

CURRICULUM IMPLEMENTATION IN ONTARIO: ESPOUSED AND DE FACTO ASPIRATIONS FOR INQUIRY

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ABSTRACT. The implementation of provincially-mandated curriculum is a critical component of educational change and progress. How well this curriculum is implemented in classrooms depends upon a number of factors including the assistance provided by the province and the willingness of schools to utilize the mandated curriculum. In this study, provincial curriculum guidelines were analysed to determine the extent to which they featured inquiry as a teaching-learning strategy. This analysis was compared with the results of a survey completed by student teachers which determined to what degree inquiry was being taught in schools across Ontario. The results of the study show that although inquiry has been mandated to be taught in Ontario schools over the past three decades in an unprecedented manner, it does not receive a corresponding emphasis in classrooms. The article proposes that the Ontario Ministry of Education and Training needs to provide more assistance to schools in order to ensure the mandated curriculum is also the implemented curriculum.

RÉSUMÉ. L'implantation d'un programme dicté par la province est un élément critique du changement et des progrès de l'éducation. La façon dont ce programme est mis en oeuvre dans les salles de cours dépend d'un certain nombre de facteurs, notamment de l'aide fournie par la province et de la volonté des écoles d'utiliser le programme obligatoire. Dans cette étude, nous avons analysé les lignes directrices provinciales sur les programmes pour déterminer dans quelle mesure elles font de la recherche une stratégie d'enseignement - apprentissage. Cette analyse a été comparée aux résultats d'une enquête réalisée par des professeurs stagiaires qui a permis d'établir dans quelle mesure la recherche était enseignée dans les écoles de l'Ontario. L'étude a révélé que même si la recherche est un élément obligatoire à enseigner dans les écoles de l'Ontario depuis trois décennies, elle ne bénéficie pas d'une importance équivalente dans les salles de cours. L'article insinue que le ministère ontarien de l'éducation et de la Formation doit fournir une aide plus conséquente aux écoles pour assurer que le programme obligatoire est également le programme enseigné.

The Ontario Ministry of Education (now Ministry of Education and Training) has a long history of developing policies and curriculum guidelines that direct schools, and in particular, the classroom teacher as to what should be taught in the classroom. One might go as far back as the *Programme of Studies for Grades 1-6 of the Public and Separate Schools 1937*, which came to be known as the "Gray Book" (Ontario Department of Education, 1937) as an example of a provincially-mandated curriculum policy document that contained goal statements requiring students to be actively involved in their own learning through the development of "intelligent self-direction" (a term first espoused by Dewey (1916, 1966) at the turn of the century) in "meaningful social experience[s]" (Ontario Department of Education, 1937, p.6). By the 1960s and 1970s, the Ontario Ministry of Education was not only developing policy documents, it was also directly involved in curriculum implementation and employed Education Officers in regional offices, who went into the classrooms of the province to provide direct instructional assistance (and sometimes supervision) to the classroom teacher and the school more generally. During the 1980s, with financial cut-backs, this service was pared back. By the mid 1990s, not only was direct implementation assistance a thing of the past, the Ontario government began cutting back on the number of civil servants it employed. Currently, the responsibility for implementing Ministry policy and curriculum guidelines is left almost entirely to each board of education, each school, and each teacher with minimal support from the Ministry of Education and Training.

Background

Traditionally, the content or knowledge base of curriculum has received the primary focus of implementation. Content refers to the facts, propositions, generalizations, and theories involved in each discipline. However, one teaching – learning strategy that focuses on acquiring higher order thinking skills and has received a significant amount of attention in Ontario Ministry of Education curriculum guidelines is that of inquiry. Although there is no universal definition of what inquiry is, essentially most versions of inquiry include actively researching questions that involve the unknown (unknown at least to the individual) in order to further understand one's reality. Hillocks (1982) defined a strategy of inquiry as "a consciously adopted procedure used to investigate phenomena in various unrelated disciplines" (p. 662). Most versions of inquiry follow an explicit process or set of skills (See Puk, 1996a).

In the 1970s, the Ontario Ministry of Education began what has arguably been one of the most extensive programs, in any jurisdiction, featuring a teaching – learning strategy in provincially-mandated curriculum guidelines – the requirement that inquiry be taught in Ontario schools. Two of the first curriculum guidelines that the Ministry of Education published during this decade that featured inquiry as a goal of education were *New Dimensions* (1973) and *Education in the Primary and Junior Divisions* (1975). A follow-up document, *Research Study Skills* (1979) which although not a mandated guideline, presented examples of the “Basic Inquiry Model” as ideas for history and geography teachers to use at the intermediate level. In 1980, the Ministry published *Issues and Directions*, which summarized a number of policy decisions the government made in regard to declining enrolment in Ontario schools. One section of this document, describing the goals of education, presented what was referred to as the “image of the learner”. This statement, which summarized in a philosophical form the goals of education for the province, stated that

[t]he image of the learner implicit in Ministry of Education guidelines and policy statements is complex. . . . the Ministry views the learner as an active participant in education who gains satisfaction from the dynamics of learning. The concept of the learner as a mere processor of information has been replaced by the image of a self-motivated, self-directed problem-solver. . . .” (p.2)

This image statement continues by declaring that “the image also reveals a methodical thinker who is capable of inquiry. . . .” (p. 3). Here then is one of the first very clear, unequivocal expectations held by the Ministry of Education, that self-directed problem-solving – inquiry should be an integral component in all classroom teaching in the province. Some Ministry of Education documents that followed the release of *Issues and Directions* did indeed include inquiry as an important component of teaching and learning (Ontario Ministry of Education, 1983; 1985a; 1985b).

However, in 1985, the Ministry published the findings of a study of education in the junior division and found that in the majority of classes, teachers still lectured from the front of the class and that the image of the learner as an actively involved, self-motivated, self-directed problem-solver was not evident in the learning opportunities of the schools that were studied (1985c). The review also found that the scientific method (a form of inquiry) was not followed in the majority of science classrooms. These findings provided initial indications that active learning in the form of inquiry was not yet common in Ontario schools.

Also in 1985, the grade 7-13 curriculum was revised in the document *Ontario Schools, Intermediate and Senior Divisions* (1985d). Although this was a policy document, not a curriculum guideline, it reinforced the use of inquiry under the heading "goals of education". These were the same goals first presented in *Issues and Directions*. However, it is important to note that the actual image of the learner, first published in 1980, was absent in the 1985 document. The development of new provincial curriculum guidelines, for grades 7-OAC, based on the *Ontario Schools, Intermediate and Senior Divisions* document, soon followed on a prolific basis, resulting in approximately 30 guidelines in various subject areas. (The comprehensiveness of these guidelines varies, with English for example having one document, history having four, geography having six, and science having fifteen.) Although only three of these guidelines explicitly refer to the "image of the learner", most include some form of inquiry or problem-solving procedures (Puk, 1990, 1994). It is also interesting to note that in the three documents that include the image of the learner (Ontario Ministry of Education, 1986; 1988a; 1991), they also include the most comprehensive descriptions of inquiry processes. The *Geography Curriculum Guideline* (1988a), for example, includes as one of the six sub-documents, a fifty-four page document entitled *Part B: Planning at the Local Level*, which deals almost entirely with the implementation of inquiry. New secondary guidelines were still being published up to 1995. For example, *Broad-based Technological Education Grades 10, 11, and 12 Curriculum Guideline* (Ontario Ministry of Education and Training, 1995a) contains five pages describing an inquiry process as it is applied to technological design.

Subsequent curriculum guidelines at the elementary grades have also featured inquiry (Ontario Ministry of Education, 1988b; Ontario Ministry of Education and Training, 1995b; 1997). In *The Common Curriculum* document (1995b), inquiry is referred to many times. Part One of the document presents a number of "principles of education" (p.16) which describe the need for students to acquire the skills of inquiry. For example, under the heading "curriculum", the document states that "[c]urriculum must enable students to develop inquiry skills and to use them to identify and explore connections. . . ." (p.20). On page 79, the document describes "methods of inquiry" and features three explicit inquiry models for mathematics, science, and technology. In the section on specific outcomes, one can find various outcomes statements for grades 1-9 that refer to inquiry. For example, on page 80, specific outcomes involving inquiry at the end of grades 3, 6, and 9 are listed.

In one of the latest provincial guidelines, *the Ontario Curriculum, Grades 1-8: Mathematics 1997*, the Ministry of Education and Training has once again provided an explicit inquiry model (p.74) and several pages describing its importance. In *Science and Technology: The Ontario Curriculum, Grades 1-8* (Ontario Ministry of Education and Training, 1998), although no explicit model is presented, the document does state specific expectations for students to develop inquiry skills and for teachers to teach inquiry skills for every topic at every grade level from 1-8.

The importance of inquiry is emphatically clear for all teachers and students in Ontario, both as a teaching and as a learning strategy. Few specific teaching – learning strategies in any jurisdiction could have received more emphasis in government mandated policy and guideline documents than inquiry has over the past three decades in Ontario education. The espoused level of aspiration (Puk, 1995) for inquiry by the various governments has been very high over that time period. That is, governments, through their documents, “say” they believe inquiry is very important in the education of all students in Ontario schools.

Impetus for the current study

The impetus for this current study was taken from a previous study involving inquiry as reported in Puk (1996a). Upon entering an Ontario faculty of education, Bachelor of Education students were asked to describe, on paper, what method they would follow to compare two or more things – they chose their own topics. Most of them already had undergraduate degrees and some were in concurrent programs. Most of them were the products of classroom teaching in the elementary and secondary schools of Ontario. The following results were reported in the 1996 published findings:

. . . most student responses were quite vague, generalized and unsystematic. Some students (18%) could not identify any specific steps (other than vague generalizations). . . In summary, no student had a procedure that consisted of more than three steps and only two students (9%) could describe as many as three disconnected steps. . . What is of vital importance is that no student had any kind of a credible, sequenced procedure that could be acknowledged as being effective or teachable. (Puk, 1996a, p.42)

. . . it is disturbing that upon entering the program no student had a well-developed, clearly articulated process for conducting a “comparison inquiry”. This is especially disturbing in a province where “comparison inquiries” have been mandated by the government to be

taught in intermediate and senior social science courses since 1985 and where self-directed problem-solving has been the central focus of a provincial educational philosophy since 1980. (p. 43)

This was an indication to the authors that although the government's espoused level of aspiration was high (that is, by mandating the teaching of inquiry through provincial curriculum guidelines), the de facto level of aspiration, that is, what actually was being allowed to occur in schools was low.

Purpose of the current study

As a result of this analysis of curriculum guidelines, we know that inquiry has been given extensive coverage in government mandated curriculum guidelines for all schools in Ontario. As a result of the 1996 study (Puk, 1996a), what Ontario student teachers, who were products of the Ontario educational system, knew about inquiry upon entering their preservice program is clear. Therefore, the purpose of the present study was to explore classroom practices across Ontario in regard to the teaching and learning of inquiry, how extensively inquiry is being taught, and what value current and prospective teachers place on it as a teaching – learning strategy.

Participants and data collection

In September 1996, the 127 participants in this study were enrolled in either a junior – intermediate (grades 4-8) or intermediate – senior (grades 9-12 – OAC) Bachelor of Education program. In January 1997, during the first two weeks of second-term classes, the students completed a survey which asked them to reflect on their initial four-week practice teaching sessions, experienced during November and December of 1996 throughout Ontario. The majority of students who completed the survey (85%) were enrolled in the junior – intermediate preservice division while 15% were enrolled in the intermediate – senior division. Sixty-one percent of these students were female.

The junior – intermediate students were majoring in a variety of disciplines such as geography, science, history, mathematics, French, English and physical education. Prior to their practicum experience, each student completed a core Environmental Studies course, which consisted of 13.5 hours of instruction. Most of this course focused on a process of inquiry which involved eight sequenced steps (Puk, 1996a). Each student was taught two different kinds of inquiry (comparison and cause – effect). In addition, they studied a course manual that con-

tained a number of examples of completed inquiries at the junior – intermediate levels, developed two lessons on paper that involved these two types of inquiry and taught one 35-minute lesson using one of these kinds of inquiry. Thus, they were taught how to do it; studied follow-up examples of inquiries; acquired experience in developing on paper inquiries that would be similar in nature to those developed by students they would ultimately teach; and practised teaching inquiries. The course could be described as being intensively involved with inquiry.

The intermediate – senior student teachers were enrolled in a geography class which involved approximately 40 hours of instruction prior to their four-week student teaching placement. They were taught three kinds of inquiry (comparison, decision-making, and issues analysis), studied a course manual which contained further examples of each type of inquiry, and developed three inquiry projects on paper. These student teachers then viewed and analysed inquiry video-tapes made by previous students. Additionally they were taught four methods of evaluating inquiry projects, used these assessment instruments to evaluate a grade nine student inquiry project, and then taught two inquiry lessons, one in front of a video camera and a second in class.

The survey completed in January 1997 consisted of 15 statements. The first statement required students to indicate whether or not they had taught a lesson involving inquiry. For each of the remaining 14 statements, the student teachers were provided with a 4-point Likert scale to indicate their degree of agreement – disagreement with each statement. The statements focussed on issues such as the personal experiences of the student teachers during the practicum and the teaching practices and influence of the associate teachers.

RESULTS

Practice teaching experience

The most important finding of the study is that the vast majority of the 127 respondents (72%) did not teach inquiry during their four-week practicum. Only 28% stated that they did teach inquiry. No limitations were added to this question, for example, how often they taught it, how long they spent in each session, or whether they just taught a portion of inquiry. Therefore, it is probable that some of the 28% who stated that they taught inquiry might have only taught it once or only taught some portions of inquiry. Of the 28% who taught inquiry, the vast

majority (89%) felt they did so successfully. Only 11% felt they were not successful when teaching inquiry.

It is also important to note that despite the fact the majority did not teach an inquiry lesson, 97% of these students still believed that inquiry is one way of providing quality teaching. This seems to imply they valued inquiry as a teaching – learning strategy and felt prepared to teach it but for various reasons did not teach it.

With regard to gender, 37% of the males taught inquiry. This was significantly different from the 21% of the females who taught inquiry ($\chi^2_1=3.86$, $p<.05$). This finding is somewhat confounded by the fact that 38% of females and 27% of the males stated they received encouragement to teach inquiry by their associates.

Practices of associate teachers

What are possible reasons why only 28% of student teachers taught inquiry? The vast majority of students (75%) indicated that they did not observe their associate teacher teach inquiry while only 25% indicated that they did. However, it is important to note that those who observed their associate teachers teach inquiry lessons were significantly more likely to have taught an inquiry lesson themselves than those who did not observe such a lesson taught ($\chi^2_3=14.45$, $p<.01$). The vast majority of respondents (75%) indicated that they did not hear discussions involving the teaching of inquiry by teachers during their practice teaching sessions. Only 25% indicated that they did.

There was also a significant relationship between observing the associate teacher teach inquiry and the student teacher being more encouraged to use inquiry in the future. That is, student teachers who did not see inquiry being taught were significantly less likely to express feelings of being encouraged to use it in the future ($\chi^2_3=21.8$, $p<.01$).

Influences of associate teachers

Of the 28% of student teachers who taught inquiry, the vast majority (68%) did not feel their associate teachers provided a great deal of assistance in developing their inquiry lessons.

Interestingly, the majority (59%) of respondents indicated that their associate was knowledgeable about a process for teaching inquiry while 41% stated the associate was not knowledgeable. This is an inconsistent finding considering that the majority of student teachers did not teach inquiry, did not observe their associate teachers teaching inquiry, and

did not hear discussions about inquiry. This inconsistency may reflect the reluctance some student teachers have of reporting negatively on their associate teachers and on a profession that they wish to join (Beyer, 1984).

The majority of students (67%) did not indicate that their associate teacher provided encouragement for them to teach inquiry. However, those student teachers who did receive encouragement from their associate teachers to teach inquiry were significantly more likely to have taught inquiry during the practicum when compared to those who did not receive encouragement ($\chi^2_3=20.05, p<.01$).

When asked to indicate whether they felt they were more encouraged to use inquiry in their future teaching as a result of their student teaching session, there was almost an even split in the responses. Fifty-one percent agreed with this statement while 49% disagreed. However, those student teachers who taught an inquiry lesson reported that they were significantly more inclined to teach inquiry in the future as a result of their student teaching experience ($\chi^2_3=15.25, p<.01$). As well, those students whose associate teachers encouraged them to teach inquiry during the practice teaching session were significantly more encouraged to use this strategy in the future in comparison to student teachers who did not receive encouragement ($\chi^2_9=33.97, p<.01$).

To summarize then, fifty-one percent of respondents neither taught inquiry, nor observed their associate teachers teaching inquiry, nor heard any discussions involving inquiry during their four-week sessions. In other words, they didn't do it, they didn't see it being done, and they didn't hear about it. Of all respondents, regardless of whether they taught inquiry or not, 61% neither observed their teacher teaching inquiry nor heard discussions involving inquiry during their student teaching placement.

Implications for implementation

It is noteworthy that in a province in which a specific teaching – learning strategy, i.e., inquiry, has received unprecedented coverage in government documents over the past three decades and as such has been mandated to be taught in all Ontario schools in all grades, we find that during four weeks of practice teaching, only 28% of student teachers taught inquiry and over 60% responded that they did not receive encouragement by their associates to teach it nor observed their associates teaching it. Are these results unexpected, or have there been earlier indications of implementation problems in Ontario schools?

As indicated earlier in this article, a provincial review of the junior division of schools in Ontario was reported in 1985 (Ontario Ministry of Education, 1985d). One of the major findings of the report was that the policy, philosophy, goals, aims, and specific learning opportunities recommended by the various Ministry publications were "implemented to a large extent in the Junior Divisions of only a few schools" (p.9). According to the report, this was in part due to the fact that central administrators as well as principals rarely visited classrooms.

Many principals either do not understand what it means to be a curriculum leader or do not accept the role as one of their key duties . . . Classrooms that are visited infrequently by central administrators and principals can become islands. Teacher isolation may occur where consultative assistance is generally not available. (p.12)

From our current findings, it would appear that the majority of classrooms are still not following the intended curriculum as set out by the province; this would cause one to wonder if any of these conditions reported above have changed since 1985!

One of the final recommendations made in the 1985 report was that because implementation was seen to be a complex process, "schools require assistance in implementing policy" (p. 12.) Unfortunately, as implementation has become a more complex process in an era of declining financial support for education, the Ontario Ministry of Education and Training has revised its public responsibility to supervise the implementation of curriculum guidelines, to the point where it has left curriculum implementation in the hands of each board of education.

In 1988, another provincial review was conducted, this time in the area of secondary geography (Ontario Ministry of Education, 1988c). In this review, "great differences" were found between how well teachers could teach simple skills as compared to their capability of teaching complex skills.

Generally, teachers seem to have a sound grasp of simple- and geographical-skills and their associated methods of instruction; on the other hand, more complex skills and those associated with interdisciplinary skills were less easily articulated by teachers. (p.21)

These complex, interdisciplinary skills were later described as involving a process of inquiry. The review went on to say that

no statistical data has been provided for the concept and skill development section. The team involved in the rating procedure had some discomfort in the scoring decisions related to the placement of teacher responses on a growth scheme. (p.21)

In fact, the results were so poor the Ministry decided not to publish them. Again, there was indication at the turn of the decade that more complex skills such as inquiry were still not being implemented fully or effectively.

Possible reasons for guideline implementation problems

A traditional reason given for the non-implementation of Ministry of Education (or centrally developed) guidelines can be found in the conclusions of Hughes (1997). In this study of the results of the implementation of a national curriculum in England and Wales, it was stated that

the main lesson that can be drawn from the story so far concerns the limitations of externally imposed curriculum reform. . . the development of the 1988 National Curriculum was an essentially political process in which the views of teachers and other educational professionals were effectively marginalised or ignored. (p. 193)

This argument, although often used, is not entirely supported by the history of curriculum implementation in Ontario. The secondary school documents developed in 1985 (Ontario Ministry of Education, 1985a) were for the most part developed by teachers. In the *Geography Curriculum Guidelines* (1988a) for example, of the seventy people given recognition for having contributed to the writing of this document, only 6% were from the Ministry of Education, whereas 66% were teachers. In other words, teachers were representing other teachers during the development of these documents. Given the findings of the current study, that for the most part inquiry is not being implemented in provincial schools, it may be that classroom teachers believe that anything other than what they decide to teach is considered "externally imposed".

Another explanation that might explain some of the findings of this current study can be found in Wimpleberg and Boyd (1990). These authors state that "variable lengths of positional tenure can have important consequences for reform [as directed by central policy making]" (p.242) and that

. . .resistance to what may be perceived as arbitrary managerial imposition can be masterfully protracted at the bottom where teachers carry on as usual, knowing they will outlast most of the policy innovators who attempt to alter curricula, student tracks and schedules, or evaluation procedures. (p. 242)

In Ontario, the effects of these "variable lengths of positional tenure" might instead be applied to governments rather than administrative positions solely. Since 1985, Ontario has seen all three of the major

political parties in power with majority governments. With that kind of power and authority, each government has attempted to change the educational system in a fundamental way according to its policies and ideologies. As a consequence, there has been a high level of inconsistency and instability in Ontario education over the past decade. Under these circumstances, not only might teachers wait out individual administrators, they may also be tempted to wait out and resist government initiatives which have fairly predictable lengths of tenure (or at least predictable possibilities for change).

However, these explanations and others, such as the wording of guidelines having an effect on implementation (Johnston & Moore, 1990), do not explain satisfactorily why a particular teaching – learning strategy might not be implemented. As we have outlined earlier, inquiry as a mandated teaching – learning strategy has existed for the past three decades and has survived several tenures, both individual and political. As well, many teachers have contributed to the development of curriculum guidelines.

Although a further study would be required to determine exactly why many teachers do not teach inquiry, our initial observations are that teachers do not teach it because they do not understand it due to the fact that they have: 1) not been trained to teach it, 2) because it has not been explained clearly enough to them or in enough depth (for example, by providing units of instruction to follow) in curriculum guidelines, and 3) because they have had little incentive to understand it or learn how to teach it in the absence of externally-applied, systematic accountability. It takes more effort to understand and teach a complex process and as a result it takes a greater amount of self-discipline to devote the energy required to learn a complex process; whereas, the alternative classroom management style of promoting student activity for the sake of entertainment (that is, keeping students busy), requires much less cognitive energy. In regard to classroom implementation, Puk (1996b) found that

[q]uite often curriculum at the classroom level is simply derived through the teacher's choice of activities. Rather than any careful reflection on what the components of education should be (such as the intended learnings, the elements of growth, the way learning occurs and the human qualities to be fostered. . .), practitioners often simply choose the activities that will keep students occupied. All else is either assumed to be inherent in the activity or is neglected. (p.41-42)

RECOMMENDATIONS

First, curriculum guidelines need to thoroughly describe practical examples of the teaching – learning process being featured. Very little time appears to be provided to teachers for developing curriculum during the teaching day. As a result, many teachers rely on materials developed by external sources such as textbook publishers and organizations, both non-profit and commercial, which may or may not follow the mandated curriculum. Fully developed units that teachers can either follow closely or can adapt to their own needs (depending upon the desired level of accountability) need to be provided in the curriculum guidelines. These units need to contain many examples of completed inquiries of different types.

Second, school boards, schools, teachers, and faculties of education need to be held accountable for implementing the mandated curriculum. In order to be held accountable, some outside agency, for example, the Ministry of Education and Training, needs to supervise the implementation. This would require a revaluing of public monies towards implementation. According to White (1991),

because change is viewed as a process not a single event, it is important that change facilitators incorporate the use of a diagnostic model designed to monitor the implementation process as it unfolds. This model should provide a system which frequently assesses the concerns of the individuals implementing the innovation, the contextual variables associated with the organization, and the use of the various components which comprise the innovation. Data obtained from these assessments should be used throughout the process to make adjustments in the implementation plan. (p.219)

The Common Curriculum (Ontario Ministry of Education and Training, 1995b), one document containing outcomes for grades 1-9, is a relatively cheap solution to a complex problem. The essential components of a curriculum are absent in this document and schools are left with only vague outcomes which theoretically must be met after the curriculum (which is absent) is implemented. The province, through the *Common Curriculum* document, has stated that the manner in which schools obtain the outcome results is not important as long as they obtain the results; however, even at that point there are no diagnostic, formative, or summative models designed to monitor the implementation process before a problem is identified during the assessment phase. This “trickle-down” implementation effect does not appear to be working when we consider, for example, the Ontario scores in the Third

International Mathematics and Science Studies. Ontario's grade seven and grade eight students scored just at the international average with 20 or more jurisdictions scoring higher. However, perhaps more importantly, Ontario scored lower than the Canadian average, and for the most part, lower than the other Canadian provinces that took part in the study, and they scored significantly lower than Alberta and British Columbia which scored very high (Beaton, Martin, Mullis, Gonzalez, Smith, & Kelly, 1996; Robitaille, Taylor, & Orpwood, 1996).

Third, faculties of education need to teach the provincial curriculum. Faculties of education often stress academic theories rather than government policy. This is not to say that faculties should slavishly and uncritically teach government policy. Poor policy, in regard to educational matters, requires counter positions in order to promote ongoing change. Faculties need to do both, that is, teach the mandated curriculum and continue to conduct research that may challenge the status quo.

Fourth, associate teachers need to encourage a climate of risk-taking and change during the practicum experience.

Fifth, a significant amount of connected inservice is required to reinforce the provincial curriculum. During the Social Contract, when wages in the public sector were frozen for three years (1993-96), one of the first areas to be cut back was teacher inservice. However, even when monies can once again be directed towards professional development, inservice must also undergo major changes and move away from a dependence on single workshops involving fashionable innovations and topics disconnected from the whole, to sequenced sessions of research-proven worth.

Sixth, provincial curriculum should not be influenced by or used for political purposes, either by governments or by teachers. What has occurred in Ontario during the 1990s may leave students less prepared to deal with complex problems and further behind in an increasingly competitive world.

Finally, a further study might examine the long-term effects of provincial reviews and inquire as to whether or not changes are made in response to these reviews.

CONCLUSION

It is interesting to note that 99% of the respondents in this study indicated that their student-teaching experience was successful. While

this may appear to be a positive response, given that inquiry is mandated in all schools in the province, and given that only 28% of the student teachers had an opportunity to teach it during four weeks of practice teaching, this may describe the genesis of how teachers become satisfied with what they are doing even though what they are doing may not correspond with the mandated curriculum (Beyer, 1984; MacKinnon, 1989). If associate teachers give student teachers the impression that the mandated curriculum is not important and one can still be viewed as a successful teacher, what incentive is there for new teachers to explore and implement complex teaching/learning strategies? If traditional approaches to teaching are enough, then why should a student teacher vary from the norm of school practice and risk poorer evaluations?

With regard to the experiences of student teachers during the practicum component of their preservice education, MacKinnon (1989) found that:

[c]onformity was, simply put, a fact of life for the student teachers throughout the eight-week practicum. Whether for reasons of status, or out of concern for the children, or as a result of a pragmatic self-interest in a good evaluation, all of the student teachers defined the practicum as a situation where significant change was not an advisable course of action. This meant following the established schedule, maintaining the existing structure, and even, in some instances, adopting certain mannerisms of their cooperating teachers. Put another way, student teaching simply did not provide the opportunity for these prospective teachers to try out many of the ideas and skills they had learned at university. (p.14)

In the case of inquiry, it isn't just a matter of student teachers not being able to try out ideas and skills they have learned at university. If that were the only concern of this study, practitioners could simply dismiss what is taught during the preservice program as not being applicable to the real classroom. In this study however, what was taught at the university during preservice training was required to be taught in the regular classroom as part of the mandated curriculum. In this instance, the university was acting in a more responsible manner than schools by reinforcing the democratic system of government.

This study confirmed suspicions raised in the 1996 study that the government's *de facto* level of aspiration in regard to the implementation of inquiry in Ontario schools is low. The final irony may be that many of the students who were in the educational system during the junior review of 1983-85 would be the same student teachers involved in this

current study. It would appear that very little has changed in their educational experiences in regard to the teaching and learning of inquiry in the province of Ontario. Given the findings of this study, that student teachers who do not teach inquiry during the practicum are significantly less inclined to teach inquiry in the future, and given that few do teach inquiry during the practicum, we may be witnessing another generation of teaching where acquiring inquiry skills is simply an espoused aspiration.

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