implementation-instructional process.

The present study which follows was designed to identify teachers’ perceptions of five innovative characteristics of the revised Manitoba Social Studies Curriculum and their levels of implementation in the elementary
schools using the following generalization: Curricular implementation is influenced by implementers' perceptions of the attributes of the innovative curriculum. The significance of this study is of most utility to those involved in current and future curriculum implementation for the improvement of educational practice in the schools. And, as noted by Nisbet (1980), case studies such as this shed light on forces that shape education. This study utilizes and extends the constructs identified above and defined below.

* **Relative advantage** is the degree to which an innovation is perceived as being better than what it supersedes.

* **Compatibility** is the degree to which an innovation is seen as being compatible with the adopter's needs, values, and previous experience.

* **Trialability** is the degree to which an innovation can be tried on a limited basis.

* **Observability** is the degree to which the results of an innovation are visible to others.

* **Complexity** is the degree to which an innovation is perceived as relatively difficult to understand and use.

* **Curriculum implementation** is the process used to bring about changes identified in each new or revised program. It is the actual use of the innovative curriculum in the classroom.

* **Degree of implementation** is the extent to which curriculum is utilized in accordance with the expected level of use prescribed by the central authority.

**Methodology**

**Subjects**

The subjects for this study were 22 female elementary school teachers some of whom held graduate degrees. Twelve of the teachers came from a central rural K-12 school containing about 700 pupils. The other ten teachers were from an urban school division and were selected from ten separate schools in the division. All teachers volunteered for the study.
Instrument and Procedure

A 5-point Likert-type scale was designed for the study, and after being compared with similar instruments found in the literature, was deemed to be suitable.\(^3\) With the use of an SPSS-X program, reliability coefficients were calculated for the five constructs and a standardized alpha of .84 was obtained.

The scale was discussed with the subjects who were interviewed for about an hour in their classrooms and the questionnaires were filled out with the purpose of indicating the subjects' observations of the innovative curriculum characteristics. All subjects showed the researcher projects they

**Table 1**

<table>
<thead>
<tr>
<th>Perceived characteristics of social studies curricula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANOVA</strong></td>
</tr>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td><strong>Source</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1. Relative Advantage</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>2. Compatibility</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
<tr>
<td>3. Trialability</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
<tr>
<td>4. Observability</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
<tr>
<td>5. Complexity</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
<tr>
<td>6. Assistance</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
<tr>
<td>7. Implementation</td>
</tr>
<tr>
<td>BG</td>
</tr>
<tr>
<td>WG</td>
</tr>
</tbody>
</table>

BG - Between Group       WG - Within Group  SIG - Significance
had done within the context of the revised social studies curriculum. Annotated comments on these were made by the researcher for later cross-referencing.

Results and Discussion

Results

Data analysis for the two groups of teachers was carried out using analysis of variance (ANOVA) and the results are presented in Table 1. The data revealed no significant differences between both groups of teachers for the three characteristics, compatibility, trialability, and relative advantage. There were significant differences, however, between the two groups of teachers for the characteristics, observability and complexity. These two factors are elaborated below. All teachers received considerable assistance from their principals (or designate) and reported high levels of implementation.

For the characteristic, “relative advantage,” 13 people (59%) stated that the revised social studies curriculum was “decidedly more advantageous;” 8 people (36%) said that it was “more advantageous,” and one stated that there was “no difference in advantage.” On the implementation scale, the thirteen subjects, who recorded “decidedly more advantageous,” and the one with “no difference in advantage,” had experienced full implementation as suggested by the curriculum developers. The other eight subjects who found the revised curriculum “more advantageous” scored 4 on the 5-point Likert-type implementation scale. So, 64% of the teachers interviewed experienced full implementation while 36% did not implement fully, but were not far from the target. The data indicate that “relative advantage” as a curricular characteristic does make a difference in curriculum implementation. Teachers felt that the curriculum was more relevant to pupils’ needs and, therefore, proceeded with implementation.

For the characteristic, “compatibility,” nine subjects scored “decidedly more compatible,” twelve subjects scored “more compatible,” and one scored “no difference in compatibility.” Again, those who scored at the top end experienced full implementation. Four others from the group of twelve had full implementation, the “no difference” subject also experienced full implementation. It would appear that the curricular characteristic, “compatibility,” does make a difference in the process of curriculum implementation. The social studies curriculum dove-tailed quite well with the “whole language” philosophy to which almost all the teachers subscribed. This facilitated integration with other school curricula and contributed to implementation.
For the characteristic "trialability," all twenty-two subjects scored "easy to try out," which is level 4 on the 5-point Likert-type scale. Therefore, the characteristic, "trialability," does appear to influence the process of curriculum implementation. Teachers were advised to try out small units rather than implement the entire curriculum at once, and this approach appeared to facilitate implementation. The results of piloted units were also available to them.

For the curricular characteristic "observability," two subjects scored "very easy to observe," eleven subjects scored "easy to observe," and nine (40%) scored "difficult to observe." It would appear that "observability" as a curricular characteristic, in the case of this curriculum, is somewhat problematic. Analysis of the interview data indicated that inadequate time was available for visitations and observations to other schools where pilot programs were in effect. This problem is closely related to the characteristic "complexity." Observability was more problematic for the rural group of teachers who found it difficult to travel longer distances to observe other teachers. It appeared that time and cost, factors noted by Hahn (1974) and Kratochvil (1972), influenced the characteristic "observability" in this study.

For the curricular characteristic "complexity," eight subjects (36%) scored "relatively easy to understand and use," which is level 4 on the 5-point Likert-type scale. Ten of the subjects (45%) scored "not difficult to understand and use," and four (18%) scored "relatively difficult to understand and use." From the interview data, the problem of resources came up with over 80% of the teachers who stated that inadequate resources affected their implementation practices, such that they had to modify the program, abandon some topics, or defer them to later in the year. However, teachers found that with the gradual introduction of small units or segments, and the integration of these with other subjects, a policy advocated by the Manitoba Department of Education and the School Division, implementation of the social studies curriculum with some modification was carried out. Some teachers (about 25%) also felt that some of the tasks suggested in the curriculum were too advanced for the pupils and were above grade level. As a consequence these teachers abandoned or modified the tasks.

It would appear from the results that the five curricular characteristics — relative advantage, compatibility, trialability, observability and complexity — do play a somewhat important role in the curriculum and influence teachers' efforts at implementation. It also appears from the data that all the curricular characteristics do not equally influence the degree of implementation. Some characteristics, for example relative advantage and compatibility, differ somewhat from others such as complexity or observability.
Discussion

While the characteristics tested in this research were important to the degree of implementation of the social studies curriculum, all subjects had received varying degrees of professional assistance from the principal, a vice-principal, or a consultant. The professional input from the administration may have contributed towards the high degree of implementation reported in this study. The literature has shown quite clearly that where such assistance is provided in a continuing manner, a high level of implementation could be expected.

When teachers were asked to comment freely on the curriculum, all comments received were favourable and supportive of the Department of Education and the school administration’s support for curriculum implementation.

It seems also that levels of experience and academic background of teachers were somewhat influential. All subjects were highly qualified teachers with many years of classroom experience, in some cases over twenty-five years. Teachers’ professional sense of responsibility appeared to have been a factor in implementation. Teachers felt that it was their duty to implement the curriculum. From the above observations, it would seem that there is an interactive influence operating here. Subjects had responded that the “organized” and “well-planned” curriculum itself was important to their implementation efforts, yet they admitted that administrative input, leadership, and direction as well as collegiality were also important.

While some interaction effects may surely have operated in accounting for the high degree of implementation, it was not possible with this research design to state clearly the amount of variation that the five curricular characteristics examined in this study, nor the other confounding factors such as administrative inputs, contributed individually to the degree of implementation. What emerges from the data is that curricular characteristics seem to play an important part in curriculum implementation.

Thus the conceptualization of Rogers and Shoemaker (1971) that users’ perceptions of the innovative characteristics influence implementation practices is supported in this research. More work, however, needs to be done and other research designs with larger samples are needed to partition the variation of the various factors such as innovative characteristics, situational factors, or administrative attributes that causally influence implementation practices. This exploratory study, nevertheless, does give some indication about the effect of curricular characteristics on curriculum implementation.
1 The Alberta Social Studies Program, introduced into schools in Alberta in the 1970s, was developed by experts (producers) for implementation by teachers (consumers). Subsequent evaluations revealed numerous difficulties in the implementation of this program, but the main problem appeared to be incongruence of assumptions and beliefs about teaching and learning social studies between the producers and consumers. As a result of the variance in beliefs implementation was negatively affected.

2 The Holt Social Studies Curriculum was developed, with United States Government sponsorship, for American schools under the directorship of Edwin Fenton, a well-known U.S. educator. This program which was widely diffused into U.S. schools was part of the overall post-Sputnik effort to improve U.S. education. The main emphasis of the program was on inquiry/discovery approaches to the study of history and the social sciences. This thrust was also termed the New Social Studies.

3 The Georgia Anthropology Curriculum Project, also a response to the post-Sputnik education reform, was a program that took an interdisciplinary approach to the social studies. The emphasis was on discovery and inquiry strategies that allowed students to think and feel as a result of direct experiences.

4 The revised Manitoba Social Studies Program currently in use was introduced, along with many other new/revised programs, into the schools of the province in 1982 after a number of years of development by numerous stakeholders—the provincial department of education, school trustees, school superintendents, school teachers, the Manitoba Teachers' Society, university professors and parents. The program, organized around a number of major concepts, is intended to guide students to think seriously about the way in which people live in both Canada and in the world. Teachers were encouraged to integrate this program in all aspects of their teaching.

5 The questionnaire may be obtained by contacting the author.

REFERENCES


Rutherford, W.L. (1976). *The madness of educational change*. Austin, TX: Research and Development Centre for Teacher Education.


K.P. Binda holds a B.A. (Hons. Laurentian), B.Ed., M.Ed. (Toronto), and Ph.D. (Manitoba) and has taught at the primary and secondary levels in the public school system. He was a Centre coordinator for Brandon University Northern Teacher Education Program for seven years. He currently teaches geography and education courses at Brandon University.

K.P. Binda, B.A. (Hons. Laurentienne), B.Ed., M.Ed. (Toronto), Ph.D. (Manitoba), a enseigné aux niveaux primaire et secondaire du réseau scolaire public. Il a occupé les fonctions de coordinateur de Centre au programme de formation des maîtres des territoires du nord à l’Université de Brandon durant sept années. Les matières d’enseignement dont il s’occupe actuellement à l’Université de Brandon sont la géographie et l’éducation.