

Evaluation of the Implementation of the Education Reform at the Secondary Level

Evaluation Framework

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TABLE OF CONTENTS

Presentation of the Evaluation Framework	2
1. Evaluation Context	3
1.1 Mandate of the Working Group	3
1.2 Main Elements of the Education Reform.....	4
1.2.1 Rationale of the education reform	4
1.2.2 Measures for the implementation of the education reform.....	4
1.3 Overview of the Québec Education Program.....	6
1.3.1 Continuity of learning targeted by the QEP at the elementary and secondary levels	6
1.3.2 Main elements characterizing the application of the QEP at the elementary and secondary levels	6
1.3.3 Timeline for QEP implementation	7
1.3.4 Path of the first cohort of students who began elementary school after initial implementation of the QEP.....	9
2. The QEP for Secondary Education.....	11
2.1 Main Elements of the QEP for Secondary Education.....	11
2.2 Characteristics of the QEP for Secondary Cycle One.....	12
2.3 Characteristics of the QEP for Secondary Cycle Two.....	13
3. Evaluation Strategy.....	15
3.1 Areas Addressed by the Evaluation of the Education Reform at the Secondary Level....	15
3.2 The Evaluation Questions	16
3.3 Conceptual Framework	17
3.3.1 Components of the question on the impact of the education reform on student retention and academic success	17
3.3.2 Components of the question on taking ownership of, complying with and applying the education reform and the QEP.....	19
3.3.3 Components of the question on the implementation context of the education reform.....	23
3.3.4 Components of the question on the implementation of new learning paths.....	27
3.4 Evaluation Strategy	34
3.4.1 Procedure and samples	36

3.4.2 Data collection.....	38
Appendix 1	
Monitoring of student cohorts in the field-testing plan to evaluate the implementation of education reform in secondary education and its effects on student success.....	42
Appendix 2	
Timetable of examinations administered to elementary and secondary school students	43
Appendix 3	
Time frame for data collection	44
Bibliography	45

LIST OF FIGURES

Figure 1	
Learning paths in the youth sector.....	30
Figure 2	
Model for the evaluation of education reform in Secondary School.....	33
Figure 3	
Longitudinal field-testing plan	35
Figure 4	
Model of the evaluation of the implementation of the education reform (ER) and the application of the Québec Education Program (QEP)	40
Figure 5	
Model of the evaluation of the implementation of the education reform.....	41

LIST OF TABLES

Table 1	
Timeline for implementation of the Québec Education Program by school year, level of education and cycle	8
Table 2	
Path of the first cohort of students who began elementary school when the Québec Education Program was first implemented.....	10

Presentation of the Evaluation Framework

This document was drawn up in order to support the evaluation of the reform of secondary education. It should enable the Ministère de l'Éducation, du Loisir et du Sport and its partners in the education system to make a reasoned judgment on the implementation of the education reform and the application of the Québec Education Program in both secondary cycles, as well as its effects on the students.

This document comprises three parts. The first part outlines the context of the evaluation that informs the mandate of the Working Group on the Evaluation of the Education Reform at the Secondary Level and the essential elements of the education reform, and provides an overview of the Québec Education Program at both secondary cycles. The second part provides a description of the Québec Education Program for each cycle of secondary education. Lastly, the third part sets out the evaluation strategy.

1. Evaluation Context

This part of the document describes a number of general elements necessary to an understanding of the evaluation project, and centres on the following topics:

- o the mandate of the Working Group
- o the main elements of the education reform (ER)
- o an overview of the Québec Education Program (QEP)

1.1 Mandate of the Working Group

The implementation of the education reform implies a major shift in the manner of viewing youth education. Since any process of change requires a monitoring mechanism and adjustments when necessary, the Québec government has set up the Table de pilotage du nouveau pédagogique (Education reform steering committee). Composed of representatives from the Ministère de l'Éducation, du Loisir et du Sport (the Ministère) and its main partners in education—teachers, parents, school administrators, school boards, private schools and universities—the steering committee has been given the following mandate:

- o to identify issues related to the implementation of the changes and any obstacles to these changes, in particular with regard to initial and ongoing professional development for teachers
- o to make recommendations to the Minister regarding appropriate strategies and actions to ensure implementation through shared responsibility
- o to periodically assess the implementation of the changes and propose adjustments where necessary
- o in light of information collected in previous stages, to periodically assess the education reform itself and propose new avenues for reflection
- o to develop mechanisms for ongoing evaluation, monitoring and adjustment of the implementation of the changes
- o to carry out any other mandate assigned by the Minister of Education, Recreation and Sports

The steering committee may also assign some aspects of its mandate to subcommittees of the partners concerned. Thus, in June 2006, it set up the Working Group on the Evaluation of the Education Reform at the Secondary Level. The mandate of the Working Group consists in collecting and analyzing the data needed to take an informed look at the process of implementing the education reform at the secondary level and at how the education reform influences students' academic success, the quality of education and student learning.

In order to meet the requirements of its mandate, the Working Group must successfully complete the following activities:

- o develop an evaluation framework that sets out the focuses of evaluation
- o carry out the evaluation
- o submit its work to an outside group composed of people who are recognized for their expertise in the area of program evaluation
- o suggest mechanisms for ensuring follow-up over the long term
- o make recommendations to the steering committee on adjustments to be made in order to ensure that the education reform continues to be implemented at the secondary level in a way that ensures mastery of learning and student success

Thus, the first task of the Working Group consists in developing an evaluation framework, which is precisely the subject of this document. The evaluation framework in question must, among other things, define the subject and context of evaluation and the evaluation strategy. The latter deals with those aspects of the program to be evaluated and with the evaluation questions by taking into account the available resources and the amount of time allotted to the evaluation process.

To ensure that each evaluation question is answered properly, several qualitative and quantitative indicators will be provided. The information source and the target population will be specified for each indicator. The evaluation framework will include a timeline for implementation.

1.2 Main Elements of the Education Reform

The main elements of the education reform are best examined by setting out its rationale and the measures taken to implement it.

1.2.1 Rationale of the education reform

The expression “education reform” refers to the implementation of a set of elements that profoundly change Québec schools and that represent a major shift in the manner of viewing youth education. Undertaken in the wake of the findings of the Estates General on Education, which were held in 1996, the purpose of the education reform is to meet the challenges of educating today’s youth in a complex and changing social context. Thus, the rationale of the education reform rests in the need to promote the success of students from the beginning of elementary school to the end of secondary school.

In June 1997, the Task Force on Curriculum Reform submitted a report to the Minister of Education in which it made recommendations on the changes that needed to be made to the elementary and secondary school curriculum in order to face the challenges of the 21st century. In the wake of this report, the Ministère de l’Éducation du Québec published the educational policy statement *Québec Schools on Course* and the plan of action entitled *A New Direction for Success* in the same year. The latter sets out a number of lines of action for the implementation of the education reform, with a view to improving student success and emphasizing the need to give young people the tools necessary to achieve social and employment integration.

1.2.2 Measures for the implementation of the education reform

The measures related to the implementation of the education reform can be summed up as follows:

- The definition of a new QEP based on curriculum reform and centred on school subjects that reflect the social, economic and cultural changes that today’s young people must face. Furthermore, the QEP is aimed at the development of essential competencies, with respect to both students’ schooling and their social and professional life. Accordingly, it is composed of:
 - subject-specific programs developed using a competency-based approach
 - cross-curricular competencies that go beyond the boundaries of subject-specific programs
 - broad areas of learning that allow students to make connections between what they learn in school and their everyday lives

- Establishment of a new *Basic school regulation* featuring a renewed curriculum, a new subject-time allocation and a new system of certification of studies. In addition, the new *Basic school regulation* calls for a secondary level of education consisting of two cycles, the first lasting two years and the second, three years.
- Adoption of a new policy on the evaluation of learning based on the scales of competency levels, among other things
- Adoption of a new policy on special education whose aim is to help students with handicaps, social maladjustments or learning disabilities, by accepting that success has different meanings for different students. The lines of action adopted to favour their success focus, in particular, on preventing difficulties and adapting and organizing educational services to meet the specific needs of individual students, based on an assessment of their needs and abilities
- Design of a new framework for complementary educational services aimed, among other things, at the establishment of four types of complementary educational services to be implemented in the schools: support services, student life services, assistance services and promotion and prevention services
- Establishment of a new form of school organization with a view to promoting success for the greatest number of students. The measures related to the implementation of this new school organization include:
 - the time teachers spend in the school is increased from 27 to 32 hours a week, favouring cooperative work among teachers
 - multiyear cycles of instruction in order to give students more time to progress through learning activities
 - diversification of learning paths in Secondary Cycle Two
- Development of a varied and creative teaching-learning process, which translates, among other things, into:
 - greater recognition of the professional autonomy of teachers, notably with respect to the choice of teaching tools and approaches according to the situation, the nature of the learning to be accomplished and the students' characteristics, and the choice of methods of evaluation of students' learning
 - the establishment of cycle teams of teachers and complementary educational services professionals who work together, especially with regard to student follow-up and evaluation, planning of their teaching, harmonization of their actions, professional development and accompaniment

1.3 Overview of the Québec Education Program

The cornerstone of the Québec Education Program (QEP) is to promote success for all students. It comprises two dimensions: formal academic success and individualized success for all. In order to provide an overview of the program, the following points will be discussed: the continuity of learning, the main elements differentiating application of the QEP at the elementary level and at the secondary level, the timeline for QEP implementation and the path of the first cohort of students who began elementary school after implementation of the QEP.

1.3.1 Continuity of learning targeted by the QEP at the elementary and secondary levels

The mission of Québec schools is threefold, namely: to provide instruction in a knowledge-based world, to socialize students in a pluralistic world and to provide qualifications in a changing world. This mission, which is the foundation of the QEP, involves the development of educational services at the elementary and secondary levels, which ensure a logical continuum of integrated learning activities that build on one another. Moreover, continuity of learning is prescribed in the *Basic regulation for preschool, elementary and secondary education*, which informs the QEP. As stated in this regulation, the purpose of elementary instructional services is to promote the overall development of students and their integration through basic learning, which will contribute to the progressive development of their autonomy and will prepare them for the level of learning required in secondary school. The purpose of secondary instructional services is to further the overall development of students, to foster their social integration and to help them determine personal and career goals. These services complement and reinforce the basic education received by students.

1.3.2 Main elements characterizing the application of the QEP at the elementary and secondary levels

For various reasons which are generally of an organizational nature, the QEP is applied differently at the elementary level and at the secondary level. In elementary school, homeroom teachers are generalists in the sense that they teach several subjects to the same class of between 25 and 30 students, who usually are at the same grade level. For their part, secondary school teachers focus more on academic content. They teach one or two subjects, sometimes three, to several classes of students. In some cases, they teach 120 students or more at different grade levels. Thus, since homeroom teachers see the same group of students for almost the entire day, they enjoy a certain amount of flexibility in managing the time devoted to the different learning activities. Secondary school teachers face more constraints imposed by the number of classes in the timetable for their subject and by the length of these classes.

As a result, the development of learning and evaluation situations involving several subjects is easier at the elementary level, since it is generally the same person who teaches, for instance, English, Mathematics, Science and Technology, Geography and History and Citizenship Education. In secondary education, the development of learning and evaluation situations involving several subjects requires teachers to work together to design a project and to make connections among their respective subjects. However, some secondary schools have adopted a model of school organization consisting of the homeroom system, under which each group of students is assigned a homeroom teacher who may teach two or more subjects. Under this system, teachers spend more time with their

students, not unlike homeroom teachers in elementary school. It is therefore easier for the teachers to propose learning and evaluation situations that involve several subjects. The homeroom system is often implemented in Secondary Cycle One to ease the transition from elementary to secondary school. This model can be used with all students or only with students experiencing difficulties.

Lastly, there are fewer differences between the work of specialist teachers at the elementary level (they teach physical education, the second language or music, for example) and that of secondary school teachers. In fact, both generally teach only one subject to several groups of students, who are often at different grade levels. As a general rule, however, specialist teachers at the elementary level work in two or more schools, whereas secondary school teachers are usually assigned to only one school.

1.3.3 Timeline for QEP implementation

As shown in Table 1, implementation of the QEP became compulsory in Elementary Cycle One in September 2000 and continued in a gradual and modulated manner for each of the other elementary cycles. The QEP was implemented in Elementary Cycle Two in September 2001 and in Cycle Three in September 2003.

Table 1

**Timeline for implementation of the Québec Education Program
by school year, level of education and cycle**

Level of education	Cycle and year	School year									
		2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Preschool		X									
Elementary	Cycle One First year Second year	X									
	Cycle Two Third year Fourth year		X								
	Cycle Three Fifth year Sixth year				X						
Secondary	Cycle One First year Second year						X		X		
	Cycle Two Third year Fourth year Fifth year								X	X	X

Unlike elementary education, the compulsory implementation of the QEP at the secondary level is not carried out by cycle, but rather by school year. In September 2005, the QEP was implemented for the first year of Secondary Cycle One; the following year, it was implemented for the second year of Secondary Cycle One. Implementation of the QEP for the three years of Secondary Cycle Two will continue over the 2007-2008, 2008-2009 and 2009-2010 school years.

It should be noted that in December 2006, the Minister granted the education community an additional year to become familiar with the Secondary III Science and Technology and Applied Science and Technology programs prior to their implementation and to implement the prework training program for unskilled and semiskilled trades. The compulsory application of these programs has therefore been postponed until September 2008.

1.3.4 Path of the first cohort of students who began elementary school after initial implementation of the QEP

Implementation of the QEP was compulsory at the beginning of the 2000-2001 school year for preschool and Elementary Cycle One. As shown in Table 2, the first cohort of students to complete their elementary and secondary education under the education reform (students in the first year of Cycle One in 2000-2001) will complete elementary school at the end of the 2006 school year and secondary school at the end of the 2011 school year.

Table 2

Path of the first cohort of students who began elementary school when the Québec Education Program was first implemented

Level of education	Cycle and year		School year										
			2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Elementary	Cycle One	1st year	X										
		2nd year		X									
	Cycle Two	3rd year			X								
		4th year				X							
	Cycle Three	5th year					X						
		6th year						X					
Secondary	Cycle One	1st year							X				
		2nd year								X			
	Cycle Two	3rd year								X			
		4th year									X		
		5th year										X	

2. The QEP for Secondary Education

The second part of this document provides a description of the QEP for the two cycles of secondary education. It centres on the following topics:

- the main elements of the QEP for secondary education
- the characteristics of the QEP for Secondary Cycle One
- the characteristics of the QEP for Secondary Cycle Two

2.1 Main Elements of the QEP for Secondary Education

Helping students construct their world-view, construct their identity and become empowered are the three aims of the QEP. They provide a common direction for all educational measures. The orientations listed below provide guidelines for the practical application of the program's aims:

- success for all (educational success, individualized educational success and success for educational institutions)
- education that focuses on the development of competencies (focus on learning, complementary knowledge and competencies, concentrating on more thorough development of the essential elements)
- evaluation that promotes learning (a learning tool, consistent with the QEP)
- integrated learning (openness to the world, measures that respect the need for continuity, cycle-based organization to ensure the complementarity of educational measures)

It supports the renewal of educational practices and promotes the use of various practices such as:

- differentiation
- guidance for the learning process
- the regulation of learning, which calls on the teacher's professional judgment and the parents' participation
- teamwork (the QEP reflects a cycle-based approach to school organization in which the class and the school become a learning community)

The QEP for the two cycles of secondary education has three basic components, namely the broad areas of learning, the cross-curricular competencies and the subject areas. The elements that make up these components are as follows:

- The broad areas of learning relate to the educational aims and deal with aspects of contemporary life young people must face
 - Health and Well-Being
 - Career Planning and Entrepreneurship
 - Environmental Awareness and Consumer Rights and Responsibilities
 - Media Literacy
 - Citizenship and Community Life
- The nine cross-curricular competencies grouped in four categories
 - Personal and social: Achieves his/her potential; Cooperates with others
 - Methodological: Adopts effective work methods; Uses information and communications technologies
 - Intellectual: Uses information; Solves problems; Exercises critical judgment; Uses creativity
 - Communication-related: Communicates appropriately

- The five subject areas:
 - Languages
 - Mathematics, Science and Technology
 - Social Sciences
 - Arts Education
 - Personal Development

The subjects considered essential for the students' education are drawn from these subject areas. Given the fact that the competencies and the program content for each subject differ in the first and second cycles of secondary school, the subject areas will be described in more detail in subsequent sections of this part of the document.

2.2 Characteristics of the QEP for Secondary Cycle One

The QEP for Secondary Cycle One must enable students to acquire a coherent set of basic competencies. In fact, in addition to the broad areas of learning and the cross-curricular competencies, the QEP for Secondary Cycle One comprises the five subject areas and 16 subject-specific programs:

- Languages
 - Language of Instruction (English or French)
 - Intégration linguistique, scolaire et sociale
 - Second Language (English or French)
- Mathematics, Science and Technology
 - Mathematics
 - Science and Technology
- Social Sciences
 - Geography
 - History and Citizenship Education
- Arts Education
 - Drama
 - Visual Arts
 - Dance
 - Music
- Personal Development
 - Physical Education and Health
 - Moral Education
 - Catholic Religious and Moral Instruction
 - Protestant Religious and Moral Education
 - Ethics and Religious Culture

2.3 Characteristics of the QEP for Secondary Cycle Two

The QEP for Secondary Cycle Two is aimed at consolidating basic education by establishing a common core of learning, while providing students with the opportunity to make choices that are consistent with their level of development, interests and career plans. Among other things, this diversity is intended to meet the following objectives:

- to take account of students' needs and abilities
- to maintain students' motivation, thereby preventing school dropouts
- to respect the learning style of each student
- to offer students opportunities to determine the trades or occupations that are consistent with their interests
- to ensure that students will be able to enter the labour market in the short, medium and long terms

The educational paths are:

- a General Education Path and an Applied General Education Path
- a Work-Oriented Training Path consisting of two options (prework training and training for a semiskilled trade)

The different paths and the bridges that allow for mobility among them are essential elements of this diversity. For example, at the beginning of each year of Secondary Cycle Two, students may choose the General Education Path or the Applied General Education Path.

The Work-Oriented Training Path focuses on general education and practical training in the workplace. It enables students to join the work force fairly quickly, but it also allows them to receive training in a semiskilled trade, go into vocational training or continue their studies in general education. More specifically, prework training, which lasts three years, provides students with both practical training and a general education adapted to their needs and allows them to earn a Certificate of Prework Training. Training for a semiskilled trade lasts one year and students who successfully complete the program earn a Certificate of Training for a Semiskilled Trade. This type of training allows students to complete the first cycle of secondary school and at the same time become familiar with a semiskilled trade of their choice, and then enroll in a program leading to a Diploma of Vocational Studies (DVS) or, under certain conditions, to a diploma in the General Education Path.

The QEP for Secondary Cycle Two is comprised of six subject areas and 21 subject-specific programs¹ as well as an integrative project:

- Languages
 - Français, langue d'enseignement
 - Intégration linguistique, scolaire et sociale
 - English as a Second Language, Core Program
 - Enriched English as a Second Language Program
 - Spanish as a Third Language
- Mathematics, Science and Technology
 - Mathematics
 - Science and Technology

1. Each subject-specific program for Secondary Cycle Two has a different curriculum for each year.

- Applied Science and Technology
- Environmental Science and Technology
- Science and the Environment
- o Social Sciences
 - History and Citizenship Education
 - Contemporary Economic Environment
- o Arts Education
 - Drama
 - Visual Arts
 - Dance
 - Music
- o Personal Development
 - Physical Education and Health
 - Ethics and Religious Culture
- o Career Development
 - Personal Orientation Project
 - Exploration of Vocational Training
 - Introduction to Entrepreneurship

3. Evaluation Strategy

The evaluation strategy takes into account the following elements:

- the areas addressed by evaluation of the implementation of the education reform at the secondary level
- the evaluation questions
- the conceptual framework
- the evaluation strategy

3.1 Areas Addressed by the Evaluation of the Education Reform at the Secondary Level

By way of introduction to the recommendations formulated in December 2006 following the evaluation of the application of the QEP at the elementary level, the steering committee has reiterated the need to maintain the foundations and orientations of the QEP and to continue with its implementation. Thus, the pertinence of the education reform and the QEP implemented in 2000-2001 will not be examined in the context of this evaluation exercise. In addition, other evaluation studies are currently being carried out by different committees and groups created by the steering committee. Among other things, these studies deal with the Policy on the Evaluation of Learning and the Policy on Special Education. This evaluation framework cannot, therefore, take into account all aspects of the education reform. In fact, it represents only part of the evaluation process that will serve to guide decision making with respect to the continued implementation of the education reform at the secondary level and to the application of the QEP in the two secondary school cycles.

Furthermore, owing to its mandate, the Working Group has chosen to emphasize the following two areas in its evaluation strategy:

- the effects of the education reform and of the application of the QEP on students
- the implementation of the education reform at the secondary level and the application of the QEP in the first and second cycles of secondary education

3.2 The Evaluation Questions

The mandate of the Working Group is to evaluate the implementation of the education reform and the application of the QEP. The Working Group therefore proposes four evaluation questions whose wording is informed by the rationale of the education reform and the aims of the QEP for secondary education, as well as by the measures taken to apply it in Québec schools. In keeping with the mandate of the Working Group, these questions must serve to better define the evaluation exercise so that, once it has been completed, the stakeholders concerned may be provided with useful information to guide their decisions regarding the implementation of the education reform and the application of the QEP in the two secondary school cycles, in accordance with the mission of Québec schools (to instruct, socialize and provide qualifications).

Thus, the evaluation strategy involves one question dealing with the effects of the education reform on student retention and success and three questions on the implementation of the education reform, one of which pertains to differentiated learning paths. These questions were chosen with a view to highlighting the effects of the education reform on students' learning by taking into account their level of exposure to the QEP and the implementation of other aspects of the education reform. The questions are as follows.

Question 1

To what extent does the application of the Québec Education Program allow students to:

- o be more engaged in their education
- o acquire the prescribed subject-specific knowledge and develop the targeted competencies
- o improve their academic success

Question 2

To what extent has school personnel taken ownership of the different components of the education reform and the orientations of the Québec Education Program? Does school personnel adhere to and apply the QEP?

Question 3

To what extent has the education community been given the resources necessary to implement the education reform and apply the Québec Education Program?

Question 4

To what extent have diversified learning paths been implemented in schools and do they take students' interests and abilities into account?

The conceptual framework described below sets out the main components and indicators pertaining to these questions, which will be used to gather the information needed to properly answer the four evaluation questions.

3.3 Conceptual Framework

The purpose of this section is to define the terms and concepts pertaining to the evaluation of the education reform so that the meaning and focuses of this exercise can be examined in more detail.

3.3.1 Components of the question on the impact of the education reform on student retention and academic success

The concept of success conveyed in the QEP is twofold: formal academic success and individualized success for all. The first type of success refers to official recognition attesting to mastery of the competencies associated with the various subjects in the Québec Education Program. The introduction of learning paths that lead to either a Secondary School Diploma, a Certificate of Prework Training or a Certificate of Training for a Semiskilled Trade is aimed at enabling more students to achieve this type of success.

The concept of *success for all* underscores the school's responsibility to provide all its students, whatever their talents, aptitudes and interests, with the necessary foundations for successful social integration (. . .) Success also has another meaning; it can refer to the challenges students face. This concept of success concerns all students: talented and gifted ones and those with major or minor difficulties alike must realize that they are the main agents of their education and establish personal objectives in order to deal effectively with their weaknesses, develop their strengths and, if possible, go beyond the established expectations.¹

Thus, schools provide educational services to students in order to instruct, socialize and qualify them with a view to ensuring their harmonious integration into society, but they are also responsible to the community. They must perform effectively with respect to the level of competency generally achieved by their students and verify the appropriateness of the measures they implement.

A more specific manner of viewing the factors that ensure student success in educational settings that provide adequate support is defined by the sociomotivational model of student retention.² This model suggests that student success is expressed through four different trajectories: the motivational, academic, social and vocational trajectories. The *motivational* trajectory refers to students' motivation throughout their schooling. Among other things, it is reflected in feelings of academic competence, self-esteem, causal attributions of success and failure and students' perceptions of their learning goals. The *academic* trajectory involves more conventional indicators of the success within educational systems such as academic performance, study strategies, subject-specific competencies and cross-curricular competencies. The *social* trajectory can be inferred from such indicators as the quality of the relationships

1. Ministère de l'Éducation, du Loisir et du Sport, *Québec Education Program – Secondary School Education, Cycle One* (Québec: Gouvernement du Québec), 2003, 9.

2. S. Larose et al., "A Sociomotivational Analysis of Gender Effects on Persistence in Science and Technology: A 5-year Longitudinal Study," in H.G. Watt and J.S. Eccles eds., *Gender and Occupational Outcomes: Longitudinal Assessments of Individual, Social, and Cultural Influences*, Washington, D.C., APA Books (pending).

between peers, between students and teachers, and between students and adults other than their parents (e.g. relationships between students and those responsible for extracurricular activities). Lastly, the *vocational* trajectory refers to the extent to which students have developed their academic aspirations, a feeling of certitude about academic and career choices and their own identity.

The sociomotivational model of student retention also holds that the quality of these trajectories depends on certain characteristics of the educational environment. If this environment provides a structure (by giving students clear and relevant information as well as feedback), supports students' autonomy (by encouraging creativity, decision making and innovation and by practising differentiation), maximizes educators' commitment to their students (through the practice of guidance and support) and values competencies over performance (through the practice of regulation), it is more likely to foster students' feelings of competence, autonomy and belonging and, in turn, will make it possible to predict the quality of their individual trajectories.

This conceptual model is in harmony with several of the orientations of the QEP. First, it is consistent with the threefold mission of Québec schools (to instruct, socialize and provide qualifications). Second, it reflects the different meanings of success set out in the QEP (i.e. educational success, individualized educational success and success for educational institutions). Third, it takes into account explanatory factors that correspond to those set out in the QEP.

The motivational aspects of students (i.e. self-esteem, feelings of competence, social and academic aspirations) are tangible indicators of academic success. Other key factors of success are the work strategies and the social skills students acquire and develop, competence and interest in reading. Louise Gaudreau³ proposes tools for evaluating the impact of the various educational projects and programs on student success. These tools have been constructed on the basis of a review of the main indicators of academic success presented here.

Furthermore, the provincial indicators (e.g. academic delays at the beginning of the first and second cycles of secondary school, the graduation or qualification rate, the dropout rate) and students' results on official examinations designed to monitor the application of the new curriculum (i.e. *épreuves officielles de régulation de système* – ERS), on examinations for purposes of the certification of studies and on the provincial and Pan-Canadian examinations⁴ are valuable sources of information from both the viewpoint of institutional success and that of being accountable to the community.

3. Louise Gaudreau, *Pour continuer à évoluer – Des instruments d'évaluation* (Québec : Comité de gestion de la taxe scolaire de l'île de Montréal, 2005).

4. Appendix 2 presents the timetable for the administration of these examinations from 2005 to 2012.

3.3.2 Components of the question on taking ownership of, complying with and applying the education reform and the QEP

Implementing the various components of the education reform and taking ownership of the QEP require a significant professional commitment. In this regard, educators are encouraged to take part in a structured personal and collective initiative with a view to forming a “learning community.” Applying the QEP and setting up cycle teams and school teams are the main challenges they will face in the process of implementing the QEP.

3.3.2.1 Taking ownership of the various components of the education reform and QEP orientations

Taking ownership of the QEP means, among other things:

- o understanding its rationale, principles and foundations
- o being familiar with all aspects of the competency-based approach
- o being part of a collective effort to gradually apply the various components of the QEP (cross-curricular competencies, broad areas of learning and subject-specific competencies) and the related evaluation methods
- o learning to work with colleagues on the cycle team and school team in order to plan and monitor student learning and evaluation
- o experimenting with new modes of intervention by using one’s own expertise, that of colleagues and research findings
- o being part of a process of ongoing professional development.

3.3.2.2 School personnel’s compliance with the foundations and principles of the education reform

This component is essential to the successful implementation of the education reform. In defining the type of compliance required of educators, it is useful to examine the four dimensions of teaching as defined by the Conseil supérieur de l’éducation:⁵ an act that involves reflection (as opposed to one that requires mere mechanical execution), an interactive act (a human relationship involving assistance and mediation to aid student development), a complex act (diverse tasks requiring many different skills), a professional act (requiring autonomy and a spirit of community service) that has ethical ramifications.

Claude Lessard⁶ concurs with the Conseil supérieur de l’éducation by underscoring the importance of professionalizing teaching and exercising professional judgment in the implementation of the education reform. According to Mr. Lessard, this ability requires a collective capacity to examine and discuss the principles and orientations as well as the pedagogical and evaluation practices involved in implementing the education reform. According to Mr. Lessard, teachers’ compliance with the foundations and principles of the education reform requires engaging in a collective process of reflection on their professional practices.

5. Québec, Conseil supérieur de l’éducation, *Un nouveau souffle pour la profession enseignante* (Québec, Gouvernement du Québec), 2004.

6. Claude Lessard, “La réforme du curriculum : une adhésion réfléchie à un changement peu banal,” *Vie pédagogique*, 114 (February-March 2000): 47-52.

Furthermore, in its brief of March 2007, the Conseil supérieur de l'éducation made reference to two movements with regard to the improvement of education: school effectiveness and school improvement. Given that taking ownership of the education reform requires an understanding of its foundations and principles, the Conseil supérieur de l'éducation situates the education reform squarely in the second movement and considers that educators' compliance with the education reform will be gradual and involve a process of reflection.

3.3.2.3 Application of the QEP

The QEP is a common frame of reference and an indispensable guide for educational practice. The various educators and school staff have to respect its broad orientations and educational aims. It is compulsory in the sense that schools have to ensure the application of all dimensions of the program—the broad areas of learning, the cross-curricular competencies and the subject-specific competencies.⁷

This means that simply covering the subject content is not an option; educators must seek to develop the competencies required to assimilate the learning and apply it in various situations. To do this involves creating teaching and learning conditions and organizational structures consistent with the orientations and aims of the QEP, both in the classroom and in the context of each school's educational project.⁸

The orientations of the QEP underscore the importance of certain teaching practices (differentiated instruction, guidance, regulation and teamwork). They encourage teachers to use students' interests and questions, to respect their different learning styles and pace, to build on the strengths and prior learning of each student, and to take into consideration personal, social and family differences. Teachers are encouraged to offer students complex and meaningful learning situations that allow each student to use his or her own resources. This practice implies flexible classroom organization, the use of many sources of information and technological tools, the formation of flexible learning groups, respect for individual work rhythms, and differentiated support and enrichment. The strategies that can be used include having students work together or having individual students work on their own, and teachers can use the traditional lecture-based approach if necessary. In addition, in the context of competency development, evaluation is considered a practice of regulation (or adjustment) of student learning. Teachers who practise adjustment seek the collaboration of students in order to ascertain their learning, monitor their progress and determine their own effectiveness.

Like all activities related to the application of the curriculum, the evaluation of learning must be carried out in a manner consistent with the principles of the QEP. Thus, it must take into account all components of the program. In addition, it must respect the *Basic school regulation*, which defines the compulsory elements of the curriculum and indicates the conditions for the certification of studies.⁹

7. The field-testing which has been carried out since 2003-2004 in some 15 secondary schools shows that secondary school teachers give priority to the subject-specific competencies. The cross-curricular competencies and the broad areas of learning rank second and third respectively in their order of priorities.

8. S. Larose et al., op.cit., p. 25.

9. Claude Lessard, op.cit., p. 27.

The Policy on the Evaluation of Learning defines evaluation as a process whereby a judgment is made on a student's learning on the basis of information gathered, analyzed and interpreted, for the purpose of making pedagogical and administrative decisions. The Policy specifies ten orientations for evaluation:

- o evaluation in the course of learning must be an integral component of all aspects of the learning process
- o evaluation of learning must be based on the teacher's professional judgment
- o evaluation of learning must respect differences
- o evaluation of learning must be carried out in conformity with the education programs and programs of study
- o evaluation in the course of learning must allow the student to play an active role in evaluation activities, thereby increasing the student's accountability
- o evaluation of learning must involve the collaboration of all stakeholders, while taking into account their respective responsibilities
- o evaluation of learning must reflect the ethical standards shared by the various stakeholders
- o evaluation of learning must contribute to improving the student's quality of spoken and written language
- o evaluation for certification purposes must render account of the acquisition of competencies and thus uphold the value that society accords to official certification documents
- o recognition of prior learning must allow for the recognition of an individual's competencies regardless of the conditions under which the learning was acquired

Furthermore, the application of the QEP calls for individualized instruction. This response to the needs of individual students must involve a type of evaluation that takes into account not only the difficulties, but also the prior learning and abilities of each student. Once the stakeholders have accurately defined the situation of individual students and how it affects their learning, the evaluation will serve to determine the measures that can help them to overcome their difficulties, build on their strengths and make progress. The use of preventive measures and adapted educational services should not be dictated by the fact that a student is deemed to have a particular type of difficulty or by the Ministère's funding requirements, but rather by an evaluation of each student's needs and abilities. Services must be organized on the basis of this principle, regardless of whether students are experiencing temporary, more serious or permanent difficulties, or considered to be at risk or as having difficulties or handicaps.¹⁰

10. Learning difficulties affect between 10 and 15% of the population, i.e. roughly two to three students per class. Schools must promote the harmonious integration of special-needs students into regular classes or groups. To do this, speech therapists and resource teachers with training in special education are available to provide these students with immediate support or to support the teacher. Furthermore, in order to help special-needs students to succeed, an action plan must be drawn up by a team of specialists and resource persons together with the parents as soon as difficulties are noted. This action plan must remain in place throughout the student's schooling. The integration of special-needs students into regular classes, which requires differentiated instruction, is another element to be taken into consideration.

For their part, the authors consulted by the Conseil supérieur de l'éducation identified certain guidelines for promoting differentiated instruction aimed at helping students with difficulties, notably:

- o intervene as soon as problems arise in the schooling of students with difficulties, using a team approach
- o view differentiation as an integral part of teaching
- o provide teachers with appropriate training and accompaniment
- o make differentiation one of the main focuses of evaluation
- o create favourable conditions for professional cooperation and shared responsibility
- o promote communication between the cycle teams

In January 2004,¹¹ the Conseil supérieur de l'éducation published a study on the organizational system used in secondary schools. It sets out the main pedagogical support measures being used in schools at the time the survey was conducted:

- o smaller student groups
- o homeroom system
- o one teacher, one group system
- o tutoring
- o stable student groups
- o mentoring or assistance from peers
- o remedial, makeup and upgrading classes
- o assistance with homework
- o study periods as part of the timetable
- o communication with parents (various forms)
- o small teams of teachers for one or more student groups
- o time allocations for teamwork by teachers, in addition to professional development days
- o professional development activities

The three main objectives for the implementation of these measures are:

- o to improve students' academic success
- o to make students accountable for their own education
- o to provide students with personalized attention

Among other things, this study mentions that, with the exception of study periods incorporated into the timetable and mentoring, the frequency with which these measures are applied gradually decreases from the first to the fifth year of secondary school, and more markedly so in public schools.

11. Québec, Conseil supérieur de l'éducation. *Support and Supervision at the Secondary Level: A Positive Force That Belies the Myths* (Québec: Gouvernement du Québec, CSE, 2004).

3.3.3 Components of the question on the implementation context of the education reform

The research conducted and observations made in the school community indicate that the implementation of a program of change, such as the education reform, destabilizes the stakeholders' sense of professional certainty and often results in temporary feelings of incompetence. Moreover, the research and observations highlight how important it is for the people involved in a context of change to understand the reasons for change, to have access to appropriate training and accompaniment and to have opportunities to share ideas with their peers.

In addition, the testing conducted in targeted schools reveals that teachers tend to have a more positive perception of the application of the QEP in schools where there is more training, coaching and cooperation than in schools where less support is provided. Overall, teachers seem more receptive to the QEP and more committed to applying it when schools ensure they are provided with the necessary support. Thus, it is important to consider the school environment in which teachers work when analyzing data pertaining to their intervention.

3.3.3.1 The training offered

In 1999, the Ministère defined ongoing professional development as a set of actions and activities in which practising teachers engage as individuals and as a group to updating and enriching their professional practices. This definition encompasses concepts of both individual and group need and responsibility (teachers, principals, school boards, the Ministère, universities, professional associations and unions). It also specified that a diversified, balanced program of ongoing professional development must help develop:

- o a solid general culture
- o interpersonal skills in addition to a welcoming, tolerant and open attitude toward all students
- o mastery of subject-specific programs
- o competencies in the areas of instruction, classroom management and evaluation
- o competencies pertaining to action-research and innovation
- o the ability to act autonomously and creatively, the use of critical thinking and the ability to reflect on one's practice

The Conseil supérieur de l'éducation believes that the current training needs of school staff pertain first and foremost to the new aspects that the QEP has introduced: the subject-specific and cross-curricular competency-based approach, the revised program content, the new pedagogical approaches, the contextualization of learning, differentiated instruction, and learning evaluation. Ongoing professional development becomes all the more necessary because teachers are responsible for organizing learning and evaluation situations which fall within their expertise and professional autonomy.¹²

Specific training is essential for teachers undertaking a cooperative process in a cycle team. They require training to learn to cooperate and work in teams, develop professional

12. Québec, Conseil supérieur de l'éducation, *L'appropriation locale de la réforme: un défi à la mesure de l'école secondaire* (Québec: Gouvernement du Québec, 2002), 45.

communication skills and to put in place conditions that promote reflection on group professional practices.

3.3.3.2 Accompaniment

Accompaniment is support provided by one or several resource persons who regularly meet with the people they accompany and who follow through with them as required. Accompaniment occurs in meetings with individuals or in small groups. The study that the Ministère conducted with elementary school teachers in March 2006 indicates that the school's teachers, guidance counsellors and school principals are the main accompanists for teachers in the context of implementing the education reform.

School principals play a central role in accompanying teachers in their process of taking ownership of the QEP. They are responsible for initiating and facilitating change. They must develop a vision of taking ownership of the education reform in their school, a vision that should:

- o integrate support for secondary school students
- o encourage everyone to be involved
- o help staff to develop and maintain a culture of cooperation
- o put in place mechanisms for coordination and cooperation to support cycle teams and the school team
- o help teachers work together to solve the pedagogical problems they experience
- o provide the accompaniment and the ongoing training required for teachers' professional development and the implementation of the education reform

The Conseil supérieur de l'éducation underscores how important it is to recognize the essential role of leadership played by school principals in bringing about the changes to school organization that the education reform requires. The ability of school principals to play this new role directly affects the implementation of the reform: it can be accelerated or delayed depending on the priorities of work organization, particularly in secondary schools.

3.3.3.3 Setting up cycle teams and cooperation

The establishment of cycles is a key element in applying the QEP. The two- or three-year cycle fosters respect for differences in students' pace of learning, and allows teachers to intervene in different ways to better promote learning. In secondary school, the introduction of learning cycles is a challenge that depends on the work organization of teachers. Since learning objectives are defined on the basis of the end of the cycle, the cycle team must collaborate to plan learning (planning of learning and evaluation situations, information communicated to parents, decision making related to the transition between cycles, etc.). As the Conseil supérieur de l'éducation explains:

[a] learning cycle requires a very high level of professional confidence and interdependency and strong synergy among teachers . . . cycles . . . require student-focused school organization and collective responsibility for the student's learning path. However, the strength of cycles also stems from the possibility of *differentiation*.

[...]

Differentiation, for the most part, means diversifying structures and grouping students together in different ways on the basis of the objectives being pursued. Work organization

will depend on the operating procedures adopted for the cycle. A system for monitoring activities and progress is indispensable at the level of the cycle team . . . Lastly, substantial ongoing professional development is required to implement differentiated instruction.¹³

Meetings with elementary school practitioners and staff involved in the organization of education into cycles led the Conseil supérieur de l'éducation to identify certain conditions needed to ensure the successful implementation of cycles:

- o a positive meaning associated with the change introduced by education reform, which stems from an understanding of the reasons underlying this change and which leads to acceptance of becoming involved in it¹⁴
- o a work plan focused on student success that defines clear, short- and medium-term objectives leading to tangible results
- o the autonomy of the cycle team in terms of its operating procedures and its decision-making process
- o the involvement of the school principal, who supports a plan to change school organization and who exercises pedagogical leadership
- o an agent of change (guidance counsellor, teacher-accompanist, coordinator) who delineates competencies
- o training that allows members of the cycle team to engage in ongoing learning and practise teamwork
- o freeing up time to allow teachers to engage in group work, which is a priority

The creation of cycle teams and cooperation among school staff members appear to form the basis for the smooth functioning of the cycles. According to Louise Lafortune,¹⁵ having school staff work in cycle teams encourages interaction, reflection and group testing, discussion in team meetings as well as analysis of practice and experience.

In addition, the experience with the targeted schools highlighted the importance of structuring discussion within a cycle team and a school staff team. Indeed, to be effective and to foster the exchange of expertise among participants, the time taken for collaboration must be planned and be included in the school staff's timetable. To this end, the following actions are recommended:

- o plan structured meetings that meet the needs articulated by the participants
- o establish the topics for the agenda in advance
- o write up a brief report on the meetings
- o assign the role of facilitator to one person with the appropriate skills
- o provide teamwork training

3.3.3.4 Availability of resources

The accessibility of resource persons, the presence of regional support and consulting services for students with learning or behavioural problems, access to training and professional development activities, the presence of an accompaniment structure for school staff and the

13. Conseil supérieur de l'éducation, op. cit., 32 [Free translation].

14. In *Écoles éloignées en réseau*, the Centre francophone d'information des organisations (CEFRIO) also points out how important it is for stakeholders to understand the reasons for change.

15. Louise Lafortune et al., *Travailler en équipe-cycle entre collègues d'une école* (Québec: Presses de l'Université du Québec, 2004).

availability of school textbooks that are QEP-compliant, suitable facilities and the accessibility of information and communications technologies (ICTs) are contextual elements that must also be taken into consideration.

The allocation of resources for the implementation of the education reform come under three administrative levels: the Ministère, the school boards and the school principals. According to the Conseil supérieur de l'éducation, in its 2003 brief, *L'appropriation locale de la réforme : un défi à la mesure de l'école secondaire*, [this] reform must be implemented collectively and as locally as possible, while being carefully accompanied and monitored by the State.

Although the Conseil supérieur de l'éducation does not closely examine the role that school boards can play in the implementation of education reform, several recommendations contained in the conclusions of briefs nevertheless define its position on this topic. In particular, the school boards must support schools in implementing the various education reform measures and introduce conditions that assist schools in the exercise of their responsibilities. Other aspects of the school boards' role are mentioned in a number of briefs cited in the bibliography of this document:

- o support for and accompaniment of school principals through the creation of favourable conditions, including the allocation of resources, in order to facilitate the full exercise of their responsibilities, particularly in their role of leading the implementation of learning cycles and the school reorganization that this involves
- o a range of ongoing training activities for school staff, activities dealing with the key elements of education reform
- o the creation of forums for the exchange and pooling of experience
- o the distribution of resources taking into account the situation of each school, particularly with respect to guidance and support for students and services for students with difficulties
- o support for schools in terms of more flexible time management for pedagogical purposes, particularly by approaching local unions and examining school transportation conditions
- o the facilitation of partnership with the health and social services network and family services

The school board assigns staff to its schools, taking into account, among other things, the staffing requirements that school principals have submitted to it (*Education Act*, s. 261) and it allocates financial resources based on the requirements formulated by the establishments (*Education Act*, s. 275).

Moreover, the Conseil supérieur de l'éducation attributes three functions to the Ministère in the implementation of the education reform; steering the education reform, guiding its assimilation and making frameworks more flexible.

Steering the education reform is an important ministerial function. Ministerial leadership must be exercised in partnership with the school boards, but it must act as an informed partner, able to take a long-term view and able to guide the action of the other partners throughout the process of change. The Ministère is therefore called upon to implement monitoring mechanisms in collaboration with the school boards, which makes it possible to make assessments to regulate action and make adjustments as required.

3.3.4 Components of the question on the implementation of new learning paths

The mandate of the schools is to provide education services to all young people, to take into consideration the different aspects of their world and to prepare them so that they can reach their intellectual and emotional potential in their personal, social and professional lives. The diversification of learning paths in Secondary Cycle Two is part of this mandate. Students receive common basic education in Cycle One. The specific needs of students are addressed through the implementation of *local* projects.¹⁶

To meet the educational needs of students in Secondary Cycle Two, diversified paths that allow them to explore areas of vocational interest are offered.¹⁷

A variety of bridges allow transition between these paths:

- o a General Education Path
- o an Applied General Education Path
- o a Work-Oriented Training Path consisting of two options
 - prework training
 - training for a semiskilled trade

The General Education Path and the Applied General Education Path

These general education paths provide access to vocational, college and university education. A secondary school diploma (SSD) is awarded to students who complete one of the General Education Plans.

In the QEP, Secondary Cycle Two, the Ministère states the following:¹⁸

In mathematics, the following three options are offered in the last two years of Cycle Two: the *Cultural, Social and Technical* option (4 credits per year), the *Technical and Scientific* option (6 credits per year) and the *Science* option (6 credits per year). In the first year of the cycle, students complete their basic mathematical education (6 credits) and select one of these options for the beginning of the following year. Their educational path has no bearing on the option they may choose. In each case, they will continue to develop their competencies and add to their mathematical knowledge so that they will be better prepared for vocational or technical training or preuniversity education and for life in society. Regardless of the option chosen, students must complete a major independent assignment in the last year of the cycle. Although this assignment has a specific focus (comprehensive activity for integrating mathematical learning, exploration activity or detailed investigation activity) depending on the option involved, it is aimed at helping students to develop a positive attitude toward mathematics, to become aware of what they have learned, and to cultivate an appreciation for the cultural significance and widespread use of mathematics.

16. Some school boards may obtain special authorization, on request, to continue the Life Skills and Work Skills Education (LSWSE) for the 2007-2008 and 2008-2009 school years.

17. Figure 1, excerpted from Chapter 1 of the *Québec Education Program – Secondary Cycle Two* (page 24) illustrates these paths and their bridges.

18. Québec, Ministère de l'Éducation, du Loisir et du Sport. *Québec Education Program – Secondary Cycle Two* (Québec: Gouvernement du Québec), 2007.

In science and technology, the programs differ according to the educational path chosen: the *Science and Technology* program is part of the general education path, and the *Applied Science and Technology* program is part of the applied general education path. Both programs help students develop their scientific and technological literacy, enabling them to become active, critical and informed participants in debates on social issues, to use the products of science and technology responsibly and to take concrete, practical and innovative action in these areas. These last two aspects are of particular concern in the applied path. Generally speaking, scientific issues are addressed in the *Science and Technology* program. The compulsory concepts are combined to address a different theme in each of the two years of the program. In the first year (6 credits), the theme examined is *The Human Organism*. In the second year (4 credits), the central theme is the environment, which is divided into four topics: climate change, drinking water, the energy challenge and deforestation. In addition to this compulsory program, the optional *Environmental Science and Technology* course (4 credits) is offered in the second year. It is aimed at developing the same competencies, but the compulsory concepts address other environmental issues. Generally speaking, technological problems are addressed in the *Applied Science and Technology* program (6 credits for each of the two years). Over the two years of this program, the compulsory concepts studied pertain to applications (objects, systems, products and processes) related to seven technological fields. In addition to this compulsory program, the *Science and the Environment* course (2 credits) at the end of the second year better prepares students for optional courses in Secondary V. Although they are part of different educational paths, the *Science and Technology* and the *Applied Science and Technology* programs have the same competencies (apart from one key feature), and more than 60 per cent of their respective program content is identical. This makes it easy for students to switch from one educational path to the other at the end of the first year of the cycle. In addition, both programs lead to the same Secondary School Diploma. The *optional Environmental Science and Technology* course (4 credits) and the *Science and the Environment* course (2 credits) make it possible to enroll in Secondary V science and technology courses. (Chapter 6, p. 4)

3.3.4.1 The Work-Oriented Training Path

This path is pursued through work-study programs and can lead directly to the job market. Under certain conditions it can also lead to vocational training programs or to the pursuit of general education. The Ministère can award a Certificate of Training for a Semiskilled Trade to students who have completed prework training (2700 hours) and the practical training leading to the exercise of a semiskilled trade.

The Work-Oriented Training path (Training for a Semiskilled Trade and Introduction to the World of Work) replaces the current Life Skills and Work Skills Education (LSWSE) program in the youth sector and programs leading to the Attestation of Vocational Education (AVE) (or option 2). It must address a number of shortcomings observed in the above-mentioned programs by promoting: broadened general education, more rigorous evaluation, more uniform certification, access to more thorough training and the availability of training leading to a

semiskilled trade in all the school boards. Moreover, the work-study program formula will be maintained and the practical training program offering will be renewed.

This path is an integral part of the QEP and is clearly provided for in the *Basic school regulation*. It provides access to official initial qualification and under some circumstances, access to vocational training.

Figure 1

Certain factors favourable to the implementation of the Work-Oriented Training Path are highlighted, including:

- o the commitment of the education community:
 - an organizational structure that permits teamwork for teachers and cooperation
 - cooperation between teachers and complementary education services staff
 - motivation of the different categories of staff and their commitment to enrolling in ongoing training
 - motivation of the different categories of staff and their commitment to implementing the Work-Oriented Training Path
 - the understanding and dissemination of information in the school
 - the commitment and collaboration of parents
 - the commitment and support of the governing board

- o the culture of accompaniment:
 - resource persons made available to students to determine their cognitive, affective and social needs, etc.
 - practices for developing intervention plans
 - support for students who show difficulties
 - ways of grouping students
 - the expertise of complementary education services staff in regard to students with difficulties
 - forms of pedagogical support (tutoring, mentoring, cycle, etc.)
 - mechanisms of transition between cycles

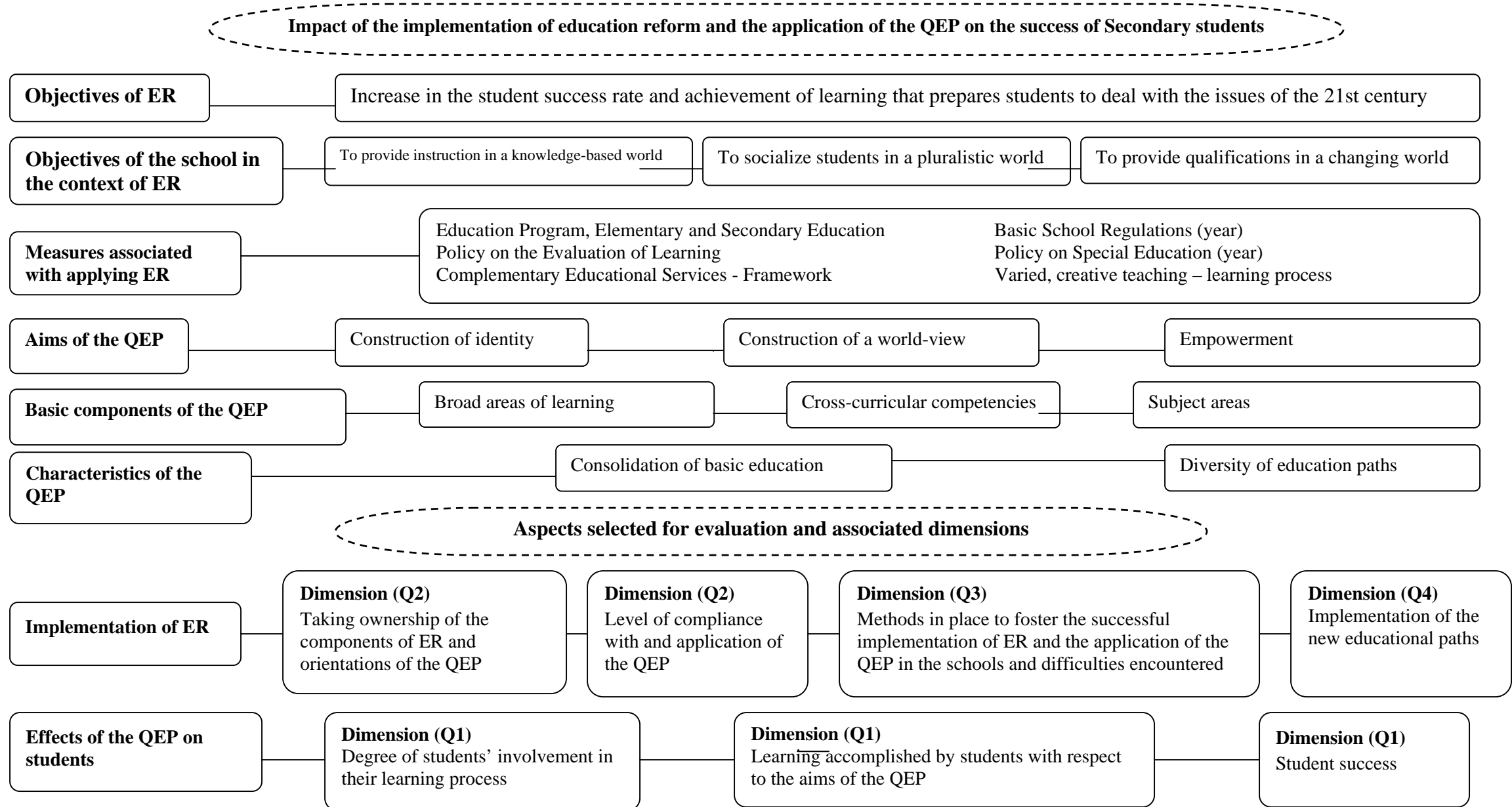
- o pedagogical practices:
 - a variety of teaching methods (cooperative learning, strategic instruction, explicit instruction, lecturing, etc.)
 - remedial pedagogical activities (homework assistance, makeup work, etc.)
 - pedagogical approaches that take into consideration differences among students (differentiated instruction according to pace, interest, etc.)
 - teachers' competencies in understanding students' learning disabilities
 - targeted actions in the educational project that promote reading
 - an understanding of the competency report and the competency-based evaluation
 - teamwork planning of learning activities
 - learning management in the classroom

- o school organization:
 - timetable adjustment
 - resource allocation
 - organization of teaching duties
 - planning of cooperative (teamwork) time
 - availability and quality of facilities
 - arrangement of a multi-functional room
 - availability of material resources
 - existence of a list of partner businesses and organizations

- the type of partnership with partner businesses and organizations for planning placements in workplaces

Figure 2

MODEL FOR THE EVALUATION OF EDUCATION REFORM IN SECONDARY SCHOOL



3.4 Evaluation Strategy

Monitoring samples of students, their parents, their teachers, guidance counsellors and school principals over a potential period of six years will make it possible to more clearly define the effects of the implementation of the education reform on students and to associate these effects with various contextual elements. To do so, three student cohorts will be established. The first cohort (C_{control}) consists of students who began their secondary education in September 2004 (2004-2005 school year) and who have not been exposed to education reform at the secondary level. In fact, these students experienced partial exposure at the elementary level, i.e. in the fourth and sixth years. In the context of this study, this exposure will be considered as negligible because these years served as periods of field-testing for several schools. The second cohort (C_{test}^1) consists of students who began their secondary education in September 2006 (2006-2007 school year). These students were exposed to the education reform in its entirety (elementary and secondary levels) during year two of the compulsory application of the QEP at the secondary level. The third cohort (C_{test}^2) includes students who will begin their secondary education in September 2007 (2007-2008 school year) and who are therefore exposed to education reform in its third year of implementation.

The 2005-2006 cohort is not included in the work plan because the first year of a program's implementation often requires adjustments in the schools and may create instability. This context of transition could mitigate the effects of the education reform but, in some cases, it might also exaggerate its effects through the feverishness surrounding the implementation of a new QEP.

Annual collections of data will take place beginning in April 2008 and continue until April 2013 (six instances of data collection in all). The scope of collection will vary from year to year. Students sampled from the three cohorts and one of their parents will complete questionnaires and will be interviewed by telephone at the end of Secondary II (except for the control cohort), IV and V and in the first year of CEGEP (only students for CEGEP). The questionnaires and the interviews will make it possible to provide evidence for these students' motivational, academic and vocational trajectories, the history of their behavioural problems, as well as the educational and economic resources of their family environment. School principals, teachers and guidance counsellors of the cohorts exposed to education reform at the secondary level (C_{test}^1 and C_{test}^2) will also be asked to complete a questionnaire at the end of Secondary II, IV and V (only teachers for Secondary V). These measures will provide evidence of their level of knowledge of and compliance with the education reform at the secondary level and the consistency of their practice with the orientations of the QEP. They will make it possible to qualify and quantify students' degree of exposure to the education reform. The data provided by the schools (school principals, guidance counsellors, teachers) will be aligned with those provided by students and parents, in order to establish nested data structures that will make it possible to define the specific contribution of the school, the class, and parents, in addition to the effects of cohort effects on the trajectories of students.

Moreover, during data collection, teachers, principals and guidance counsellors will be asked to provide information, using a questionnaire about the context of the implementation of the education reform in their schools, about training and accompaniment options, the development of modes of cooperation between the stakeholders concerned and the presence of the necessary human and material resources. The questionnaire will include sets of items that will be used to associate the perceptions of the three populations in the same school. After analysis of these

results, the Ministère will set up discussion groups in order to further explore some of the problems highlighted.

Figure 3

Longitudinal field-testing plan

Number of years from initial enrollment in secondary school						1st year college
1st year	2nd year	3rd year	4th year	5th year		
<i>C_{control}</i> 2004-2005 (before implementation)	2005-2006	2006-2007	2007-2008 students (n = 2000) parents (n = 2000)	2008-2009 students (n = 2000) parents (n = 2000)		<i>2009-2010**</i> students (n = 2 000)
<i>C_{test}¹</i> 2006-2007 (2nd year of implementation)	2007-2008 students (n = 2000) parents (n = 2000) teachers (n = 6000) school principal (n = 847) guidance counsellors (n = 847)	2008-2009	2009-2010 students (n = 2 000) parents (n = 2 000) teachers (n = 6 000) school principal (n = 847) guidance counsellors (n = 847)	2010-2011 students (n = 2 000) parents (n = 2000) teachers (n = 6000) school principal (n = 847) guidance counsellors (n = 847)		<i>2011-2012</i> students (n = 2000)
<i>C_{test}²</i> 2007-2008 (3rd year of implementation)	2008-2009 students (n = 2000) parents (n = 2000) teachers (n = 6000) school principal (n = 847) guidance counsellors (n = 847)	2009-2010	2010-2011 students (n = 2 000) parents (n = 2000) teachers (n = 6000) school principal (n = 847) guidance counsellors (n = 847)	2011-2012 students (n = 2000) parents (n = 2000) teachers (n = 6000)		<i>2012-2013</i> students (n = 2000)

* In addition to the populations indicated in this figure, a sample of Secondary IV and Secondary V teachers (approximately 2000) will be interviewed about their pedagogical practices and their perceptions of education reform.

** Data collection will be conducted for the years appearing in bold, whereas the data collection included in the column for the first year of college, in italics, will not be included in this project.

This data collection plan will help the Working Group continue to implement the education reform. Five annual reports describing the progress of the project and future stages (December 2008, 2009, 2010, 2011 and 2012) are planned. Moreover, two progress reports integrating the initial longitudinal data making it possible to test differences between Secondary IV (report 1) and Secondary V (report 2) cohorts and the analysis of data on the implementation of education reform and the application of the QEP will be tabled: one in December 2011 and the other in December 2012. A third and final report collating all of the longitudinal data and answering the first three questions of the evaluation will be tabled in December 2013.

3.4.1 Procedure and samples

The research will be carried out with five groups of respondents: students and their parents, teachers, school principals and guidance counsellors.

Students and their parents

Students and their parents form a population that will constitute the core of the research. Each cohort will include 2000 families (a child and a parent) of anglophone and francophone students enrolled in the public and private sectors. This number will ensure the validity of the findings, allowing for an approximate sample loss of 25% over the six-year research period. This percentage of loss is based on the statistical data for the school dropout rate in previous years.

The sampling procedure will be probabilistic, stratified and disproportionate. The francophone student samples (1500 each) must be representative of the population of francophone students enrolled in Secondary I in the fall of 2004, 2006 and 2007. For their part, anglophone students will be oversampled (500 per initial sample) in order to allow for comparisons according to language. For the 2004 cohort, students who attended schools targeted for the implementation of the education reform will be excluded from the sample. Using personal information lists generated at random by the Ministère (these lists must include the name and address of parents and the school board and the school attended by the child), it will be possible to telephone parents to ask them to take part, along with their children, in this study. During this initial contact, the goals of the project and the extent of participation asked of families will be explained [participation in three studies (parents) or four studies (children) over a period of five years]. At the same time, a short telephone interview will also be conducted and will conclude with the mailing of two questionnaires to the home (one for the parent and the other for the child). Participants may answer on either the print or electronic form of the questionnaire. The telephone interview will allow for the collection of factual data about students' families and educational paths. Parents will also be asked to give their authorization to inform the school principal of their child's participation in the project and to collate data pertaining to their child's educational path that is recorded in the databases of the Ministère or the school.

3.4.1.1 Teachers

Samples of teachers will be drawn from the list of students included in the two test cohorts in Secondary II. The principals of each school attended by the selected students will be asked to provide the research team with the list of teachers who taught these students during the second school year (at the end of Cycle One). For each student selected, the school principal must generate a list of his/her teachers in sequence, according to the teaching hours devoted to this

student. The research team will request the participation of the three teachers who, according to this list, spent the most time teaching the student during the second school year.

The composition of the teachers' samples will vary over the course of data collection. In theory, each cohort will be composed of 6000 teachers (3×2000 children). However, in actual fact, the sample size could be under 6000. It is possible, and even likely, that, in schools where several students take part, the same teacher will be included in several samples. It is also likely that a teacher selected in the first test cohort will be selected again in the second cohort.

All teachers will be asked to complete a questionnaire in print or electronic form, based on their preference. They will be asked to provide authorization for linking the data obtained from them to data obtained from students, the principal and the guidance counsellor of their school. They will also be notified of the probability of being asked to take part again when the students in the current year move on to Secondary IV and V.

This second sampling procedure will make it possible to define two additional samples of no more than 6000 teachers each (three per student included in the project). Among the teachers selected for these samples, some will likely have already been included in the first wave of recruitment. Where applicable, their participation will constitute an extension of what they have already done. In sum, the teachers' samples for Secondary IV and V will consist of old and new participants.

In addition, at the request of the steering committee, which wants to make use of data pertaining to the pedagogical practices of teachers before the implementation of the education reform, in April 2008, a sample of teachers for Secondary IV and V will be queried about their pedagogical practices and their opinion about education reform. The sample will be equivalent to the samples described above, or approximately 2000 teachers.

3.4.1.2 School principals and guidance counsellors

All school principals and the same number of guidance counsellors (one per school) will be included in the test cohorts. These populations will be called upon a first time, while the sampled students are called upon at the end of Secondary Cycle One (Secondary II). A communication plan will be developed to inform these populations and make them aware of the importance of participating in this project.

The school principal will have two tasks to perform. The first will be to give an account of his/her knowledge of education reform, compliance with the basic principles of education reform, the practices put forward in the school to promote its implementation and the climate surrounding the implementation by completing a questionnaire designed for this purpose. The second task will consist of asking the guidance counsellor working in his/her school to participate by completing a questionnaire reflecting the counsellor's specific circumstances. School principals and guidance counsellors will be called upon again when the student test cohorts reach Secondary IV. As is the case for the other participants, these two populations can complete the questionnaire in print or electronic form.

3.4.2 Data collection

The data collected will make it possible to gauge the quality of the exposure of students to education reform and its effect on their educational trajectories and academic results. Mitigating factors and control variables will also be evaluated.

3.4.2.1 Measurement of effects on students' trajectories

The effects of education reform on students' trajectories will be evaluated according to four types of indicators, i.e.:

- 1) perceptions of achieving the nine cross-curricular competencies defined in the education reform at the secondary level
- 2) evaluations of the students' perceptions based on measurement scales whose empirical links with academic success and the graduation rate are well documented (for example, academic motivation [motivation at school], feeling of subject-specific competency, study habits, quality of social relations, certitude about career choices)
- 3) self-evaluation of academic performance and educational paths (e.g. plans to continue their education, hopes for their education)
- 4) data from schools (e.g. report cards)

3.4.2.2 Measurement of the quality of students' exposure to education reform

The measurement of the quality of the students' exposure to education reform will be obtained from school principals, teachers and guidance counsellors. Knowledge indicators will draw on the various stakeholders' sense of how well they understand the elements of education which stem from the QEP, the *Basic School Regulation*, learning evaluation and special education policies as well as school organization. Compliance with the foundations and principles of the education reform can be measured against general and specific perceptions concerning the relevance of these foundations and the consequences of the application of the education reform. Lastly, personal, pedagogical and institutional practices will be evaluated using the measurement of pedagogical practices in the classroom and a measurement that is more descriptive than the one various stakeholders used, in compliance with the principles of education reform.

3.4.2.3 Measurement of students' results

The students' results on the various ministerial, international and Pan-Canadian examinations (the timetable is included in Appendix 2 of this document) will constitute another significant source of information pertaining to the effects of education reform on student learning and success. The Ministère's administrative data on dropouts and academic delays, as well as the graduation rate, will also be taken into consideration upon analysis of the study findings.

3.4.2.4 Measurement of mitigating factors

Mitigating factors will be measured among all the project participants and will also be collated using databases from the Ministère. These questions will be mainly objective in nature and will describe the situation of families and schools engaged in the process of education reform. A more subjective measurement, collected from questionnaires completed by school principals, guidance counsellors and teachers, will provide a description of the climate in the school and the difficulties encountered when implementing education reform.

3.4.2.5 Measurement of control variables

The control variables will also be evaluated using objective and subjective indicators. Behavioural problems and parental involvement will be evaluated longitudinally (subjective indicators), whereas the family's socioeconomic profile will be established in the first phase of measurement.

Figure 4

**Model of the evaluation
of the implementation of the education reform (ER)
and the application of the Québec Education Program (QEP)**

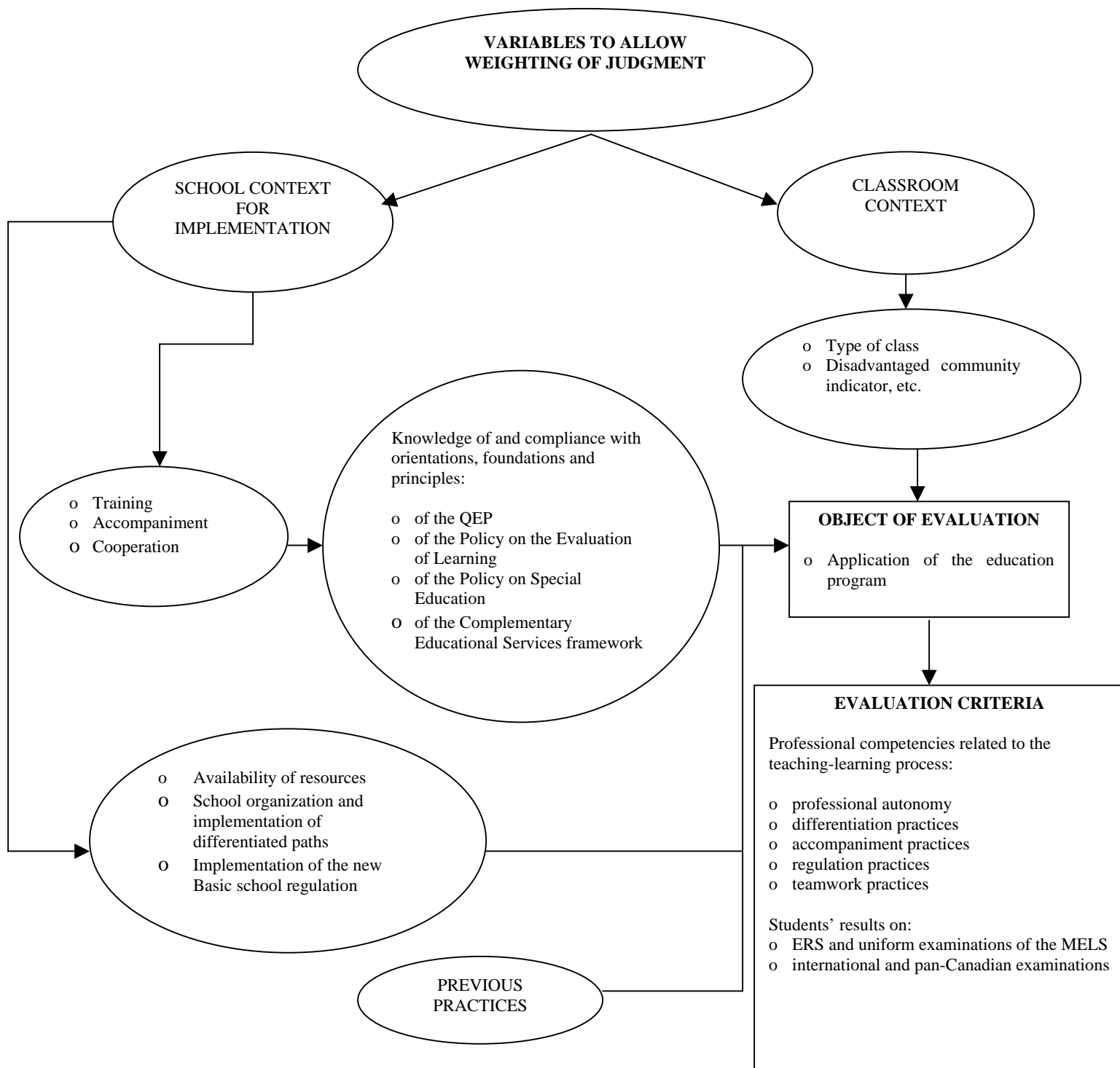
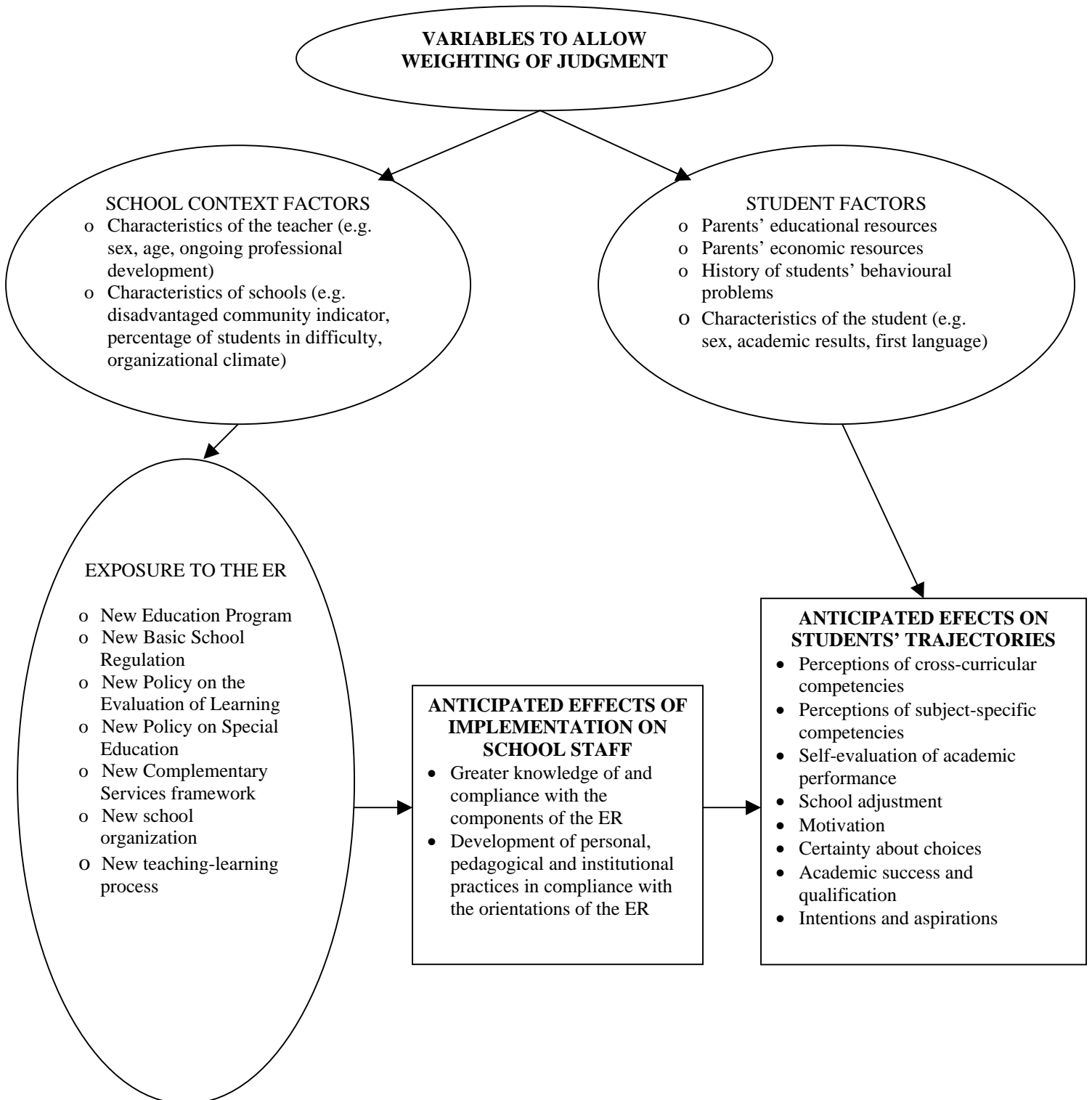


Figure 5

Model of the evaluation of the effects of the implementation of education reform



APPENDIX 1

MONITORING OF STUDENT COHORTS IN THE FIELD-TESTING PLAN TO EVALUATE THE IMPLEMENTATION OF EDUCATION REFORM IN SECONDARY EDUCATION AND ITS EFFECTS ON STUDENT SUCCESS

Education level	Cycle	Year	School year											
			2000-2001	2001-2002	2002-2003 ¹	2003-2004	2004-2005 ²	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Preschool education			Ctest2											
Elementary education	One	1st	Ctest1	Ctest2										
		2nd		Ctest1	Ctest2									
	Two	3rd	Ccontrol		Ctest1	Ctest2								
		4th		Ccontrol		Ctest1	Ctest2							
	Three	5th			Ccontrol		Ctest1	Ctest2						
		6th				Ccontrol		Ctest1	Ctest2					
Secondary education	One	1st					Ccontrol		Ctest1	Ctest2				
		2nd						Ccontrol		Ctest1 T, SP, GC	Ctest2 T, SP, GC			
	Two	3rd							Ccontrol		Ctest1	Ctest2		
		4th								Ccontrol ST, P Tcontrol		Ctest1 ST, P	Ctest2 ST, P	
		5th								Tcontrol	Ccontrol ST, P		Ctest1 ST, P, -T, SP,GC	Ctest2 ST, P,T, SP,GC

Ccontrol last cohort that did not field-test the QEP (first enrolled in Secondary school in 2004-2005).

Ctest1: second cohort, which field-tested the application of the QEP (first enrolled in Secondary school in 2006-2007).

Ctest2: third cohort, which field-tested the application of the QEP (first enrolled in Secondary school in 2007-2008).

□ Application of the education reform

■ Data collection T = teachers SP = school principals ST= students P = parents GC = guidance counsellors

□ Application of the education reform and Data collection

1. Result of the teachers' boycott.

2. Application of the Education Program postponed for one year.

APPENDIX 2
TIMETABLE OF EXAMINATIONS ADMINISTERED TO ELEMENTARY AND SECONDARY SCHOOL STUDENTS

Year administered	Elementary		Secondary			
	2 nd year, Cycle Two	2 nd year, Cycle Three	Secondary II	Secondary III	Secondary IV	Secondary V
2005-2006	PIRLS Reading Nov. 2007 Report	Languages of instruction (A*C) Mathematics (A*C)		PISA Sc. 15 years	Uniform examinations: Mathematics, History, Science	Uniform examinations: Languages of instruction Second languages
2006-2007	TIMSS Math – SC	Languages of instruction: English Language Arts (A*C) Français (A*) Mathematics (A*) English as a Second Language (A C)	TIMSS Math - SC PCAP Reading 13 years (May) Languages of instruction (AC) Mathematics (AC) <i>Examinations administered to Secondary III students in October 2006</i>	Languages of instruction (AC) Mathematics (AC)	Uniform examinations: Mathematics, History, Science	Uniform examinations: Languages of instruction Second languages
2007-2008		Languages of instruction (A*) Mathematics (A*C)	Languages of instruction (AC) Mathematics (AC) <i>Examinations administered to Secondary III students in October 2007</i>	Languages of instruction (AC) Mathematics (AC)	Languages of instruction (AC) Mathematics (AC) Uniform examinations: Mathematics, History, Science	Uniform examinations: Languages of instruction Second languages
2008-2009		Languages of instruction (A*C) Mathematics (A*)	Languages of instruction (AC) Mathematics (AC) <i>Examinations administered to Secondary III students in October 2008</i>	PISA Reading 15 years (April) PCAP Reading 15 years (May) Languages of instruction (AC) Mathematics (AC) Science and Technology and Applied Science and Technology (C)	Uniform examinations: Mathematics (A*C) History (A*C) Sciences (A*)	Uniform examinations: Languages of instruction (A*C) Second languages (A*C)
2009-2010		Languages of instruction (A*) Mathematics (A*C) English as a Second Language (AC)	PCAP Math. 13 years (May)	Science and Technology and Applied Science and Technology (AC)	Uniform examinations: Mathematics (A*C) History (A*C) Sciences (A*)	Uniform examinations: Languages of instruction (A*C) Second languages (A*C)
2010-2011	TIMSS Math – SC PIRLS Reading 2012 Report	Languages of instruction (A*C) Mathematics (A*)	TIMSS Math - SC	Science and Technology and Applied Science and Technology (AC)		Uniform examinations: Languages of instruction (A*C) Second languages (A*C)
2011-2012		English as a Second Language (AC)		PISA Math. 15 years PCAP Math. 15 years (May)		

A* = examination administered to all students **A = examination** administered to a sample of students **C = centralized correction.**
Years of application of the education reform

**APPENDIX 3
TIME FRAME FOR DATA COLLECTION³**

Year and level of education	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Secondary I								
Secondary II		TIMSS Math-Sc PCAP Reading ERS - Ministère (Lang. instruct., Math.)	Ctest1 (ST, P, T SP, GC) ERS - Ministère (Lang. instruct., Math.)	Ctest2 (ST, P, T SP, GC) ERS - Ministère (Lang. instruct., Math.)	PCAP Math	TIMSS Math-Sc		PCAP Sc.
Secondary III	PISA Sc.	ERS - Ministère (Lang. instruct. Math.)	ERS - Ministère (Lang. instruct., Math.)	PISA Reading PCAP Lecture ERS - Ministère (Lang. instruct. Math. Sc & Tech App. Sc.& Tech)	ERS - Ministère (Sc & Tech App. Sc & Tech)	ERS - Ministère (Sc & Tech App. Sc. & Tech)	PISA Math. PCAP Math.	
Secondary IV			Ccontrol (ST, P) ERS - Ministère (Lang. instruct., Math.)		Ctest1 (ST, P, T, SP, GC)	Ctest2 (ST, P, T, SP, GC)		
Secondary V				Ccontrol (ST, P)		Ctest1 (ST, P, T)	Ctest2 (ST, P, T)	
1st year College					Ccontrol ST (n=2000)		Ctest1 ST (n = 2000)	Ctest2 ST (n = 2000)

Ccontrol: last cohort that did not field-test the QEP (Secondary I in 2004-2005).

Ctest1: first cohort, which field-tested the application of the QEP (Secondary I in 2006-2007).

Ctest2: cohort that experienced the second year of application of the QEP (Secondary I in 2007-2008).

ST = students (2000) **P** = parents (2000) **T** = teachers (6000) **SP** = school principals (500) **GC** = guidance counsellors (500).

ERS - Ministère = Épreuves officielles de régulation de système (examinations designed to monitor the application of the new curriculum).

TIMSS = Trends in International Mathematics and Science Study (9 years and 13 years).

PCAP = Pan-Canadian Assessment Program, Reading and Writing, Mathematics and Science (13 years and 15 years).

PISA = Programme for International Student Assessment (15 years).

3. All data collection concerning the three student cohorts will be conducted in April.

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