SECONDARY SCHOOL LEAVING EVALUATION IN NEWFOUNDLAND 1972-1976

NORMAN L. BULL


CENTRE FOR NFLD. STUDIES
JUN 2 1978
MEMORIAL UNIVERSITY
OF NEWFOUNDLAND

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

SECONDARY SCHOOL LEAVING EVALUATION IN NEWFOUNDLAND 1972-1976

A Thesis

Presented to

The Faculty of Education

Memorial University of Newfoundland

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

by

Norman L. Bull

March 1977

ABSTRACT

The major secondary school leaving evaluation in Newfoundland since June 1972 has been a system of shared evaluation between each school and the Department of Education. The Department of Education awards 50 percent of the students' final grades through the Public Examinations held in June of each year. The school awards the remaining 50 percent by a variety of in-school evaluation procedures.

The purpose of this study was to determine, as far as possible, the degree to which shared evaluation has achieved its aim of providing a more valid assessment of student achievement while at the same time maintaining quality control and permitting a broadening of the curriculum. The study investigated trends in the distribution of mean marks and pass rates both for the school grades and the Public Examination grades. The final part of the study dealt with a questionnaire survey of 151 teachers in 53 randomly selected schools. The purpose of this survey was to collect data on school practices and teacher opinion regarding shared evaluation. The study covered the years from 1972 to 1976 for the four subjects, algebra, history, English and biology.

Although the conclusions were confounded by a number of factors it appears that there is a general decline in mean marks and pass rates in the Public Examinations but not in the school examinations. Also the estimated magnitude of differences between schools expected due to random errors is much smaller than the difference permitted by the Department of Education. The results of the teacher survey indicated that the teachers are generally satisfied with shared evaluation and that the majority want no change at the present time.

ACKNOWLEDGEMENTS

The author wishes to gratefully acknowledge the assistance of the following people and groups in the preparation of this report.

Dr. R.K. Crocker
Director of the Institute for Educational Research and Development
Memorial University of Newfoundland

Dr. Wm Spain
Department of Educational Psychology
Memorial University of Newfoundland

Newfoundland Department of Education
Division of Instruction

Principals and Staff of Schools who participate in the survey.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

SCOPE AND OBJECTIVES OF THE STUDY

Background to the Study

Down through the ages from early Chinese times, when examinations were administered to determine one's suitability for the civil service (Compayre, 1900, p. 16) to the present time, man has been attempting to measure the capacities, aptitudes, knowledge, etc., possessed or acquired by people. Traditionally, one's future upon leaving secondary school depended upon the amount of knowledge he had acquired, as evidenced by a mark on an academic examination, usually set by some agency external to the school. No consideration was taken of the moral, mental, emotional and cultural development of the pupil.

Within the past ten years in Canada this impersonal system of measuring student achievement has changed somewhat. There was an apparent acknowledgment on the part of both the school and the Departments of Education that their efforts were not meeting the needs of society. Too many young people and others were becoming disillusioned with the school system, condemning it as irrelevant with the curricula too narrow and the examinations too rigid and eliminatory. In an effort to correct this situation, provinces began to broaden their curricula and allow the schools more autonomy in evaluating student progress.

This trend started in Ontario in 1968. British Columbia and Alberta started school-based evaluation in 1973. By 1974 only Quebec, Newfoundland and to a lesser extent Saskatchewan still required external

departmental examinations. (Gayfer, 1974, p. 15).

The British Columbia Teachers' Federation, in a proposal for abolishing departmental examinations, included such criticisms as the curriculum contained too much to be examined by one examination; the examination attempted to examine too much; and the examination was detrimental to good instruction. Their recommended solution was to "trust the schools" to evaluate student achievement. (Evaluation of Pupil Progress, 1966, p. 84).

Newfoundland has not reached the stage yet where schools have complete control over secondary school leaving evaluation, but steps are being taken to bring this about. Accreditation, a term loosely synonymous with total internal evaluation by schools, is being piloted in four schools during the 1976-77 school year.

Currently in Newfoundland schools there are several evaluation procedures used in awarding Grade XI certificates. Both the type of evaluation that a student receives and the method of awarding a school leaving certificate varies. The variations in use are: (a) shared evaluation, (b) Public Examinations only, (c) total internal evaluation, and (d) principal's recommendation.

Shared evaluation. Under this procedure the school and the Department of Education cooperate in grading the students. The school submits marks to the Department of Education which represents fifty percent of the students' final grades. These marks must be submitted several days prior to the closing of school and the student is given an opportunity to appeal. The Department of Education, through its Public Examinations held

in June of each year, determines the other fifty percent and awards the final grades and diploma. To be eligible to participate in shared evaluation a school must meet certain standards and operate within guidelines set by the Department of Education. A copy of Standards for Participating Schools - 1975 is reproduced as Appendix 1, a copy of Evaluation Guidelines for Participating Schools, Revised for 1973-74 is reproduced as Appendix 2, and a copy of Regulations for Shared Evaluation Plan is reproduced as Appendix 3.

Public Examinations only. A second practice used by some smaller schools involves one hundred percent evaluation by means of the same Public Examination referred to above and the same diploma is awarded. In 1976 only 26 of the 179 high schools were following this practice.

Total internal evaluation. Some schools have, in addition to shared evaluation total internal evaluation and award their own diploma for non-matriculating or general students. This practice is not controlled by the Department of Education and consequently there are no figures to indicate how widespread this practice is. From our survey it was determined that it was the general practice of one board of education and several other schools. Also we know that for the past five years only an average of 77 percent of students enrolled in Grade XI wrote the Public Examinations.

Principal's recommendation. Another practice found in some larger schools was instituted by Memorial University. Under this procedure if a student has a seventy-five percent school average in the required

matriculation courses he may be recommended by his principal for admission to the University. These students are not required to write Grade XI Public Examinations and those that do not are not given a provincial Grade XI diploma. The one disadvantage of this practice is that if, for any reason, the student who did not write the Public Examinations discontinues his studies at the University, especially during the first semester, he may have difficulty finding employment or gaining admission to another post-secondary institution because he does not possess a provincial Grade XI diploma. From the University's point of view, as one might expect, this system is reported as working well.

Purpose of the Study

If shared evaluation is to be judged as an improvement over other possible systems for awarding school leaving certificates, then the system should be expected to reduce some of the problems of public examinations while, at the same time, retaining the quality control feature which, it may be argued, is the merit of such examinations. Furthermore, in the local context, the use of shared evaluation should be expected to bring about some improvement in the retention ability of the high schools. The system should permit a broadening of the curriculum, yield greater flexibility in evaluation procedures and allow outcomes not measurable by public examinations to be assessed.

The primary purpose of this study was, therefore, to determine, as far as possible, the degree to which shared evaluation has been achieving these purposes and to identify possible strengths and weaknesses in the system.

More specifically the study examined the following aspects of the system:

1. Existing evaluation practices in schools under the system.

2. The distribution of school and public examination marks, and overall differences between school marks and public examination marks.

3. Teacher reaction to shared evaluation.

4. The effect of shared evaluation on non-sharing schools.

5. The method used by the Department of Education to control differences in grades between schools.

Scope of the Study

The study consisted of five parts as follows:

1. The background aims and objectives of the shared evaluation system, adopted for the high schools in 1971 were examined by researching publications of the Department of Education, through interviews with Department personnel and through other research papers on the same topic.

2. Public Examination data of the Department of Education were analysed with a view to answering a number of specific questions.

3. A questionnaire was administered to fifty-three randomly selected schools for the purpose of gathering information on evaluation practices and teacher reaction to shared evaluation.

4. In an attempt to maintain some uniformity among schools in the grades assigned the Department of Education has adopted a system in which schools deviating more than 10 points from their expected grades have to explain why the deviation occurred. The question of

whether or not this deviation of 10 points is realistic was examined by determining the degree of difference between schools that may be attributed to the three components of differences, namely

(a) differences in pupil ability and quality of teaching

(b) random error in grades, and

(c) differences due to unique within-school grading or evaluation practices.

5. The effect of shared evaluation on the grading of students in non-sharing schools was explored. The study addressed itself to the question, "Are students in non-sharing schools being discriminated against because their final grades are determined by public examinations only?"

The Need for the Study

Grade XI shared evaluation was introduced into seventy-six Newfoundland schools in 1971-72. By 1975-76 the number of participating schools had risen to one hundred and fifty-three, or eighty-six percent of all high schools in the Province. The trial period was to be five years at which time an evaluation of the program would be carried out. This study forms part of an assessment of the system now being conducted by the Institute for Educational Research and Development of Memorial University, in cooperation with the provincial Department of Education. It is hoped that the assessment will be of value in future decision making about the process of evaluation for school leaving purposes and

about shared evaluation in particular.

Chapter 2

REVIEW OF LITERATURE

Evaluation in Newfoundland

The history of Public Examinations in Newfoundland goes back to 1893 when the Council of Higher Education was established. According to Rowe (1964) it was the duty of the Council "to promote sound learning and to advance the interest of higher education by holding examinations (p. 111)." The examinations, held annually, were based on a syllabus prescribed by the Council. The grading system, known as Primary, Preliminary, Intermediate and Associate, were more or less equivalent to our grade six to eleven, which terminology was adopted in the 1930s. Rowe goes on to state that, "The success of this new venture was immediate and far reaching. Schools all over the Island endeavoured to prepare older pupils for the examination and before long teachers were being judged by the number of successful candidates in what were popularly known as the 'C.H.E. Examinations' (p. 112)."

Although the Council of Higher Education was abolished in 1949, the system of external examinations continued until 1971 under the Department of Education. In 1971, the system of shared evaluation described earlier was introduced, that is, the final grade in Grade XI was shared 50-50 between the school and the Department of Education. At the same time, public examinations in Grades IX and X were eliminated.

As with many decisions in public education, the decision to adopt shared evaluation was made in a climate of debate, with the winning argu-

ments being those that could gain the most support among decision makers at the time. Little empirical evidence was (or indeed could be) brought to bear in the decision.

The case against public examinations seemed to be reinforced by the fact of high failure rates in these examinations and the (presumably consequent) high dropout rates in the high schools. Teachers and professional educators were publicly attributing these problems to the rigidity of the Public Examinations, to their strong academic orientation, and their neglect of student attributes other than academic ability. Writing in the N.T.A. Journal, Kelland (1965) says, "Many factors contribute (to the low percentage of passes in the high school grades) including the lock-step method of promotion, inadequate diversification in our curriculum to allow less capable students to take courses commensurate with their abilities, an ever increasing number of students and lack of adequate teaching personnel to mention some (p. 27)." Buffett (1967) was also critical of the Public Examinations. "I can only conclude that since we either subscribe to or tolerate the present method of 'one shot' promotion then we are a bunch of die-hard traditionalists who regard standards and mastery of the subject matter as being more important than student growth (p. 12)."

The Royal Commission on Education and Youth (1967-68) reported the values and criticisms of external examinations. There were submissions to the Commission speaking in favor of external examinations. It was claimed that the uniform standards established by external examinations were "more readily accepted by institutions of higher learning and by employers than were the results of internal examinations administered in

individual schools; that they (external examinations) provide motivation for pupils and teachers; that they ensure control over the curriculum by the Department of Education (p. 183)." An additional claim in favour of external examinations was that they enable both pupils and teachers to organize learning and teaching more systematically.

Submissions taking the opposite view claimed that external examinations tend to narrow the objectives of education and the curriculum to those which can be evaluated by paper and pencil examinations and that they produce not only standardization but also stereotyping of curriculum. The teacher's adaptation of the curriculum to local conditions and differences in pupils' abilities is adversely affected by external examinations. Also, there was a lack of consistency from year to year within the examinations themselves. The Report further stated that "It was claimed that they (Public Examinations) have a narrowing effect on education in that they place too much emphasis on rote learning and minimize the aesthetic and creative side of learning". (Royal Commission, p. 184).

It was in this atmosphere of public debate then, that evaluation within the school system was first seriously discussed by the General Advisory Committee of the Department of Education in 1969. Rowe (1976, Note 1) describes in some detail the events leading up to the implementation of shared evaluation. A Sub-committee which was formed to investigate this matter considered the following points.

1. the reliability of Public Examinations as evaluative criteria for standards and/or achievement;

2. the alleged tendency of the Public Examinations to stifle and inhibit creative teaching;

3. the high failure rate each year, particularly in Grades IX and X;

4. the high failure rate in Grade IX and the proven relationship to the high dropout rate at this level;

5. the difficulty of preparing external examinations that can test with any degree of validity the total school program;

6. the significant improvement in teacher qualifications over the past 10 years;

7. that most other provinces had already eliminated Public Examinations. (Rowe, 1976, Note 1).

The conclusion and recommendations of the sub-committee were that Public Examinations should be discontinued in Grades IX and X for a period of five years beginning in June, 1971 but that the Grade XI Public Examinations should be continued (Rowe, 1976, p. 32, Note 1). These recommendations were accepted by the Department of Education but before implementation occurred an amendment setting up the 50-50 shared evaluation in Grade XI was adopted (Rowe, 1976, p. 38, Note 1).

At this time in the late sixties also the University indicated that it was becoming more concerned with evaluation by conducting seminars on evaluation. The 1969-70 series of Saturday Seminars concerned itself with the theme Planning for Evaluation. In the Preface, Buffett (1970) states of the seminars that "It was generally felt that we should move in the direction of placing less emphasis on the 'one shot' final examination and work towards continuous evaluation". By the time the seminars were held the Department of Education had already announced its intention of discontinuing the Grades IX and X Public Examinations for five years

thus setting the stage for the seminars. The three seminars with guest speakers from across Canada and panels made up of leading teachers and educators from across the Province, were held at St. John's, Corner Brook and Grand Falls.

The Integrated Education Committee*, in its Annual Report for 1974, endorsed shared evaluation. The Report stated that the system provided reasonable scope for a school district to diversify its curriculum and teaching strategies, while at the same time providing some external measure of the individual school's worth. The school is freed from the handicap of completely external examinations but at the same time a degree of consistency in provincial standards can be maintained. (Annual Report, Integrated Education Committee, 1974).

That shared evaluation was readily accepted by schools across the province can be seen by the rapid adoption of this innovation shown in Table 1. The levelling off has occurred chiefly because of the number of smaller schools ineligible or unwilling to participate.

Some Theories and Practices in Evaluation

Having outlined what has happened in the province regarding Grade XI evaluation, the study will now look at evaluation, both of student learning and educational programs, from a theoretical point of view.

Definition of evaluation. Funk and Wagnalls (1963) defines

*One of three committees comprising the Denominational Education Committees (DECS) which is an advisory body to the Department of Education. The other two are the Roman Catholic Education Committee and the Pentecostal Educational Committee.

TABLE 1

RATE OF ADOPTION OF SHARED EVALUATION
BY SCHOOL AND ENROLLMENT

Year	Percent Participating in Shared Evaluation	
	Schools	Student Enrollment
1971 - 1972	44	70
1972 - 1973	64	75
1973 - 1974	86	83
1974 - 1975	86	84

evaluate as "To find or determine the amount, worth, etc., of": This definition lends itself well to educational evaluation because, in the first place, we are constantly attempting to determine the amount. Specifically we want to know the amount of knowledge that a student has acquired at any given time so that we may, on the one hand, know whether the teaching strategy we are employing is working and, on the other hand, that we may be able both to compare the level of achievement of individuals and groups and to issue diplomas certifying what level of knowledge students have acquired at a given time. In the second place we are constantly endeavouring to determine the worth of our efforts relative to the provincial and local aims of education. In particular we need to know the worth of our teaching, the worth of the course, the worth of the curriculum and the worth of the evaluation system we use to evaluate pupils, courses, and the curriculum.

Evaluation, then, is concerned with all aspects of education and is aimed at the improvement of teaching and learning. Bloom (1971) says of evaluation that it is "a method of acquiring and processing the evidence needed to improve the student's learning and teaching". This evidence, he says, must be of great variety going beyond the usual final paper and pencil examination. He says, secondly, that the goals and objectives of education are clarified by evaluation and that evaluation is a process for determining the extent to which students are developing. By monitoring this development evaluation serves as a system of quality control in which it may be determined at each step in the teaching/learning process whether the process is effective or not and what changes must be made to ensure its effectiveness before it is too late. (Page 15).

The first step for any educational decision is the establishment of needs. Taba (1962) says, "Diagnosis (of needs), then is an important first step in determining what the curriculum should be for a given population". (p. 12). From these needs comes the establishment of goals and objectives depending on the level of the decision. Most writers tend to define a goal as a broad framework set by higher levels of administration while objectives are at a much lower level, usually at the school level. Bloom (1971) says of goals, "They are designed . . . . to give direction to policy makers at the national, state and local level. Though lofty, they are still explicit enough to suggest certain types of action to the school boards and administrators". (p. 21).

When goals are translated into school programs and activities they become objectives. ". . . . the explicit behaviours that a program will help a student develop are its immediate objectives and should be related to the statement of long range purpose that initiated it". (p. 21).

The only logical way that we can evaluate achievement of an education program is in the context of the objectives that it was meant to reach. If the objectives are not clearly stated it is difficult to determine whether the program has been successful or not. According to Taba (1962), ". . . . objectives serve as a guide for evaluation of achievement. Discrepancy between what is taught and what is evaluated is a common fault of school programs". (p. 12).

Scriven (1967) made a distinction between a final evaluation to determine the worth or value of a program, course, etc. and the evaluation taking place concurrently with the implementation of a program, course,

etc. aimed at immediate modification and improvement. The former he called summative evaluation and the latter formative. This distinction is very useful for either evaluating student learning or an educational program. In the case of student learning formative evaluation enables the student to grow through self-evaluation.

Evaluation of student learning and teaching. The distinction between formative and summative evaluation is important in evaluating student learning. Formative evaluation in a learning situation is used to tell the student and the teacher how well the learning is taking place. It is aimed at self-evaluation. Formative evaluation should not be used for grading purposes but rather to help both the pupil and the teacher decide upon the next step in the attainment of some objective. Summative evaluation, on the other hand, is aimed at determining whether or not the objectives of the course or some substantial part of it has been reached. Summative evaluation, therefore, is used to grade pupils (Bloom, 1971, p. 61-62).

The frequency of application is a characteristic of the two types of testing. According to Bloom (1971) summative testing is carried out "two or three times within a course". On the other hand, short tests which come at the end of a short unit of instruction are characteristic of formative evaluation and, therefore, should not be used for grading purposes.

Essentially, what has been said is that the classroom teacher should be frequently evaluating for the purpose of assisting the student in achieving the objectives of the course and infrequently "two or three

times within a course" testing for grading purposes. It is recognized that this procedure is difficult to implement because students look upon any quiz or test as marks towards a final grade rather than an opportunity for self-appraisal. "What is it worth?" they ask whenever a quiz is administered. The author endorses Bloom's "two or three times within a course" testing for grading purposes, possibly to the extent that the final mark be composed of first half year test, second half year test, and Public Examination. Unit tests and chapter tests should be used only as self evaluation for the student and as a diagnostic tool for the teacher.

Evaluation of an educational program. Let us now look at formative and summative evaluation of an educational program. The starting point for any educational innovation should be the assessment of needs leading to objectives. It is in the context of these objectives, then, that evaluation, formative or summative, is carried out (Taba, 1962). Welch (1974) says that evaluation is an information-generating process. The information thus generated is used in decision making to determine alternate courses of action or plans. He goes on to say that evaluation of this kind seems to demand greater attention to attitudes, opinions and values, and it is often concerned with providing information on the worth of a program where collective judgement of people is important. He suggests that a questionnaire is a useful technique for this kind of data gathering.

When any new program is being developed evaluation should accompany it as an integral part of the development. A program that is continuously

being evaluated will have a higher probability of success because of the increased amount of useful information available to the decision makers. For example, if the implementers are not following the prescribed path, it is unlikely that the stated aims of the program will be achieved. The implementers may not be aware that their behaviour is not the behaviour required for the success of the program. Continuous formative evaluation serves to monitor and adjust as the program unfolds leading more probably to success while summative evaluation at the end of the program simply comments on success or failure.

Summary of Theories and Practices

Whether we are evaluating student progress, then, or an educational program, we have two distinctly different types of evaluation to perform. The formative evaluation in both cases is to make corrections leading to improvement--a change in curriculum, a change in teaching strategy and so on. The summative evaluation in both cases is to let us know how well the product measures up. In the case of the student it tells us how much he achieved in relationship to the objectives of the course during his allotted time in the course, and where he ranks with the remainder of the group. In the case of an educational program, it tells us how well the program met its objectives.

Shared Evaluation as a Formative and Summative Process

In categorizing shared evaluation as either being of a formative or summative nature or as having elements of both, we must first look at its components, the public examination and the school evaluation.

Historically, public examinations have been used primarily to

judge which individuals are acceptable for particular forms of employment or for admission to post secondary educational institutions. Aggregated over groups of students, (such as classes or schools) public examinations are also used to judge the relative standing of teachers or schools. It should be noted that, in fulfilling these functions, an important point for consideration is that individuals scoring higher on the examinations are always considered to be more acceptable, independently of the quantity of knowledge or level of skill that is being measured. The purpose of the public examination, then, is to make comparisons between individual students, or schools. Thus it is of a summative nature. Although the formative characteristic of a diagnostic/developmental function is not precluded by the nature of the public examinations, it appears that such examinations, at least in the local context, are rarely used to systematically improve programs or to provide remedial action for students.

The school evaluations may reasonably be classified as formative at least when they are used with students preparing for external examinations. Even the function of familiarizing students with external examination format and conditions may be considered part of this function. The continuous school evaluations may be used to make judgements about whether extra work is required, whether certain parts of the curriculum require special attention, and so on. Evaluation within schools may have a summative character as when they are used to select candidates for external examinations, or more indirectly, when informal judgements are made about the abilities of students. However, these purposes must be considered incidental to the diagnostic function.

In a combined system such as shared evaluation, the situation becomes ambiguous. It is clear that school evaluations are used for comparative purposes since marks assigned by schools are added to public examination marks in arriving at the reported grade for a student. At the same time, if large discrepancies occur between school and public examination grades for a particular school, this schools program is investigated by the Department of Education, presumably for purposes of having the school adjust its evaluation (or teaching) procedures. Although these discrepancies have not yet been used to rank schools as to quality, such a use is not inconceivable.

The point being made here is that shared evaluation has resulted from the combination of evaluation of a summative nature, the Public Examination, and evaluation of a formative nature, the school evaluation. The results of the study must therefore be interpreted in the light of this type of combination. One obvious consequence is that if ranking of students for employment or further education is carried out on a province wide basis, then differences between schools in grading standards should be minimized. Can the comparative function of summative evaluation be effectively accomplished at the local school level or is some form of external standardized testing essential for the maintenance of standards? This study will address itself to this question.

Trends in Standards of Scholastic Achievement

The current wave of "Why Johnny Can't" articles seem to indicate that educational standards are dropping, especially in mathematics and English. The most recent Canadian publication is the Science Council of

Canada Background Study No. 37 - Mathematical Sciences in Canada. (Beltzner, 1976). This comprehensive report covers all facets of mathematics in Canada from teaching to business, industry and research. Regarding the quality of our high school graduates, the report states that both practical and theoretical teachers in our community colleges are "aghast" at "the lack of mathematical competence of so many of the incoming students, which goes hand in hand with their lack of mathematical confidence". It also points out from testing done in British Columbia that the deterioration is not in the performance of the top percentiles but that of the future "average citizen". (Beltzner, 1976, p. 76, 114).

In the American context Harnischfeger and Wiley, (1976) point out that, since the mid-sixties, achievement test scores have been steadily dropping and the drop has been more rapid in higher grades in recent years. The authors list nine well-known achievement tests that verify this trend, and then go on to report on an in-depth analysis of possible causes. The analysis covered factors from the composition and scaling of the tests themselves to the changing social and educational context surrounding these achievement test score declines. They conclude that the drop seems to be "real" and are not artifacts of the tests, and, therefore, the prognosis for the future, ". . . . a return to traditional learnings, a retrenchment from educational 'frills', and a reinstatement of the authority of the school at the expense of the 'autonomy' of the pupil".

In a broad sense this study raises the question of whether the trend noted also exists in the local context and whether a retrenchment can be justified by the observed trends.

Chapter 3

PROCEDURE

The purpose of this study was essentially twofold, School practices and teacher opinion regarding shared evaluation were examined and an analysis was made of the examination data of the Department of Education. The study was therefore divided into two main parts as follows:

1. A questionnaire survey of schools.
2. Analysis of Department of Education examination data.

Survey of School Practices

The questionnaire. To collect data on school practices and teacher reaction to shared evaluation a questionnaire (reproduced as Appendix 4) was compiled and distributed to approximately 200 teachers in 53 schools.

The questions. The questionnaire was designed to yield data on the following questions:

1. What models of evaluation are being applied in the schools?
2. What evaluation procedures are being used?
3. Are students selected to write public examinations?
4. What scaling procedures are used?
5. To what extent is "preparation for public examinations" practiced?
6. What influence does shared evaluation have on curriculum and on teaching practice?
7. What opinions are held by teachers regarding the value of public examinations and the impact of shared evaluation?
8. What changes, if any, are desired by teachers?

Sampling Procedure. In selecting the sample, schools with fewer than 10 students writing the public examinations the previous year were eliminated because of the likelihood of instability in grades for these schools. Random sampling procedures were applied to the remaining schools to yield the desired sample. One teacher in each of the subject areas of English, mathematics, history and biology from each school was asked to complete the questionnaire.

English was chosen because it was written by all students, even though in 1971 and 1972 it was divided into English Language and English Literature. For these two years for analysis we chose literature because the English course that followed is essentially a literature course which approximates the previous English Literature course. Algebra, history and biology were chosen because of the relatively high enrollment in each and because curricular changes in these courses have been relatively few during the four years. Another factor in the selection

logy was that the enrollment was by far the largest in any science.

Because of the number enrolled in each of English, algebra and biology and because English is required for a Grade XI pass, the author feels confident that when course marks are being compared there is a reasonable probability that marks in these subjects are for the same students. This confidence regarding history is not quite so high but the enrollment figures alone would indicate that we have a large sample of students which is common with the other three courses. Table 2 shows course enrollment from 1972 to 1976. This insistence on having approximately the same students in each course was, as was said, for comparison purposes. For example when the pass rates in algebra and English were

TABLE 2

COURSE ENROLLMENT

	1972	1973	1974	1975	1976
English	4363*	4964*	7164	6902	7289
Algebra	4488	5241	5726	5239	4590**
History	4534	5460	5518	4095	3840
Biology	2923	3725	4671	4465	4484

From Department of Education Public Examination Report Book.

*English Literature.

**Matriculation Mathematics.

being compared a different set of students in each course might well be the main factor in explaining any difference that may exist in the pass rate. That is, different sets of students would increase the number of variables for a comparison study, thus confounding observed results.

Content validity. To help ensure content validity of the questionnaire a committee of two faculty members of Memorial University and the Assistant Director of Instruction (Testing) of the Department of Education was established. Some changes were made in the original draft as a result of committee members' recommendations.

Distribution and returns. The questionnaires were mailed in late May, 1976 to principals of sample schools, along with a letter outlining the purposes of the study and a set of directions for administering the questionnaire. Because of the high degree of interest in the topic, no serious problems in obtaining participation were anticipated. Nevertheless, in order to ensure a high return rate arrangements were made to visit the sample schools to collect the questionnaire and to further discuss the evaluation problem. These visitations were made during the last two weeks of the school year.

Of the 53 schools in the study, 50 were visited, while only one declined to participate. (The three schools not visited were in more remote areas of the Province). Cooperation with schools and teachers was good. This probably indicates a high interest in the topic on the part of school personnel. In fact, the superintendent of one of the larger boards sent a letter of endorsement for the survey to his participating schools.

Analysis of Distributions of Student Grades

Data on student grades for the years 1972 through 1976 were made available to the study by the Public Examinations Division of the Department of Education*. These data, on computer disk files at the Newfoundland and Labrador Computer Services, consisted of school grades and Public Examination grades for all subjects for all students in the Province. In addition, certain summary statistics by schools and information for verifying computer programs were also available. In order to reduce the amount of data to be processed and to ensure representative samples of students, it was decided to limit the analysis, in general, to subjects used in the survey.

Since the data was on computer files, most of the work for this phase of the study involved the preparation of computer programs to retrieve the appropriate portions of the data and to carry out the necessary calculations.

The following are some of the specific questions addressed by this phase of the study:

1. Do differences exist between overall mean school and public examination grades and overall percent passing school and public examinations?

2. Do differences exist in the form of the distributions of school and public examination grades?

3. What is the magnitude of the correlations between school and public examinations?

*Appropriate precautions were taken to preserve confidentiality of data at the school and student levels.

4. How realistic is the ten point tolerance level established by the Department of Education (as the criterion for questioning schools on their evaluation procedures) in terms of the magnitudes of random errors in the grades?

5. What changes, if any, have occurred in the retention power of high schools during the years under investigation?

6. Have systematic changes occurred from year to year in mean grades and proportion of passes in the school and public examinations?

7. Are deviations between school and public examination grades a function of school or of subject? That is, does a school tend to have consistently greater deviations than others?

8. What effect does shared evaluation have on the grades of students in non-sharing schools compared to those in sharing schools.

In order to obtain answers to these questions the following information and statistics for each of the four subjects in the survey for each of the five years from 1972 to 1976 was compiled:

1. Number of students writing the examinations.

2. Pearson product moment correlation coefficient for the school mark and Public Examination mark.

3. Mean, standard deviation, and percent passing for the school mark, public mark and final mark.

4. Frequency distributions for the school mark, public mark and final mark.

All the above information except Item 4 was compiled both for the Province and for each of the sample schools. Item 4 was compiled for

the Province only and all items for the Province only are reproduced as Appendix 5.

Chapter 4

RESULTS

The results of our study are divided into five parts as follows:

1. Analysis of Grade Distributions
2. The Difference Formula
3. School Practices in Shared Evaluation
4. The Non-participating school
5. Retention of Students

Analysis of Grade Distributions

The following questions were addressed in this analysis:

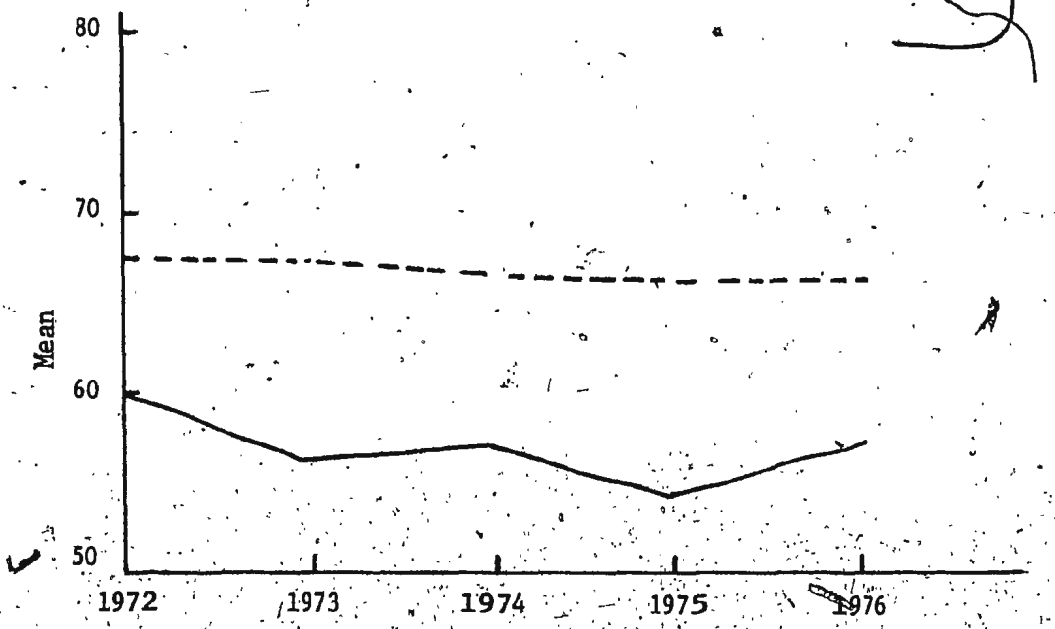
1. Do differences exist between overall mean school and public examination grades and overall percent passing school and Public Examinations?

2. Do differences exist in the form of distributions of school and Public Examination grades?

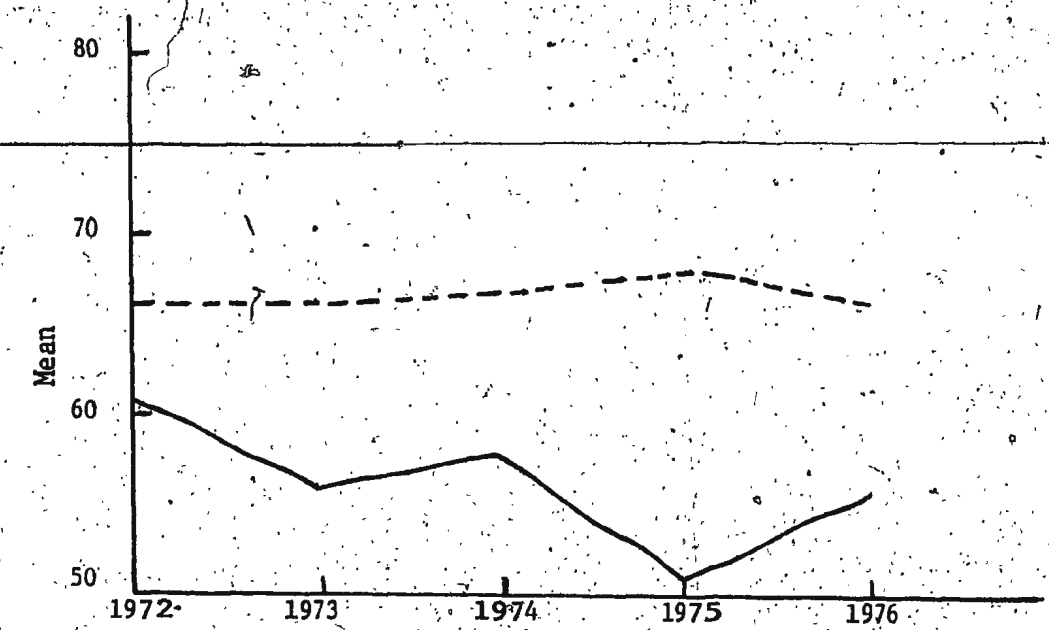
3. Have systematic changes occurred from year to year in mean grades and proportion of passes in the school and Public Examinations?

School and Public Examination means. The general trends in school and Public Examination means in the four selected subjects for the years 1972 to 1976 are shown in Figure 1. (The numerical data on which these plots were based are reproduced in Appendix 5).

There are several interesting trends apparent from these graphs. First, it is obvious that Public Examination means are consistently lower



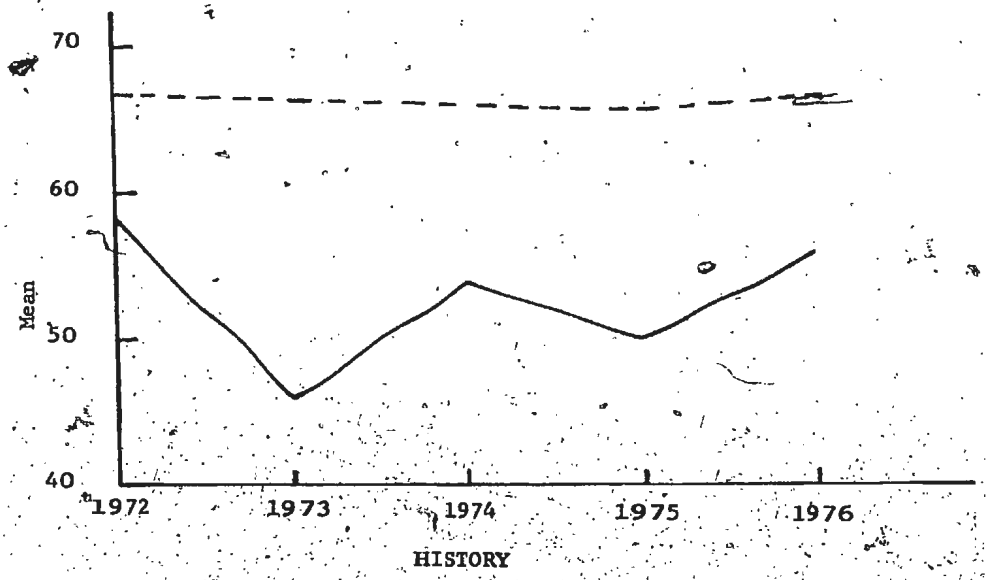
ENGLISH



ALGEBRA

(Matriculation Math, 1976)

Figure 1. School and Public Exam Means Over All Students for Four Selected Subjects, 1972-1976.



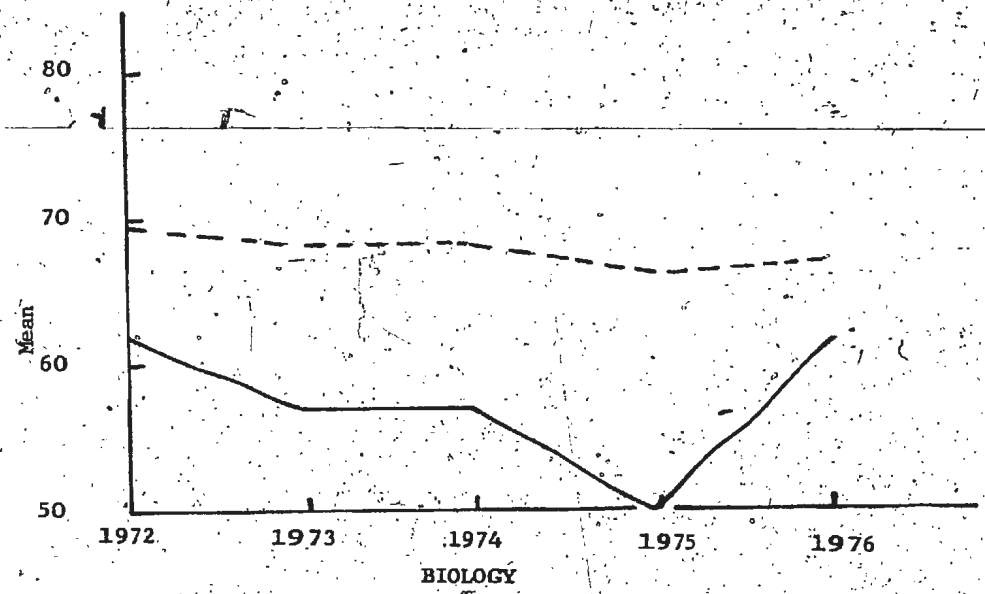


Figure 1 (continued)

than school means for all subjects for all years. In fact, the differences ranged from a low of 4.5 points for algebra in 1972 to a high of 19.3 points for history in 1975. The average difference was 10.6 points. It is also apparent that there are greater variations in Public Examination grades than in school grades across both subjects and years. School means are, in fact, quite constant. What is less obvious is that the trends for the public examinations were generally parallel across subject, following a cyclical pattern whereby for all four subjects they decreased from 1972 to 1973, increased from 1973 to 1974, decreased from 1974 to 1975 and increased once more from 1975 to 1976. This trend is not quite so apparent in English as in the other three subjects. It is most apparent in history. In English, algebra and biology the basic cyclical trend persists, and in addition, from 1972 to 1975, the tendency was for a downward movement; that is the drops in the mean marks were greater than the gains in the alternate years until 1976. In 1976, algebra and biology took a sharp upswing while English held more closely to the original trend, not recovering more in 1976 than in 1974

A closer examination of this cyclical pattern indicates that it is much stronger than an initial inspection of the graphs would indicate. It occurs for all but one of the twelve possible pairwise comparisons. (The exception was biology 1973 and 1974 where the means were 57.9 and 57.8 respectively). The probability that this could have resulted from random fluctuations is therefore quite small.

Some observations may be made about these trends. First, Public Examination means have typically been in the 50-60 range, and generally represent raw scores. Therefore, they are not as subject to opinions about what

constitutes a desirable grade. Furthermore, there is no indication that the nature of the Public Examinations themselves has changed since the introduction of shared evaluation. The Assistant Director of Instruction (Testing) stated that no change has been made in instructions to examination setters from what they had been previously. The public examinations have not changed in their structure, the objectives which they test, nor content except when the curriculum changed. We were told also that the factor that has the greatest influence on the setter from year to year is the report of the chief reader of the previous year's examination. If this effect is significant, then the 1975 Public Examination chief readers' report for our sample subjects would have indicated that the papers were too difficult, or otherwise inappropriate. The readers' reports are summarized in Appendix 6.

There is evidence to indicate that the readers' reports of 1975 may have influenced the setting of the algebra, biology and history examination for 1976. In 1975 the chief reader's comments indicated that the algebra paper was "geared to the above average student". The paper was considered to be difficult. We cannot say in this case, however, that this led to an easier paper in 1976 since in 1976 the algebra became part of a single examination in either honours mathematics or matriculation mathematics.

In the case of the biology chief reader's report there are criticisms that might prompt a setter to set an easier paper for 1976. "A very bad paper!" "It was not geared to the average student".

The 1975 history chief reader's comments were more aimed at the curriculum rather than the paper. The contention was that the paper was

satisfactory but the pass rate was down because with fewer academic students taking the course the non-academic students are making up a larger percent of the enrollment and hence causing the pass rate to decline.

Another possibility that would explain the decline but again not the 1976 increase is that the schools are becoming less concerned with the Public Examinations and the students are becoming less prepared to write these examinations. Table 3 summarizes questionnaire evidence on this point. The data indicate that the majority of schools 'rehearse' for the Public Examination in that their major examination is patterned after the Public Examination regarding content, format and writing conditions. The majority of teachers said also that they stressed Public Examinations as much now as they did before shared evaluation. Teachers were about evenly divided regarding the stressing of public examinations throughout the year. There is no evidence, then, to indicate that lack of preparation has contributed to the decline.

Another factor considered when analysing the decline was whether or not the Public Examinations are testing the objectives of the course set by the Department of Education. This was rather difficult to determine since objectives are seldom explicitly stated. Some evidence on this point was gathered by the questionnaire. Table 4 summarizes teacher response to the question, "Are the objectives to the respective courses sufficient and clear?" It seems that a relatively large number of teachers are dissatisfied with the guidelines for their course. This was also substantiated by the English Public Examination readers' recommendations in the 1975 Public Examination Report (p. 43). "Last, but perhaps the most vital, is the need for a general outline of clearly de-

TABLE 3

QUESTIONNAIRE RESPONSES REGARDING PREPARATION FOR PUBLIC EXAMINATIONS

	Major Exam Patterned After Public Exam Regarding			Stresses public examinations as much now as before started evaluation
	Content	Format	Writing Conditions	
Algebra	84%	81%	72%	63%
History	77%	66%	69%	63%
English	63%	61%	78%	49%
Biology	59%	69%	78%	62%

TABLE 4

QUESTIONNAIRE RESPONSE REGARDING COURSE OBJECTIVES

Subject	Were the Objectives for Your Course	
	Sufficient? (yes)	Clear? (yes)
Algebra	82%	65%
History	71%	66%
English	56%	66%
Biology	53%	56%

fined learning objectives for the English curriculum. This would be of immeasurable aid to students, teachers, exam setters and readers". or the 1974 Report (p. 24) "(The) present curriculum guide (is) of little value".

Another factor that could possibly relate to the decline and increase is the annual drop-out rate. One could argue that if the drop-out rate is decreasing, then possibly students with a lower ability are reaching Grade XI. This would tend to decrease the pass rate and the mean marks. In fact, however, during the years in question the drop-out rate has not decreased enough to account for any influx of lower ability students. This point will be explored in more detail later in this report.

One further possibility is that the Public Examinations are valid and reliable but that the students are learning less. Opinion on this point can be found in the chief reader's comments in the Public Examination Reports. Some quotes follow: History (1973) - "Moreover it is a reading subject, a study subject, to a large degree, and students just do not seem to be studying that much after school hours any more". English (1974) - "There was a conviction by some readers that the standard had deteriorated considerably in recent years". History (1975) - ". . . . the calibre of students writing this examination has dropped".

Evidence relating to the appropriateness of the examinations themselves can also be gathered from the readers' comments in the Public Examination Reports. These comments are summarized in Appendix 6. In some instances, as we demonstrated earlier, there is evidence to indicate that the readers' reports from one year would influence the setters' examination the following year. For example, the 1973 history

report might have prompted an easier paper for 1974. In fact the mean mark for that year increased by 7 points over the previous year. Another example is the biology 1975 report. That report could well have prompted an easier 1976 paper. In fact, in this case the mean mark increased by 12 points. These are the only two explicit examples of where a difficult examination from one year may have prompted an easier examination the following year.

Achievement test scores have been declining on the national level in the United States (Harnischfeger and Wiley, 1976), and there is some evidence to indicate that this is the case in Canada as well (Science Council, 1976, p. 114). Whether or not our data indicate that we have been part of that trend is rather difficult to say. The Public Examinations are not standardized and could fluctuate in difficulty from year to year. We have already shown that the previous year's examination is likely to have some effect on the setting of the examination in the following year.

In a further attempt to examine variation in the content of the examinations from year to year, we classified the items of the algebra examinations according to Bloom's taxonomy. This proved to be ineffective since most of the Part I questions were at the knowledge/comprehension level and the Part II questions were at the application level for each year. If variations did exist, they were manifested in areas other then the taxonomy levels.

The factor that might contribute to a reasonable degree of validity and reliability from year to year, then, is the consistency of the format and content. However, difficulty of individual items may fluctuate to offset this. As far as is known, no item analysis has ever been carried out on these tests.

It appears, then that the cyclic variations may be caused by a

combination of effects operating from year to year to adjust marks based on the previous years experience. Classroom teachers may emphasize teaching for the test more in years after the pass rate in the Public Examinations drops. The adjustments may be in the form of easier or harder questions, or more or less rigorous grading practices, depending on the conditions of the previous year. Our observations show that when the average pass mark is nearly or lower than 50, the marks of the following year increase sharply, regardless of the subject.

One of the shared evaluation guidelines states that school grades should be assigned in such a way that average students should be given a grade of 65. Granting that students writing public exams will tend to be the better students, one would expect a mean school mark a bit in excess of 65 if the guidelines were being followed and this is, in fact, the case. The observed consistency, then, can be hypothesized to be a result of year to year within school fluctuations resulting from a self-correcting process within each school. This fluctuation would be random between schools if it is assumed that the schools are trying to adhere to the guidelines of 65.

The downward trend in Public Examination grades between 1972 and 1975 can be explained in a number of ways. Larger proportions of the grade eleven class, including the less qualified, may be presenting themselves for examination. This might be reasonable in that the higher level of school marks encourage the less able students to take the examinations. Our data indicate that in 1972 only 71 percent of the Grade XI students wrote the Public Examinations, while in 1976, 80 percent wrote. Other explanations might be general changes in teaching practices, Public Exam-

inations which became, in general, progressively more difficult or, that there was less student emphasis on the examinations in successive years. Perhaps the drop can be attributed to the decreasing familiarity of students with the Public Examination format. The effect of this might have been cumulative over a period of years after Public Examinations were dropped for Grades IX and X.

School and public examination pass rate. For many students each year the importance of the mean mark is overshadowed by the pass/fail statistic. The line between pass and fail, although a thin one, is crucial to the future of many students. Furthermore, the trends in the pass rate, as will be seen, provide valuable insights into the nature of grade distributions. The graphs of these trends are shown in Figure 2.

The gap between the school examination pass rate and the Public Examination pass rate fluctuated from year to year and subject to subject ranging from 6.0 for English 1972 to 38.4 for algebra 1975. The mean difference was 20.9 points. Except for biology the percent passing the school examinations is constant or increasing while the decline from 1972 to 1975 for the Public Examinations is quite pronounced. The declining pattern clearly overrides the alternating year pattern for algebra and biology, while it is confounded with this pattern for the remaining two subjects. Even with the reversal in 1976, in no case is the 1976 pass rate higher than that which prevailed in 1972. In fact, even with the strong compensation provided by school marks, the overall combined pass rate shows a decline which is only partially reversed in 1976. Figure 2 includes a plot of the percent passing on the final mark. In certain instances, notably

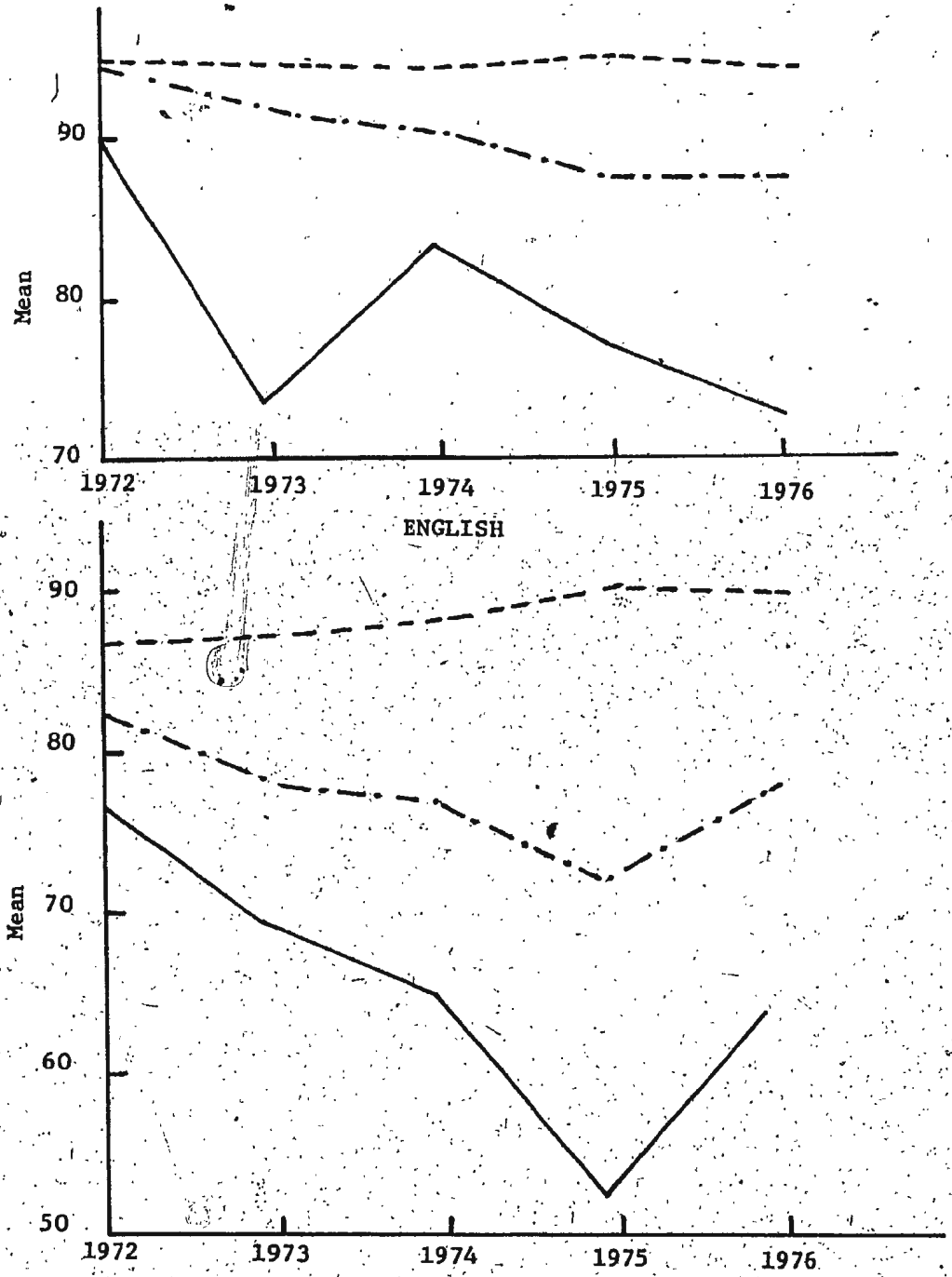


Figure 2. Percent Passes in School and Public Exams, 1972 - 1976 for Four Selected Subjects.

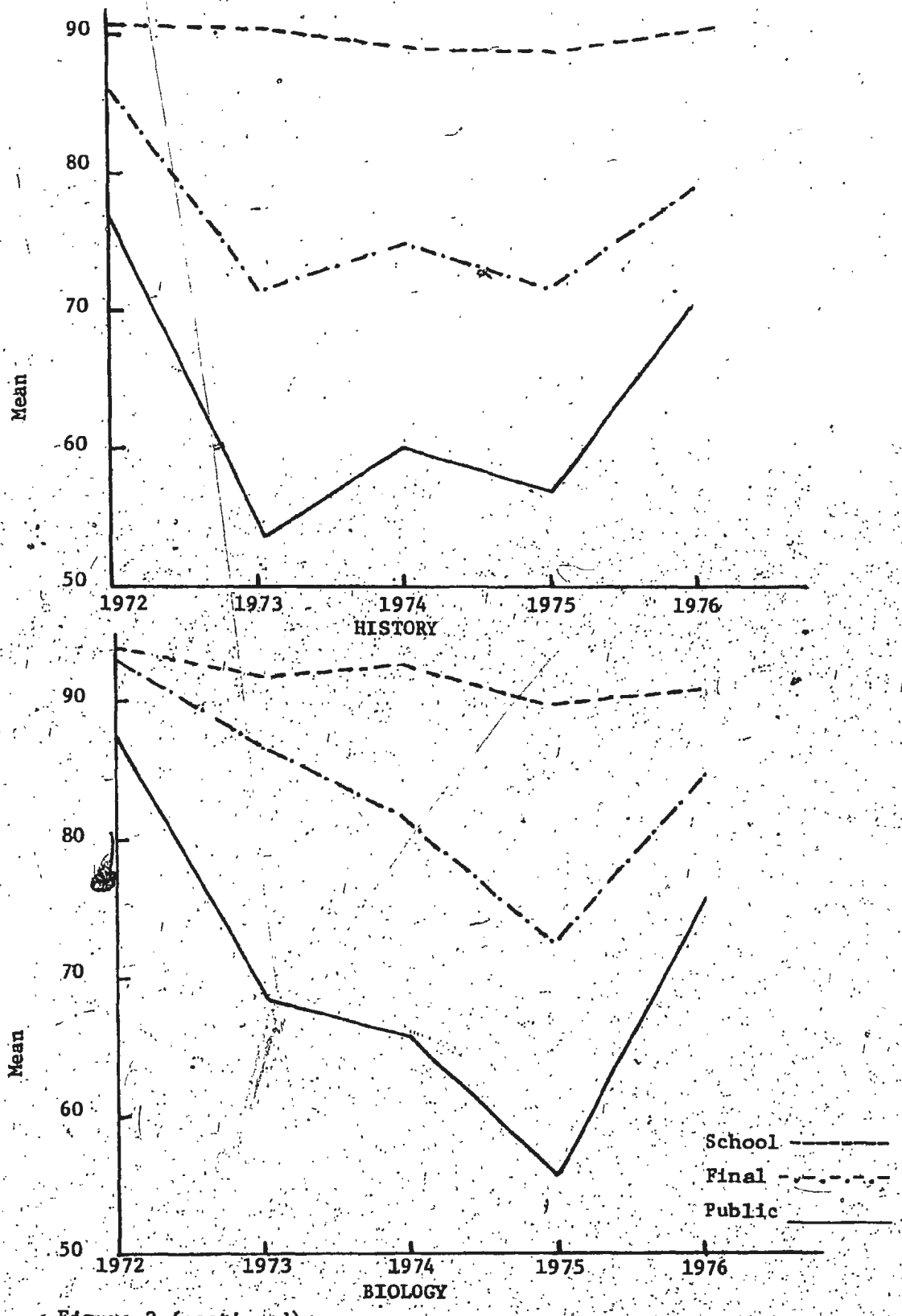


Figure 2 (continued)

English and biology 1972 and 1973 one can see the greater weight coming from the school examination. Otherwise, the percent passing the final is close to the arithmetic mean.

Since the pass rate can be used as an indicator of the number of students who have become eligible for various kinds of post-secondary education and job opportunities, it is important that the possible causes of fluctuations, particularly declines, in the pass rate be sought. Again, on the basis of this study, it is possible only to speculate on possible explanations. In connection with the possibility advanced in the discussion of mean grades that the nature of the students writing the examinations may have changed, as stated earlier there is some evidence, although none based on local data, that student scores on most standardized achievement tests have suffered a decline in recent years and that this decline can only be attributed to reduced ability of students to deal with the kind of material included in these tests (that is, the decline cannot be attributed to changes in the tests or to population shifts). Whether this has indicated a lowering of standards of teaching in the schools or simply a shift in emphasis away from the types of knowledge contained in standardized tests is debatable. It is important to note, however, that as long as such tests retain their current importance in selection for post-secondary education and occupational opportunities, declines in scores must be taken as an indication of an undesirable state of affairs in the educational system.

While it might be argued that to teach for the examinations would be a retrograde step, it must be recognized that it is probably not possible to maintain high pass rates (using the 50 percent pass mark)

while at the same time attempting to broaden the curriculum and give teachers greater opportunity to vary their teaching practices. In fact, some of the decline that seems to have occurred in pass rates in the Public Examinations may be a result of the reduced emphasis on the content of these examinations after the implementation of shared evaluation. While it might be argued that school grades compensate for the decline, differences between schools, create further difficulties because of grading differences. Also, non-sharing schools do not reap the benefit of these compensations.

Grade distributions. In addition to examining the trends in mean marks and pass rates the nature of the distributions of the school and Public Examination grades were examined. The general trends in the distributions are shown in Figure 3. (Graphs for other years have been omitted to conserve space, data from which these graphs can be generated appear in the Appendix 5).

Many of the trends already discussed are also apparent from the histograms. In addition, a number of new features are revealed. It is clear that the Public Examination grades more closely approximate the normal distribution than the school grades. For all subjects except algebra, a definite depression in the distributions occurs in the 45-49 range, with a corresponding peak in the 50-54 range. This was first thought to be caused by an adjustment procedure of the Department of Education whereby marks of 48 and 49 were adjusted to 50 and marks of 46 and 47 were adjusted to 45. According to the Assistant Director of Instruction (Testing) this is not necessarily the case. In fact, when this type of adjustment is

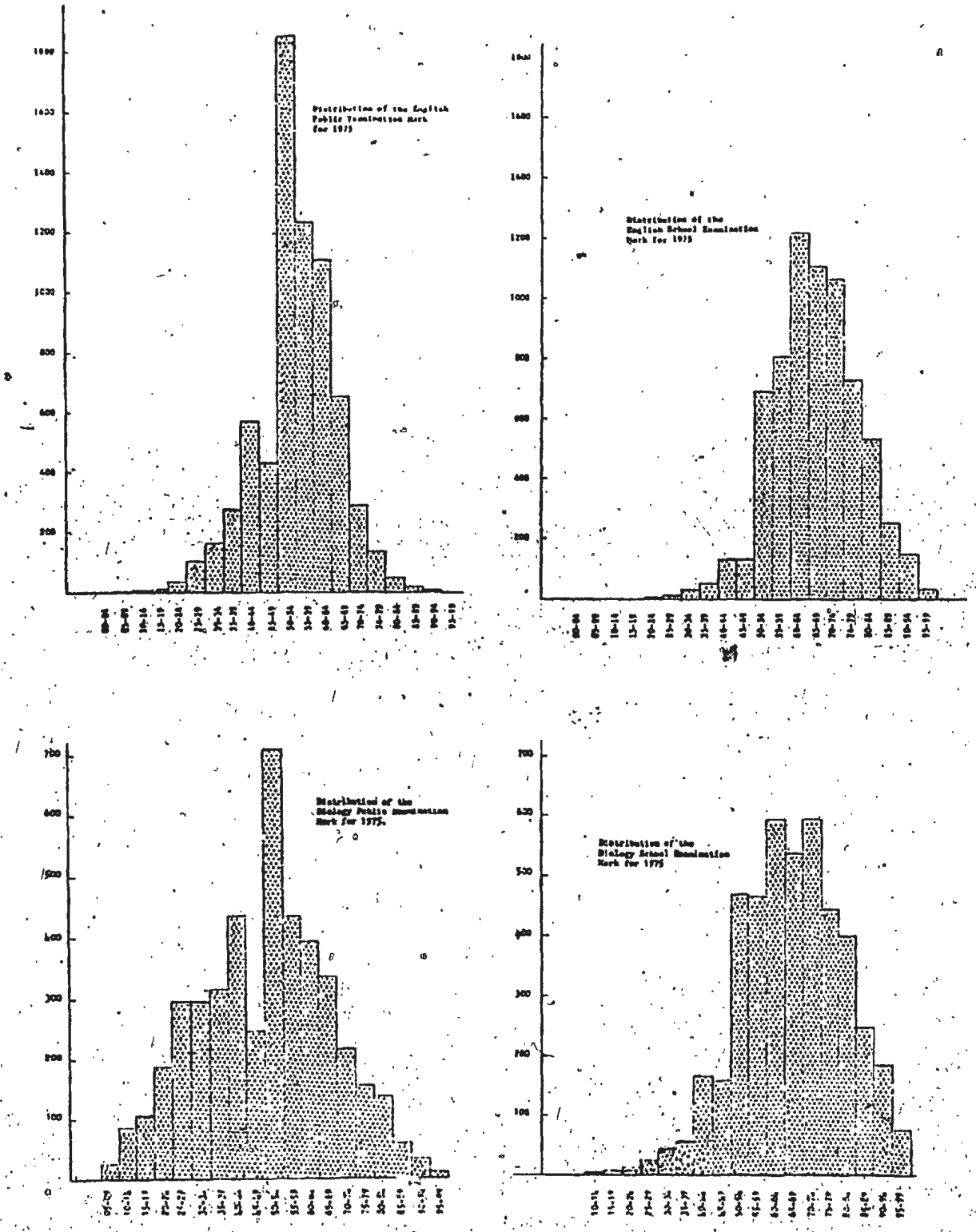
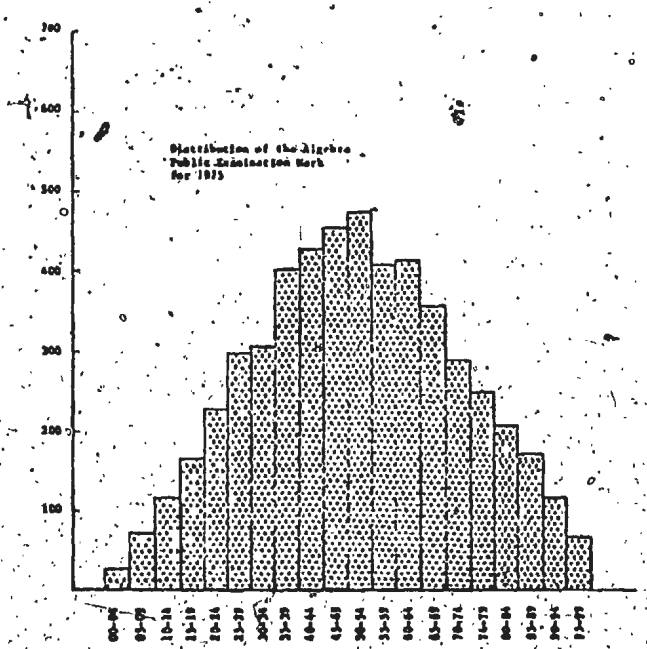
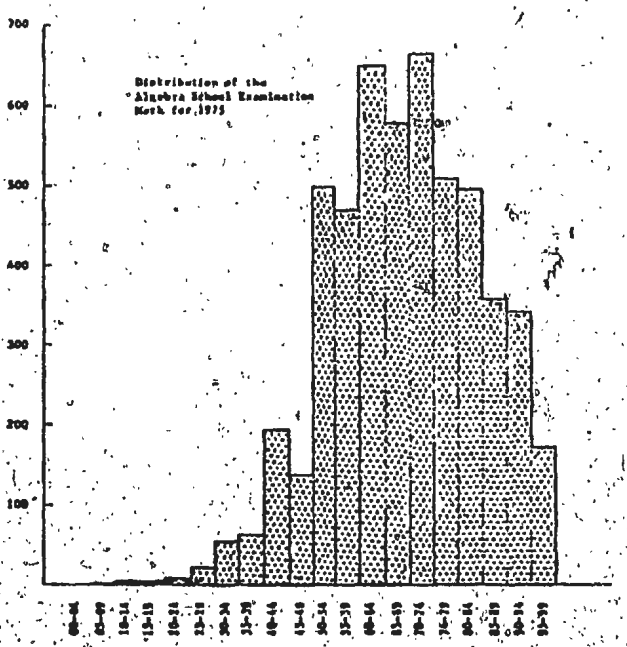
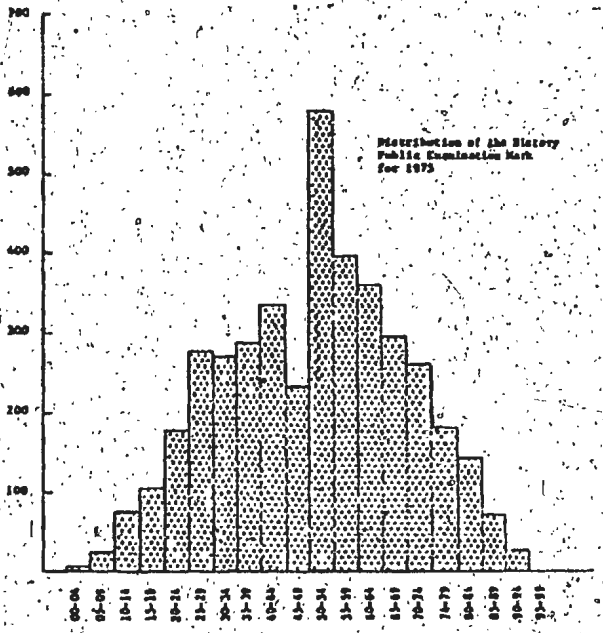


Figure 3. Distributions of Grades for School and Public Exams, 1975.







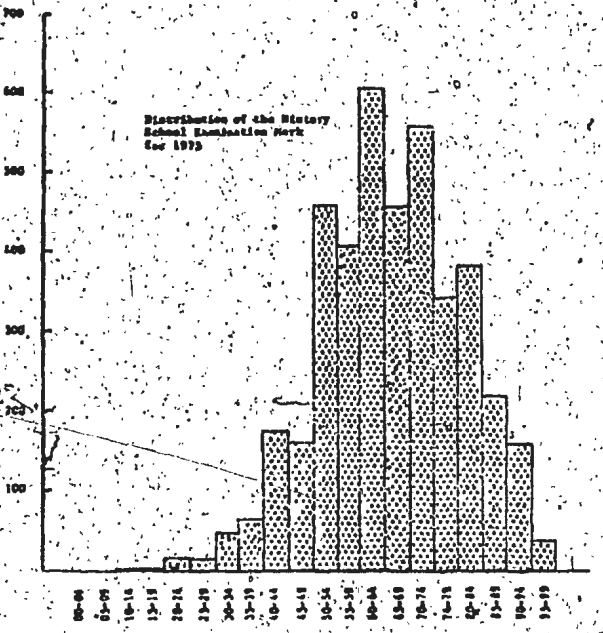


Figure 3 (continued)

necessary, it is made on the final mark by adjusting the Public Examination mark. For example, suppose a student gets a school mark of 60 and a Public Examination mark of 34, his final mark will be 47. Rather than let this mark stand, it will be adjusted to 50 by changing the Public Examination mark to 40. Thus, the Public Exam mark was not changed in the class interval 45-49. No satisfactory explanation has been forthcoming for the gap from 45-59 and the peak from 50-54. One possible explanation is that the chief marker, when the marks are compiled makes the adjustment. Another is that readers themselves, even though grading on a question by question basis, are reluctant to give marginally failing marks even on single questions. Neither of these possibilities could be confirmed.

The fact that algebra does not show this discontinuity may be accounted for because of the relative objectivity of the algebra grades and the consequent ease of defending a specific mark. It is possible, then, that scaling may be done by the marking board on more subjective tests.

The discontinuity at the 50 percent point is even more pronounced for the school marks than for the Public Exam marks. It seems that, for some reason, schools tend not to give a grade of less than 50 percent to a student. (This negative skewness of the school mark may indicate an advantage that schools on shared evaluation have which is not available to non-shared schools. This will be discussed later). This explains why the gap between school and Public Examination pass rates is greater than that for the means. The reasons why schools act in this manner are not especially obvious. Perhaps teachers wish to shift the burden of failing students to the Public Examinations. There may be a consensus that only a small proportion of students should fail. School evaluation procedures may be more criterion based (that is, the content tested by the schools

may more directly reflect what was taught). Schools make widespread use of assignments, projects, lab work and the like as basis for evaluation. It is customary that grades on such work will be higher than those on more broadly based tests, and that, in particular, it is unlikely that students will receive less than a passing grade on such work.

The shapes of these distributions shed some light on some of the questions raised in the discussion of means and pass rates. The near normality of the Public Examination distributions suggests that the tests are more norm referenced than criterion referenced. That is, the content of these tests likely represents a sampling from a general pool of knowledge within a particular curriculum rather than representing in a specific fashion what may have been learned by a particular student.

Under conditions of content sampling, as appears the case for Public Examinations, distributions in any given year will be dependent upon the items selected, and the examination and marking procedures adopted in any given year. The actual distributions obtained suggest that the tests are constructed and administered in a way that facilitates their use for purposes of comparison; but, it then has to be argued, that the selection of a raw score mark of 50 as the pass/fail cut-off bears little or no relationship to the actual nature of the test. In order to be meaningful, the pass/fail cut-off should be tied to the nature of the content being sampled, item difficulty and test administration practice.

It is worthwhile noting that discussion of trends in the pass rate will be completely meaningful only when these factors of content, setting and marking procedures are constant for the years being considered. Therefore,

the downward trend in the pass rate noted between 1972 and 1975 is an indication of an important drop in achievement over those years only if it can be demonstrated that the test content, difficulty and administration procedures have been constant during the period. The issue of possible changes from year to year in Public Examinations due to readers' comments has already been discussed. Otherwise, there is nothing to suggest that major changes in Public Examinations have occurred over the years.

Correlation coefficients. Since correlation coefficients are dealt with at some length in the main report of which this study is part (see page 6), it is sufficient here for us to make a few general comments.

The Evaluation Consultant for the Department of Education said in a memorandum to District Superintendents and Principals that

> . . . extremely high correlations (0.8 or higher) might indicate that the school mark measured the same thing as the public examination mark while a correlation lower than 0.3 might indicate that they are not measuring the same thing. Since the same subject is being evaluated by the school and the public examinations, a good correlation is to be expected. However, a very high correlation might indicate that the schools are using the same type of evaluation as the public examinations and therefore correlations between 0.8 and 1.00 are not necessarily better than those between 0.5 and 0.8.

This memorandum disturbed some of the teachers who were interviewed, because of the difficulty of interpretation. One finds it difficult to see how the correlation coefficient can be used to determine the "type of evaluation" taking place. Regardless of the type of evaluation the students ought to be ranked in much the same way on both examinations if general abilities are being measured. The correlation coefficient merely indicates the degree of this ranking.

Interpretation of the correlation coefficient from the perspective of "goodness" is rather difficult as an examination of two actual cases points

TABLE 5

ENGLISH 1975 CORRELATION COEFFICIENTS (EXTREMES)

School	Marks			Percent Pass			R (school-public)
	School	Public	Final	School	Public	Final	
1	65	57	61	94	94	100	-0.06
2	68	48	56	100	60	70	0.84
Prov.	66	55	60	94	79	88	0.60

out. (Table 5).

School 2 had the highest correlation coefficient but was not as successful in the percent of students passing as School 1 with the lowest correlation. The mean correlation coefficient was 0.60 for the fifty-three schools.

Retention of students

One of the factors considered when the introduction of shared evaluation was being debated was the high rate of loss of students from the high schools. It was maintained that this loss rate was due to the high failure rate in Grades IX and X. Thus, with these examinations abolished one would expect a positive impact on school retention.

Figure 4 shows the trend in student loss for the ten year period from 1967 to 1976. The loss is calculated from the Grade I enrollment of one year to the number writing complete sets of Public Examinations ten years later. While the drop-out rate shows a general decline, it appears that the greatest rate of decline occurred in the years prior to the introduction of shared evaluation. In interpreting this trend, it should be kept in mind that the Public Examinations in Grades IX and X were eliminated at the same time that shared evaluation was introduced in Grade XI. If Public Examination failure rates in these earlier grades was a contributing factor to the drop-out rate, then the greatest improvement in retention would be expected to occur for the first year in which students wrote no external examinations prior to Grade XI. Although this occurred in 1974, no change in the trend of student loss occurred in that year. Since 1974, the retention rate has fluctuated slightly but these changes are too small to be attributed to the introduction of shared evaluation.

It is thus obvious that shared evaluation and the accompanying

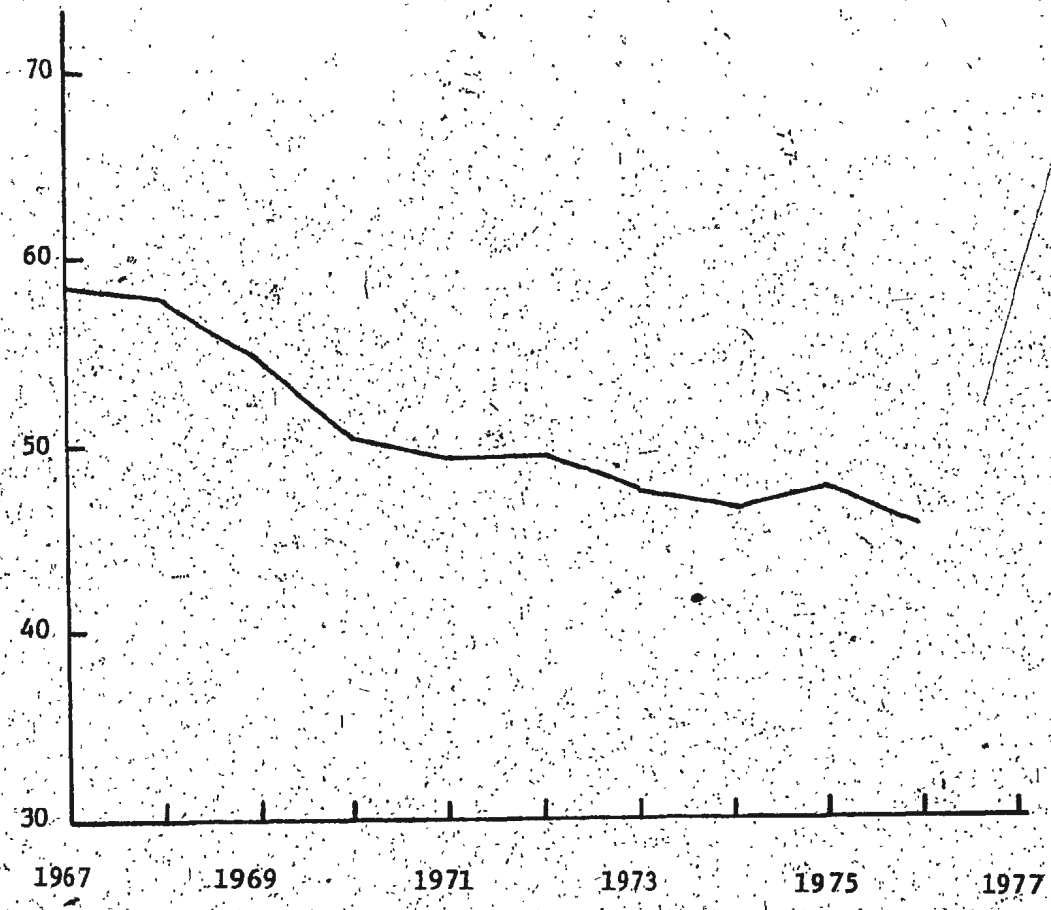


Figure 4. Student Loss in Percent From Enrollment in Grade I to the Number Writing Complete Sets of Grade XI Examinations Ten Years Later.

changes in the Public Examinations have had little impact on student retention, unless, of course, other factors that would have tended to increase the dropout rate during this period were offset by the effects of shared evaluation. One could argue, however, that the retention rate would have taken a downward turn except for shared evaluation but, in view of the overall trend, this is considered unlikely.

The Difference Formula

This section addresses itself to the following question: How realistic is the ten point tolerance level established by the Department of Education (as a criterion for questioning schools on their evaluation procedure) in terms of magnitudes of random errors in the grades?

The formula. In the context of this study the term school difference has a particular definition. In order to maintain some uniformity in the grades assigned the Department of Education has devised a formula to compute what is called the school difference whereby schools that deviate more than a given amount from their expected grades have their evaluation practices questioned by the Department. (Under the regulations establishing shared evaluation the Department retained the right to withdraw from a school the right to participate).

The formula used in determining whether a school's practices are questioned is

$$D = (PP-SP) - (PS-SS)$$

Where PP is the provincial mean on the Public Examination

SP is the school mean on the Public Examination

PS is the provincial mean on the school examination and

SS is the school mean on its own examinations. If the absolute value of D is greater than 10 points, the school is considered to have

deviated excessively from its expected grades. An actual example of the application of the formula follows:

	School	Public
School average	67	63
Provincial average	68	51
Difference	-1	-12
Total difference	-12-1 = -13	

As can be seen, the forumla adjusts for differences between overall mean school and Public Examination grades. Crocker (Note 2) has suggested the following transformation and statistical analysis of the relationship to make it more clear,

$$D = (PP-PS) - (SP-SS)$$

Since PP-PS is a difference in provincial means and thus constant for a given subject, let us consider the difference SS-SP as the variable used to determine whether the school deviates from expectations. Letting PP-PS = K we can rewrite the formula as SP-SS = K-D.

This then suggests that if the maximum permissible variation in D is 10 points so the maximum variation in SP-SS under the conditions of K is also 10 points. The difference SP-SS consists of two components--one that may be attributed to random error which influences both SS and SP, and one due to uniqueness of the school's grading system which influences only SS. If we were to estimate the random error in SS and SP then we would have a basis for estimating the amount of variation that should be permitted in school grades before the school's evaluation practices are called into question. (A school's final marks may be determined by certain school characteristics but should not be determined by the

grading system within the school if the school marks are to be used for the same purposes of the Public Examination marks.

Estimate of random error in the means. The standard error of the mean provides us with an estimate of the amount of variation that might be expected in the mean due to random errors in the scores that make up that mean. The standard error is a function of the estimated standard deviation of the population scores and the size of the sample from that population. If we consider a school as a random sample from the provincial population then the standard error (SE) in the school mean would be given by

$$SE = \frac{SD}{\sqrt{N}}$$

where SD, the estimated population standard deviation, could be the standard deviation of the scores for the province and N, the number of students in the particular school.

Since, in our case, the statistic of interest is the difference between two means, the standard deviation of the difference is required before the standard error can be calculated. The standard deviation of the difference between two means is given by

$$SD_d = \sqrt{SD_1^2 + SD_2^2 - 2rSD_1\ SD_2}$$

where r is the correlation between the two sets of scores. The standard error of the difference is therefore

$$SE_d = \sqrt{\frac{SD_1^2 + SD_2^2 - 2r\ SD_1\ SD_2}{N}}$$

It is important to note here that this statistic is generally used to determine the probability of a sample mean estimating a population mean and is independent of the sample mean itself but is dependent on the size of the sample. In our case the standard error is independent of the actual school mean but is dependent on school size. Thus, if the standard error is to be used to estimate the tolerance in grades to be permitted, then greater tolerance must be allowed small schools than large schools.

Numerical example. If, as we said earlier, we use the provincial standard deviations and correlation coefficients as the population parameters then we may calculate numerical estimates of the magnitude of the random error in grades for a school of given size. Using English 1974 as an example the relevant parameters are as follows:

Standard deviation of the Public Examination	10.9
Standard deviation of the school examination	12.1
Correlation between school and Public Examination	0.6

Based on these figures, the standard errors for four different size schools are:

N	SE
16	2.7
48	1.5
85	1.1
250	0.6

In terms of probability, only one small school in three would vary from the expected value by more than 2.7 points because of random fluctua-

tion alone. The number of schools varying by more than that amount should decrease as the size of the school gets larger. Our data (not published in this study) indicates that 34 of the 53 schools in our sample exceeded these figures. Figure 5 shows a distribution of these differences for English 1974. If the policy cut off of 10 points is used, only 5 of the 53 schools sampled would fall outside the policy guidelines, calling for a questioning of school grading practices. There is good evidence, then, that at least 29 of the schools examined had school marks which fluctuated from the Public Examination for other than random causes which would not have been questioned as to their marking practices. It must be stressed then that systematic differences in school grades occur long before the cut off of 10 points is reached and that these differences cannot be accounted for by differences in student ability or quality of teaching since such differences are already accounted for in the difference formula.

The question now arises whether the school differences are a function of school or a function of subject. That is, are the differences related to school level policies or are grading decisions made at the subject (or teacher) level? To shed some light on this we examined the subgroup of schools in the survey who had school means above the provincial average and Public Examination means below the provincial average. Seventeen of the 54 schools were in this category in 1974. Of the 17 ten were in the category for one subject only, three for two subjects and four for three subjects. This seems to indicate that no strong school tendency exists but rather suggests that differences are more a matter of individual subjects (and thus individual teachers).

A similar analysis was done for the same category on subject across year by school for each of the four subjects. In no instance

Frequency Distribution of School Differences for English 1974 Sample Schools.

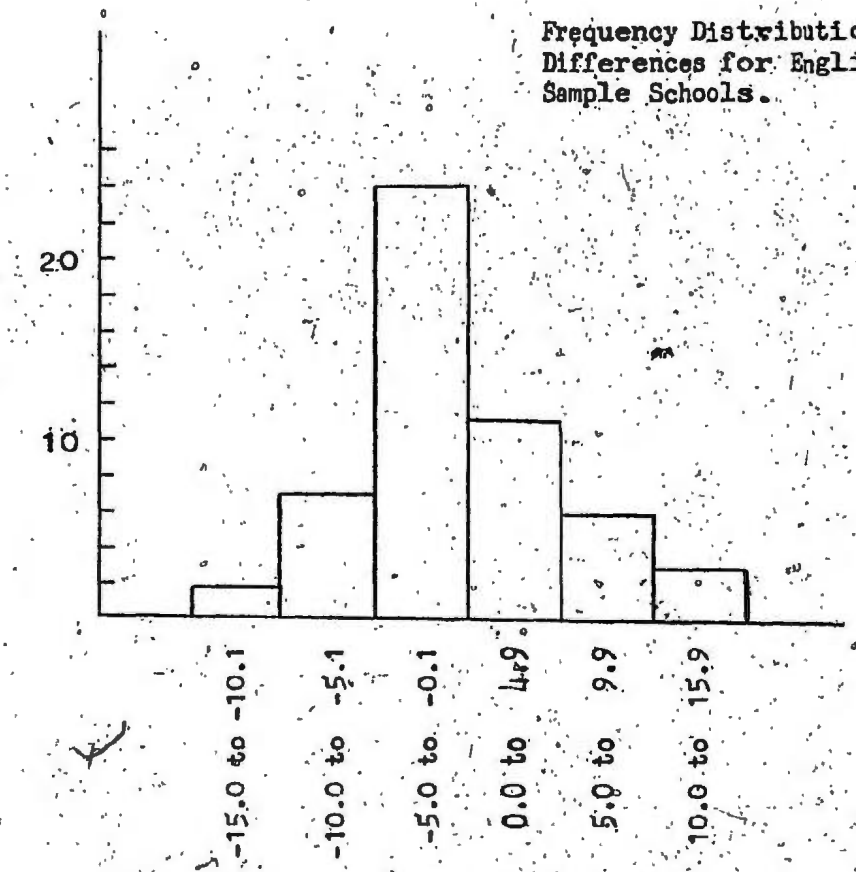


Figure 5.

LEAF 59 OMITTED IN PAGE NUMBERING.

was a school-subject in this category for more than two consecutive years and this occurred infrequently. This seems to indicate that there is no strong tendency on the part of individual teachers from year to year to give higher than average marks on the school examination.

We have shown that the 10-point tolerance established by the Department of Education to maintain uniformity from school to school is much too large if random error alone is to determine the allowable difference between schools. On the other hand, if other differences are to be permitted, then comparison of student grades from school to school will not be valid. We must observe here also that schools cannot be expected to maintain a tolerance within that allowable by random error while at the same time being permitted various systems of evaluation.

School Practices in Shared Evaluation

This section deals with the data obtained from the questionnaire survey dealing with school practices of schools participating in shared evaluation. The procedure followed in the survey was described in Chapter 3. It has already been shown that random error cannot account for differences in school marks from school to school. These differences may be attributed to grading and related school practices. In an attempt to determine some of these differences this section addressed the following questions:

1. What models of evaluation are being applied in the schools?
2. What scaling procedures are being used?
3. Are students selected to write the Public Examinations?
4. What evaluation procedures are used?

5. To what extent is preparation for the Public Examinations practiced?

6. What opinions are held by teachers regarding the value of Public Examinations and the impact of shared evaluation?

7. What changes, if any, are desired by teachers?

What models of evaluation are being applied in the schools? This question was proposed to determine to what extent schools were using norm referenced versus criterion referenced evaluation procedures. That is, do the examinations rank the student according to the attainment of his fellow students or is their purpose to determine if a student has achieved a specified level of attainment. For example if a large school had several algebra classes divided on ability level would the term work, quizzes, projects etc., be the same for the upper ability class as for the lower ability class or would each class have a different criterion to meet.

Table 7 shows the responses of teachers when asked if they set different examinations for students of different ability levels. One factor to be considered in interpreting these data would be the nature of streaming. If streaming occurs in a school, it is frequently on the basis of some estimate of student ability or achievement. Teachers who might otherwise feel the need to adjust examinations, might not in this circumstance. Taking this into consideration, it can be seen that 24.1 percent of the teachers responding say they set exams based on the level of ability of the student.

Table 8 shows that 89.3 percent of all teachers say that their student evaluations predominately reflect student achievement with respect to course content.

TABLE 7

PERCENTAGES OF TEACHERS WHO CONSIDER STUDENT ABILITY IN SETTING EXAMINATIONS

Subject	N	Percent Yes	Percent No
Algebra	41	21.9	79.1
History	33	24.2	75.8
English	37	29.7	70.3
Biology	30	20.0	80.0
Total	141	24.1	75.9

TABLE 8

PERCENTAGE OF TEACHERS AWARDING MARKS REFLECTING ATTAINMENT OF COURSE CONTENT

Subject	N.	Percent Yes	Percent No
Algebra	41	92.6	7.4
History	35	94.3	5.7
English	41	78.0	20.2
Biology	42	92.8	7.2
Total	159	89.3	10.7

These two sets of data are consistent in suggesting that most teachers believe that their evaluations reflect attainment of content rather than being used for ranking purposes.

What scaling procedures are being used? The guidelines of the Department of Education (Appendix 2., para. 2) recommend that a teacher "select a student whose achievement most closely approximates that of an average student in the province", assign this student a grade of 65 and rank the others accordingly. When interviewed, many teachers said that it was difficult, if not impossible, to select a student who approximated the average provincial student. The difficulty of this guideline item notwithstanding, the average school mark is consistently in the neighbourhood of 65. Teacher response to the question indicated that, of those polled, 54.9 percent said that they submit the marks of their students unchanged from raw scores. An additional 21.8 percent do not scale because their grades are always close to a mean of 65. Six percent occasionally scale up or down and only 11.2 percent scale in accordance with the above mentioned guideline. Almost 45 percent of teachers either directly influence the level and distribution of marks or would do so under specified circumstances. The group which ranks students about an average of 65 is most direct in doing this, while another 21.8 percent by implication would alter marks if the average varied from 65.

What evaluation procedures are being used? The Department of Education has not set any guidelines on the evaluation procedure that a school should follow. However, a participating school does have to "maintain an evaluation committee to review periodically its evaluation policies and procedures which will be subject to approval by the Minister". (Appendix 3, Para 2., D., 6). Of the schools visited, only one maintains such

a committee. All other schools confused this committee with the appeals committee. (See Appendix 3, para. 2., D., 11).

Data from the survey indicated that there is a variety of evaluation practices in each school and also that each practice carries different weights towards the final mark in different schools. For example a practice common to most schools was the major mid-year examination. This examination contributed from a low of 30 percent to a high of 60 percent towards the final mark.

Summarising the data from the previous two questions we see that scaling practices and evaluation procedures vary from school to school. It is obvious that these variations, in conjunction with variations in teacher standards from school to school, could contribute to the differences between schools.

Are students selected to write the public examinations? About 20 percent of the schools polled offer a school leaving certificate to students who for some reason do not wish to take the Public Examinations. This practice is not regulated by the Department of Education and consequently no figures are available to indicate the number of students involved; nor did the data indicate the degree to which students are encouraged to adopt this route.

Thirty two percent of the teachers polled indicated that some of their students are recommended by the school principal to direct university entrance thus, if they wish, bypassing the Public Examinations.

Since these practices are not common to all schools, and since the number of students affected would vary from school to school in any case, we have to consider this factor as confounding any comparison of Public

Examination means between schools.

To what extent is "preparation for the Public Examinations" practiced? Fifty eight percent of the teachers polled said that they often talk to students about writing Public Examinations. Sixty four percent stress the kind of questions during the year that will appear on the examinations. Further, 84 percent of the teachers use past examination papers to a significant degree in helping students review for the exams. Almost all of the teachers polled said that the students knew their school marks before taking the exams.

These data indicate that the Public Examination is still considered very important, despite the advent of shared evaluation. Teachers are concerned not only to make students aware of the need to take the exams but also to give experience in writing them.

What are the opinions of teachers regarding shared evaluation? Page seven of the questionnaire was designed to assess teacher reaction to selected statements regarding shared evaluation. These statements came from Departmental guidelines, objectives of shared evaluation, and expressed teacher and public opinion of shared evaluation from such publications as the Royal Commission on Education and Youth (Report 1967-68).

The reactions to the statements are not meant to be additive but were meant to determine teacher reaction collectively to the statements.

The results of this part of the questionnaire indicate that teachers were satisfied with the shared evaluation system, and that they believe it is achieving its aim of more creative and effective teaching and a more valid assessment of pupil achievement.

About three quarters of the teachers in the sample agreed that

external examinations were necessary to maintain standards, while roughly two thirds of the teachers felt that the school examination was just as good a predictor of success as was the public examination. The notion of which is a better predictor of success, the school examination, the Public Examination or a combination of both is important and will be dealt with in another part of the main study.

It has been said that external examinations handicap teachers and lead to artificial methods of teaching. Generally between one third and one half of the teachers felt this to be true.

It was significant that about one fifth of the teachers felt that external examinations were necessary as a guide to teaching. (In aggreement were 26 percent of the algebra teachers, 14 percent of the history teachers, 34 percent of the English teachers and 9 percent of the biology teachers). Of the thirty three teachers who did feel this way, sixteen felt that the Department was not providing sufficient objectives for their course. Possibly they feel that the Public Examinations are required as a guide in lieu of clearly defined objectives from the Department.

One of the aims of shared evaluation was to provide an opportunity for the development of greater creativity in teaching and learning. More than one half of the teachers felt that this aim was achieved. As one might expect, the English teachers were in the lead here with 70 percent. Algebra, history and biology were 59, 58 and 53 percent respectively.

One argument for the retention of Public Examinations was the motivational aspect both for teaching and learning. Teachers were about evenly divided regarding whether or not Public Examinations motivate the student to more learning and the teacher to better teaching.

An implicit aim of shared evaluation seems to be the development of self-evaluation in the student. Less than one half of the teachers felt that this aim was being achieved.

There was a consensus of opinion that pupils were reaching Grade XI academically unprepared. In fact, several schools indicated concern and had instituted remedial programs, especially in mathematics. It is interesting to note here that the tendency to attribute responsibility for inadequacies in students to lower levels of the educational system seems no less prevalent among high school teachers than among university and other post-secondary teachers.

What changes if any are desired by teachers? Table 9 summarises the responses to this question. Forty percent of the 151 teachers expressed the view that no change was needed at the present time. Furthermore, only 18 percent of the teachers polled were in favour of abolishing the Public Examinations entirely.

The Non-participating School

If a school is not participating in shared evaluation (56 percent in 1972, but only 14 percent at the present time) its students' final marks come entirely from the Public Examination. Generally these schools, perhaps because they were smaller and less well equipped, had average marks which were below the provincial average to start with. (see Tables 10 and 11). These schools were placed at a disadvantage because, in very few cases in schools on shared evaluation were the school mean mark and pass rate less than the public mean mark and pass rate. In other words, shared evaluation elevated the mean final mark and pass rate of most participating schools as indicated by Figure 3, p. 45.

While some compensating adjustment has been made since 1975 for

TABLE 9

TEACHER RESPONSE TO THE QUESTION "WHAT CHANGE WOULD YOU LIKE TO SEE IN HIGH SCHOOL EVALUATION?"

Change	Percent Response			
	Algebra	History	English	Biology
0. No response	7	9	2	6
1. No change	19	26	29	31
2. Return to public examinations in Grades IX, X, XI	19	11	15	9
3. Return to public examinations in Grades X, XI	12	6	7	3
4. Eliminate public examinations in Grade XI	12	26	20	16
5. Total external examinations in Grade XI only	2	3	0	0
6. System as it exists with a compulsory pass mark in the public examination	19	9	10	19
7. Comment	12	11	17	16

non-participating schools in the form of a 5% increase in marks, these schools still fell behind the provincial average. Table 10 gives the mean mark and pass rate for the province and the mean mark and pass rate for non-participating schools for algebra for the past four years. Table 11 gives the same information for matriculation mathematics, English, history and biology for 1976.

As the final column of Tables 10 and 11 indicates, the number of students being affected by this system is still significant. These students obviously do not have an equal opportunity with students in participating schools. As we said earlier, the Department recognizes this inequality and makes some compensating adjustments, however, there is no written policy regarding this.

Futhermore if the quality of education is, in fact, inferior in these schools the effect of using Public Examination marks only serves clearly to exaggerate this inferiority as it is reflected in the final grades.

TABLE 10

COMPARISON OF PARTICIPATING AND NON-PARTICIPATING SCHOOL MARKS AND PASS RATES 1972-1975

Year	Participating Schools				Non-participating Schools		Number of Students
	Public Exam		Final Mark		Public exam = final		
	Mean Mark	% Passing	Mean Mark	% Passing	Mean Mark	% Passing	
1972	62	77	63	79	57	71	1782
1973	56	70	61	75	47	52	794
1974	58	66	62	78	52	59	385
1975	51	52	60	74	35	26	184

TABLE 11

COMPARISON OF PARTICIPATING AND NON-PARTICIPATING SCHOOL MARKS AND PASS RATE FOR FOUR SUBJECTS 1976

Subject	Participating Schools				Non-participating Schools		Number of Students
	Public Exam		Final Mark		Public Exam = Final		
	Mean Mark	% Passing	Mean Mark	% Passing	Mean Mark	% Passing	
Matric Math	56.4	64.0	61.4	78.3	41.7	33.6	244
English	57.1	73.2	61.4	88.0	51.8	55.7	228
History	56.9	69.4	61.4	78.1	54.2	62.4	189
Biology	62.0	74.9	64.3	84.3	55.0	61.0	99

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study considered the various secondary school leaving evaluation procedures in Newfoundland. Since the system common to most schools is shared evaluation, most of our analysis was done in this area. The study was divided into two parts: the distributions of school and Public Examination grades; a survey of school evaluation practices and teacher opinion on shared evaluation.

The subjects selected for the analysis of school grades and Public Examination grades were English, algebra, history and biology for the five-year period from 1972 to 1976. The results of this analysis may be summarized as follows:

1. Mean grades are considerably higher for the school evaluation than for the Public Examinations.

2. Public Examination means tended to decline from 1972 to 1975 but showed a recovery in 1976. This trend was confounded by a tendency for the means to increase and decrease in alternate years.

3. The overall mean school grades are remarkably stable across both subjects and years.

4. The pass rates are higher and more stable for the school evaluations than for the Public Examinations.

5. Public Examination pass rates tended to decline from 1972 to 1975 but showed a recovery in 1976.

6. The study failed to find a relationship between shared evaluation and the ability of high schools to retain students.

7. The estimated magnitude of the differences between schools due to random errors is much smaller than the difference permitted by the Department of Education, even in the case of small schools. This point is especially important for post secondary institutions when students are being selected for a program or course. There is the danger of selecting students of lesser ability with higher marks from one school while rejecting students of higher ability with less marks from another school.

The survey of teacher opinion was based on a sample of teachers from 53 schools randomly selected from those participating in shared evaluation. The major findings are as follows:

1. In practice, most teachers feel that the purpose of school evaluation is criterion related; however, a significant minority of teachers scale examinations deliberately in a normative fashion.

2. The population of students taking Public Examinations is less than the Grade XI population because of the school leaving certificates and university recommendations given by some schools. The proportion of students in these categories is not known.

3. The significance of the public examination is recognized by teachers who generally emphasize the necessity of taking the examinations, and provide practice in examination procedures and content.

4. The teachers are generally satisfied with the shared evaluation system. Only a few would recommend complete abolition of an external examination.

Conclusions

Under our present system of evaluation, the final mark that the student receives in a course ought to indicate a level of achievement that the student has reached in that course (criterion based) or it should indicate how well the student achieved relative to the remainder of the students in the province (norm based). In any case an employer or admission officer in a post-secondary institution ought to be able to reasonably compare by means of these marks students from any part of the province. It has been concluded in this study that this comparison is not entirely valid.

The marks from one school should differ from those of another by only the amount expected because of random error or to differences in student ability or quality of teaching. It is important here to distinguish 3 components of the differences

1. random errors,
2. differences in student ability and quality of teaching, and
3. differences in grading practices.

Any variation, then, between the school mark and the Public Examination mark not accounted for by random error or student ability and quality of teaching would contribute to a mark from one school not being comparable with the mark from another school and since the school mark makes up fifty percent of the final mark, the final marks from different schools would not be comparable. This study explicitly dealt with random errors. Differences in student ability and quality of teaching appear in both school and Public Examination marks and do not contribute to the difference formula. The plausible cause of differences between schools then was attributed to differences in grading practices.

The Department of Education attempted to keep this variation to a minimum by allowing it to be no more than ten points. This study has shown that even for small schools this allowed variation greatly exceeds the amount that can reasonably be attributed to random fluctuations.

These variations are difficult to control because of the variety of evaluation procedures in the schools and would be very difficult to maintain within the tolerance allowable by random error under the present guidelines. From the survey it was concluded that the largest common factor is the mid-term test and even that had quite a variety of weights for the school mark. Beyond this, no standard seems to exist.

Earlier it was argued that final grades are summative in nature, being used for the purposes of job selection and admission to post-secondary institution, rather than for the formative purpose of curriculum improvement. Since post-secondary institutions establish their own entrance standards, which are not necessarily (or even usually) the same as the passing criterion, and since these institutions select the best candidates to fill the available places resulting at times in many who meet the minimum requirements being rejected, it is obvious that grades are used more for normative than developmental purposes. Even in the case of occupations requiring a Grade XI pass, selection of the best candidates is likely to be the process used.

Under these conditions it can be concluded that the issue of passing grades can be deemphasized to the extent that a student's grade need simply be an index of his standing relative to his peers. Indeed, the Deputy Minister of Education has said, ". . . one of the most unpleasant things about examinations is that we tend to perpetuate an anachronistic concept of 'pass' and 'fail' . . . (the publication of

which) place an unjust and cruel stigma on a large number of normal young Newfoundlanders". (Roebothan, 1973). (The shared evaluation system has done nothing to remove this anachronism). In fact, because of the nature of their use, it might be argued that grades should be transformed into a set of numbers (or letters) that do not indicate percentage points. Decisions that are now being made on grades could just as accurately be made on percentile rank.

Regardless of whether marks or some other system is used to grade students it will be first necessary to establish some standard evaluation procedures which all schools must follow. This is necessary under shared evaluation and will be absolutely essential if accreditation is implemented.

This standard could be controlled in a number of ways. Schools by mutual agreement could set up a standard evaluation procedure; the school mark could be scaled to its Public Examination mark; users of the marks could compare students on the basis of the Public Examinations alone or in conjunction with the school mark; users could set their own examinations. Regardless of which of the above merits adoption, or if some other plan is adopted, one point is clear, a student's chances for job placement or admission to a post-secondary institution must be equal throughout the province. This study has shown that this is already not true at present.

In this regard, then, it is concluded that any province-wide evaluation must have some external control in the form of testing. Hotyat, quoted in Agazzi (1967, p. 67) says: "Certain educationalists have gone to the extreme length of proposing that examinations should be done away with altogether, but to do this is to ignore the facts.

In every educational system some form of 'control' is indispensable as a means of enabling all parties concerned--education authorities, pupils and teachers--to regulate their activities".

While development of detailed proposals to improve the Public Examination would require further study, one or two suggestions can immediately be made for increasing the validity and reliability of these examinations.

First the current practice of using a single examination setter reduces the validity of the examinations by introducing the bias of that individual. Sample tests from curriculum committees reduces this bias only slightly. One way of reducing this problem would be to develop a large pool of items for each subject and to select the test items from this pool. The pool could be created by teacher contribution. The items could be classified by content and by cognitive level. Thus a given test could be selected to reflect the appropriate balance of content and cognitive level. A large representative pool would make possible yearly selection (possibly by computer). A basic element of test construction, item analysis could easily be carried out on each test. The pool for each subject could be composed of objectively scored items. With current knowledge about the construction of such items, objective tests can be constructed to reflect most important content and cognitive level objectives of any particular curriculum. For example for mathematics see Wilson in Bloom's Handbook (Bloom, 1971). Using this procedure the marking board could be replaced by a computer.

The pool could be diverse enough to cover all school variation in such areas as teaching strategies and to overcome problems inherent

in interpreting the Public Examination mark, marks could be reported as percentiles.

This plan would also provide marks that would be comparable from year to year thus facilitating curriculum evaluation and educational research.

The stigma attached to passing or failing could be eliminated simply by not setting criteria for a pass. As was said earlier, all post-secondary institutions set their own entrance requirements. For students going directly into the work force, even if a Grade XI pass is required, competition will still be on the basis of grades or marks.

To maintain a standard, and to provide a means of check on the educational system, the revised Public Examinations described earlier should continue. This essential check should in no way indicate a mistrust of the school. In fact, schools and teachers should look upon these tests as an opportunity to assist in self-evaluation. The score, as a percentile could be reported as a separate component of the students final grade for each subject.

Recommendations

1. The Public Examination program should be reorganized to make use of currently accepted practices of test construction, validating, marking and reporting marks.

2. Post-secondary admission procedures should use Public Examination scores only, as a basis for admission.

3. Public Examination results should be reported as percentiles.

4. If accreditation is implemented the Public Examinations (revised) should remain as a requirement for students continuing to post-secondary

education. While this seems to imply that only a very limited version of accreditation can be implemented the current situation regarding differences between schools seems to demand this.

5. If shared evaluation is to be retained the difference criterion should be reduced from ten points to a figure consistent with the magnitude of expected random errors, taking into account the fact that greater variation must be allowed for small schools than for large schools. This should be accompanied by a concerted effort to bring about some standardization of evaluation practices across schools.

REFERENCES

Agazzi, A. The educational aspects of examinations. Strasbourg: Council for Cultural Cooperation of the Council of Europe, 1967.

Annual Report of Integrated Education Committee, 1975.

Beltzner, K. P., Coleman, A. J., Edwards, G. D. Science council of Canada background study No. 37, Mathematical sciences in Canada. Supply and Services Canada, 1976.

Bloom, B., Hastings, J. T., Madaus, G. S. Handbook on formative and summative evaluation of student learning. New York: McGraw-Hill, 1971.

Buffett, F. Public examinations in Newfoundland. Newfoundland Teachers' Association Journal, 1967, 59 (2).

Buffett, F. (Ed.) Planning for evaluation. Memorial University of Newfoundland, 1970.

Champagne, A., Klopfer, L. E. Formative evaluation in science curriculum development. Journal of Research in Science Teaching, 1974, 11 (3).

Cooley, W. W. Methods of evaluating school innovations. Paper presented at the 79th annual convention, American Psychological Association, Washington, D.C. September 3, 1971. Cited by (Champagne, A. 1974).

Evaluation of pupil progress. A report of an invitational seminar sponsored by British Columbia Teachers' Federation. Vancouver, 1966.

Funk and Wagnalls, standard college dictionary (Canadian edition). Toronto: Longmans, 1963.

Gayfer, M. An overview of Canadian education. The Canadian Education Association, Toronto: Bryant Press, 1974.

Harinschfeger, A., and Wiley, D. Achievement test scores drop. So what? Educational Researcher. 1976, 5(3) 5-12.

Kelland, N. We've talked about shortcomings: Now we need action. Newfoundland Teachers' Association Journal, 1965, 56 (4).

Public Examination Report Book, St. John's: Newfoundland Department of Education, 1971.

Public Examination Report Book, St. John's. 1972.

Public Examination Report Book, St. John's. 1973.

Public Examination Report Book, St. John's. 1974.

Public Examination Report Book, St. John's. 1975.

Report of the Royal Commission on education and youth. (Chairman Warren, P. J.) St. John's: Queen's Printer, 1967-68. 2V.

Roebothan, C. Public examinations, School World 1973. 23 p. 4-5.

Rowe, F. W. The development of education in Newfoundland. Toronto: Ryerson Press, 1964.

Sanders, J. R., Cunningham, D. A structure for formative evaluation in product development. Review of Educational Research, 1972, 43(2), 217-235.

Scriven, M. The methodology of evaluation. In R. E. Stake (Ed.) AERA monograph series on curriculum evaluation, No. 1, Chicago: Rand-McNally, 1967.

Taba, H. Curriculum development, theory and practice. New York: Harcourt, Brace and World, 1962.

Welsh, W. W., Walberg, H. J. A design for curriculum evaluation. Science Education, 1968, 52(1).

Welch, W. W. The process of evaluation. Journal of Research in Science Teaching, 1974, 11(3).

REFERENCE NOTES

1. Rowe, G. A case study of decisions giving local school boards more control over examinations. Unpublished Education 6760 term paper, Memorial University of Newfoundland, 1976.

2. Crocker, R. K. Personal communication, January 27, 1977.

APPENDICES

SHARED EVALUATION PLAN

STANDARDS FOR PARTICIPATING SCHOOLS

Department of Education & Youth
Revised for 1974

The plan is designed with two major purposes:

(1) To obtain a more valid assessment of pupil achievement
(2) To encourage the improvement of instruction.

For both of these there are tacit assumptions that the school programs are sound, that the facilities and their organization are at least adequate, and that teachers are experienced and competent to ensure that these assumptions are valid.

A. TEACHER QUALIFICATIONS

1. AT LEAST 75% OF THE STAFF INVOLVED IN THE GRADES TEN AND ELEVEN PROGRAMS MUST HOLD A BACHELORS DEGREE OR ITS EQUIVALENT.

2. AT LEAST 75% OF THE STAFF INVOLVED IN THE GRADES TEN AND ELEVEN PROGRAMS MUST HAVE THREE OR MORE YEARS TEACHING EXPERIENCE.

These qualifications are to be applied to all teachers actually teaching in grades ten and/or eleven classes. A grade four teaching certificate is considered the equivalent of a bachelors degree. The teachers years of experience should include the current school year.

B. PROGRAM

1. THE COURSES OFFERED MUST BE CONSISTENT WITH THE PROVINCIAL PROGRAM OF STUDIES OR HAVE THE APPROVAL OF THE MINISTER. This applies to all courses whether or not they are offered for provincial credit.

2. PROVISION MUST BE MADE FOR SUBJECT PROMOTION. Difficulties of administration may require creative approaches. For the initial year, minimal requirments should be at least one subject. For example, a student should be able to take at least one grade ten subject while doing most of his work in grade eleven.

3. PROVISION MUST BE MADE FOR STUDENTS TO TAKE COMBINATIONS OF "GENERAL" AND "ACADEMIC" COURSES. The intent is that students should not be arbitarily streamed into complete programs.

4. STAFF MEMBERS TEACHING ASSIGNMENTS MUST BE WITHIN THEIR AREAS OF COMPETENCE. If teachers are assigned to teach subjects for which they are not qualified, the system is likely to be defective from the start, since they cannot be expected to do an adequate evaluation. Minimal requirements for competency in this content are three courses, preferably including a methods course in the subject area.

5. A REASONABLE DEGREE OF BALANCE MUST BE ESTABLISHED IN TEACHING LOADS OF STAFF.
Various formulae are available for assessing teaching load. Gross inequalities are likely to produce dissentions among staff and disrupt effective evaluation. Here again, sophisticated schemes are not required, but some indication of attention to the problem is expected.

C. FACILITIES

1. THE SCHOOL MUST HAVE A FUNCTIONING RESOURCE CENTRE OR LIBRARY.
The library resource centre is considered essential for improved instruction, especially in reducing over-dependence on the text. The statement allows a bare minimum of facilities to be accepted, but participating schools will be expected to place major emphasis on the improvement of their libraries. A functioning resource centre is one which makes material relevant to the course of study easily accessible to classes and students.

2. THE SCHOOL MUST, AS FAR AS POSSIBLE, PROVIDE SUBJECT ROOMS OR AREAS WHERE INSTRUCTION IN EACH SUBJECT AREA TAKES PLACE. (e.g. FRENCH ROOM, ART ROOM, MATH ROOM, GEOGRAPHY ROOM)
The teacher cannot function effectively if he must move from class to class for successive periods in the same subjects. The basic requirement is that a place be designated where instruction in a subject takes place. This is especially important in subjects such as Art, the Sciences and French, where a certain amount of equipment is needed for good teaching. It is recognized that smaller schools cannot designate a room exclusively for any single subject; in this case groups of subjects or a subject area may be scheduled into the same room. A move toward this type of organization is required of participating schools.

3. SCHOOLS MUST MEET MINIMUM STANDARDS OF FACILITIES FOR EACH SUBJECT IT OFFERS. FOR EXAMPLE, SCHOOLS OFFERING SHEMISTRY, BIOLOGY OR PHYSICS MUST HAVE AT LEAST ONE EQUIPPED LABORATORY, AND THE PROGRAM MUST INVOLVE STUDENTS IN LABORATORY WORK 25% OR OVER OF THE INSTRUCTIONALTIME OF THE COURSE CONCERNED, DEPENDING UPON THE REQUIREMENTS.

The Division of Instruction will attempt to clarify these standards as courses are developed. For the present, advice is available in English, French, Social Studies, Mathematics, Science, Home Economics and Music. For Science in small schools, a mulit-purpose laboratory is regarded as adequate. While the requirement applies only to Physics, Chemistry and Biology, the school should engage all Science students in laboratory work. For the purpose of the 25% requirement, a number of demonstrations may be included; however, is not considered acceptable.

D. SUPPORTIVE SERVICES

SCHOOLS PARTICIPATING IN THIS PLAN MUST OFFER GUIDANCE AND COUNSELLING SERVICES TO THEIR STUDENTS WHEREVER POSSIBLE.
They must also make use of whatever medical and psychological services that are available to them.

EVALUATION GUIDELINES

FOR

PARTICIPATING SCHOOLS

Revised for 1973-'74

1.0 The school mark of the student should indicate the degree to which the student has reached grade eleven standards in the objectives of the course by the end of the school year.

1.1.0 The public examination will test as broad a range of objectives as possible.

1.2 A number of subjects have important objectives which cannot normally be tested by pen and paper tests. The schools evaluation should include these objectives, the emphasis given to them depending on the subject.

Examples of these would be speaking ability in English and French, manipulative skills in laboratory work, creativity in English and Art, performance skills in music, research skills in social studies, etc.

1.2.1 In Art, Home Economics, Music and Industrial Arts, the school evaluation will be based entirely on such objectives.

1.2.2 In English, French, the Sciences and Social Studies, a proportion of the mark ranging from 30 - 40% of the school mark would be appropriate for such objectives.

1.2.3 In Mathematics it may be unnecessary to consider such objectives.

1.2.4 In special courses and pilot projects where the school is responsible for the full evaluation the whole range of objectives must be considered. A final examination worth 50% of the total mark is normally required. The school evaluation marks and the final examination marks should be submitted separately.

1.3 To determine the mark it is appropriate to assign students marks in specific categories relating to general objectives throughout the year rather than giving marks for non-specific tests or assignments and aggregating them.

E.G. A student with the following record in oral language evaluation

Category – Oral Expression					
Evaluation Period	1	2	3	4	5
Mark	C	C	B	A	A

would be considered to have made significant progress and would obtain a final mark of A, whereas an aggregation or averaging of similar marks from assignments or term tests would give him a rating of B. This latter approach is less acceptable because

it relates almost primarily to the acquisition of knowledge and does not indicate the state of the students achievement at the end of the course. It also binds the school in an inflexible marking pattern allowing little room for appropriate adjustments toward the end of the school year.

1.4 When the final school grade is being considered, adjustment of the basic mark may be justified for some students in order to recognize:

1.4.1 unusual progress of a student with a weak background. Such progress may indicate a higher potential than an actual achievement mark would show.

1.4.2 unusual application or interest which carries the student beyond the boundaries of the assigned work. Such additional work may produce educational achievement which is not recognized by the regular marking pattern.

1.4.3 However, teachers should avoid giving sympathetic marks to weak students as the evaluation system is useless unless it treats students fairly.

2.0 <u>To achieve a reasonable degree of comparability between schools an average mark of 65 is predicted for the province in each subject.</u>

In assigning marks the teacher should bear the predicted average in mind, grading students accordingly.

The following procedure is recommended:

2.1 Relying on the information supplied by the evaluation system, rank the students in order of achievement.

2.2 On the basis of your experience select the rank of student whose achievement most closely approximates that of an average student in the province.

2.3 Assigne the student or students 65% and assign grades of other students accordingly on the basis of the ranking already done.

<u>NOTE</u>: The mark of 65% should not be given to the average student in the class, but to the one(s) you consider closest to the average in that course for the province.

3.0 To achieve a reasonable pass standard the following approaches are suggested:

3.1 If the course is pre-requisite to further study in the field, students should have achieved the minimum considered necessary to begin work at the next level (e.g. university or technical college) with a reasonable expectation of success.

3.2 If the course is not part of a sequence, a student should have achieved the minimum acceptable of an average student.

4.0 Some students do not perform well in written tests. The public examination is limited mainly to the assessment of written materials. While a major

aspect of education is the development of writing skills, other skills must be developed as well. Schools should, therefore, attempt to use other techniques of evaluation to a substantial degree. Personal interview, work files, project assessment, oral reports, etc. should be used where suitable. The type of evaluation should be suited to the type of achievement being tested.

5.0 The school, through individual teachers, should develop a sound but flexible system, one purpose of which is to develop more creative and effective teaching. Such teaching can be stifled as easily at the district or school level as it can at the provincial level. Teachers should participate in the development of such a system, which should allow for modification.

6.0 Schools should avoid averaging unit tests. This procedure will tend to reduce the discrimination of the final mark. Also, the procedure is inconsistent with our knowledge of learning processes, which are not continuously uniform. At end-of-year assessment using all related information of the continuous evaluation of the school year will be more acceptable.

7.0 The result supplied the department should reflect the range of achievement within the class evaluated. A reasonable range of marks, discriminating among poor, average and good students is expected.

8.0 Students should be kept fully informed of all aspects of the evaluation process. They should know what is expected of them in the course; on which basis credit is given, and what procedures they must follow if they wish to question a mark.

8.1 As far as possible students should be permitted to influence the design of the evaluation procedures; self-evaluation should be encouraged. Involvement of the students either formally or informally will reduce the likelihood of appeals.

8.2 Appeal procedures should be such as to ensure the pupil a fair hearing; the principle "justice must not only be done, it must be seen to be done" is a good one. For these reasons teachers should be prepared to accept students representation on appeal committees.

DEPARTMENT OF EDUCATION & YOUTH

REGULATIONS FOR SHARED EVALUATION PLAN

GRADE XI CERTIFICATION

Revised for 1974

1. High schools approved by the Minister are permitted to assign 50% of the final mark for the Grade XI Examination Certificate.

2. To qualify for approval, schools must meet minimum standards established under the following headings:

A. Teacher Qualifications

I. At least 75% of the staff involved in the grade ten and eleven programs must hold a bachelors degree or its equivalent.

II. At least 75% of the staff involved in the grade ten and eleven programs must have three or more years teaching experience.

B. Programs

I. The courses offered must be consistent with the provincial program of studies or have the approval of the Minister.

II. Provision must be made for subject promotion.

III. Provision must be made for students to take combinations of "general" and "academic" courses.

IV. Staff members teaching assignments must be within their areas of competence.

V. A reasonable degree of balance must be established in teaching loads of staff.

C. Facilities

I. The school must have a functioning resource centre or library.

II. The school must, as far as possible, provide subject rooms or areas where instruction in each subject area takes place. (e.g. French Room, Art Room, Math Room, Geography Room.)

III. Schools must meet minimum standards of facilities for each subject they offer for credit. For example, schools offering Chemistry, Biology or Physics must have at least one equipped laboratory, and the program must involve students in laboratory work 25% or over of the instructional time of the course concerned, depending upon the requirements.

D. Supportive Services

1. Schools participating in this plan must offer guidance and counselling services to their students wherever possible. They must also make use of whatever medical and psychological services that are available to them.

3. Schools must apply through their District Superintendent on a form prescribed for the purpose by the Minister.

4. Schools meeting the minimum standards will normally be approved upon recommendation of the Superintendent. However, schools not meeting these standards, but recommended by the Superintendent, will be considered for approval.

5. Subject to Section 15 schools will be approved for a 3-year period; at the end of this period schools will be required to re-apply.

6. Participating schools are required to maintain an evaluation committee to review periodically their evaluation policies and procedures which will be subject to approval by the Minister.

7. In co-operation with the School Board Office, the Division of Instruction will be responsible for periodic evaluation of participating schools to ensure maintenance of minimum standards, to reassess the schools internal evaluation policies and procedures, and to provide feedback for the revision of the system.

8. Each teacher must take steps to ensure that his students fully understand the evaluation procedures to be used.

9. All marks for the schools must be reviewed and approved by the Principal after consultation with the Evaluation Committee before offical release to pupils.

10. The final school marks must be released to students to allow sufficient time for review of special appeals.

11. The school must establish an appeal committee drawn from staff members other than the teacher concerned. The Committee must have school district representation if possible, and to assure students that the system operates fairly, consideration must be given to including a representative of the student body. In processing appeals, the following will apply:

I. The Appeals Committee will entertain only appeals that have been rejected by the teacher concerned.

II. The Appeals Committee will hear evidence presented by the student, consult with the teacher concerned, and recommend a final mark for the student.

III. No change in the student's mark will be made if it is the opinion of the Committee that the mark is consistent with marks assigned to other students in the same class.

12. Following the hearing of appeals, but not later than the closing of school, the Principal will forward the marks directly to the Public Examinations Section on forms provided for the purpose. The Principal is responsible for checking the school marks against the school copy of the public examination register to eliminate errors or amissions. Schools will provide the Section with a means of verifying the school marks in case of error or omission for a period of two weeks after the close of school.

13. Public Examination papers will be reread upon request made in writing to the Supervisor of Public Examinations and accompanied by a fee of $5.00 per paper. The fee will be refunded if an increase of five or more marks is made.

14. The results of the Fall supplementary papers will be based solely on the supplementary examination. Partial students, in regular attendance at a school which is participating in the Shared Evaluation plan, should be provided with school evaluation in the course(s) they are taking in June.

15. Any apparent misuse of the authority delegated to schools under these regulations may result in the revocation of the privileges granted. In such cases an investigation will be carried out in co-operation with the School District Office. If the investigation confirms such misuse or incompetence, the privilege will be withdrawn for at least one year.

16. Except as stated in Section 17, students in participating schools will be required to use both the school marks and the public examination results in their final mark for the provincial certificate.

17. Students transferred from a participating school will be provided with a statement of school evaluation to that date and will remain on shared evaluation if transferred to a participating school.

Students transferred from a participating to a non-participating school shall discontinue shared evaluation.

Students transferred from a non-participating to a participating school before the registration date for the public examination will be on shared evaluation.

Students transferred from non-participating schools after the deadline will be graded by the public examination only unless an arrangement between the student and school can be made. If such students are placed on shared evaluation the Public Examination Section must be notified.

Students who leave school after the deadline will continue on the school evaluation if the school provides an evaluation for them.

Instructions

The attached questionnaire is part of a study of shared evaluation in Grade XI. Your school is one of a random sample chosen to participate in this study. The subjects chosen for the study are Algebra, History, English, and Biology in the matriculation stream. Teachers who taught these subjects last year, or respective department chairmen, where more than one class is involved, are requested to complete the questionnaire. There is one questionnaire for each subject. Teachers who are teaching two or more of the above subjects are requested to complete the block at the top of the questionnaire.

The surveyor intends to visit each school in the study to collect the completed questionnaire and discuss its contents with the respective teachers. The questionnaire will be handled in accordance with the enclosed covering letter.

Definition of terms

School Examination - any form of assessment that the school does as its share of the final mark received by the student.

Public Examination - the final examination set by the Department of Education and written by the students in June.

Guidelines - Evaluation Guidelines for Participating Schools (Revised for 1973-74).

Please complete the questionnaire by placing the number of the response chosen, in the box at the right of each question.

Example of how the questionnaire is to be completed.

1. The number of students in Grade XI in your school is

   [1] less than 20 [2] 20-40 [3] 40-80

   [4] 80-120 [5] more than 120 [5]

2. Do you like teaching? [1] yes [2] no [1]

3. How many years have you taught in this school? [1 2]

If a particular question does not have a suitable response, feel free to answer the question as you wish. In the case of multiple choice questions, limited space is left for this purpose.

If you taught more than one subject last year complete the following:

(1) Check the subjects you taught last year:

☐ Algebra ☐ History ☐ English ☐ Biology

(2) Check which you consider your major teaching assignment and complete the questionnaire as a teacher of that subject:

☐ Algebra [1] ☐ History [2] ☐ English [3] ☐ Biology [4] ☐ [6]

1. a. (1) Generally, what percent of students pass your school examinations in the indicated ability level classes?

	60-69	70-79	80-89	90-99	
(a) No ability level grouping	[1]	[2]	[3]	[4]	☐ 7
(b) Low ability class	[1]	[2]	[3]	[4]	☐ 8
(c) Middle ability class	[1]	[2]	[3]	[4]	☐ 9
(d) High ability class	[1]	[2]	[3]	[4]	☐ 10

(2) Do you sometimes scale your marks upward?

[1] yes [2] no ☐ 11

(3) Do you sometimes scale your marks downward?

[1] yes [2] no ☐ 12

(4) Do you sometimes scale your marks to fit an expected distribution (e.g. a normal distribution)?

[1] yes [2] no ☐ 13

(5) Select what you think is a desirable average <u>pass rate</u> for the province on the school examination.

[1] 55 [2] 60 [3] 65 [4] 70 [5] 75 [6] 80 [7] 85
[8] 90 [9] 95 ☐ 14

(6) Select what you think is a desirable <u>pass rate</u> for the province on the public examination.

[1] 55 [2] 60 [3] 65 [4] 70 [4] 75 [6] 80 [7] 85
[8] 90 [9] 95 ☐ 15

(7) Do you set different examinations for different ability levels?

[1] yes [2] no ☐ 16

(8) Which of the following best describes your examinations? ☐ 17

[1] Reflects achievement of the student with respect to course content.

[2] Ranks the student relative to other students in the class.

[3] [1] and [2] with [1] predominant.

[4] [1] and [2] with [2] predominant.

1. b. (1) Give the weights which best describe how your final mark is obtained.

(a) Projects/assignments	____ %	18-19
(b) Unit tests	____ %	20-21
(c) Non pen and paper tests (class participation, effort, etc.)	____ %	22-23
(d) Term tests	____ %	24-25
(e) Final examination	____ %	26-27
(f) _____	____ %	28-29
(g) _____	____ %	30-31
(h) Final Mark	100 %	

1. c. (1) Evaluation guideline 2:00 states

"To achieve a reasonable degree of comparability between schools, an average mark of 65% is predicted for the province in each subject. In assigning marks the teacher should bear the predicted average in mind, grading the students accordingly."

How does the predicted 65% affect your grading? 32

[1] No effect. I submit the marks that I get.

[2] No effect, because the average is generally close enough to 65%

[3] I sometimes scale upward.

[4] I sometimes scale downward.

[5] Both [3] and [4] on occasion.

[6] I assign 65% to the student who is most probably the average of the province and rank the others accordingly.

[7] _____

1. d. (1) How many major examinations do you conduct during the year? 33

[1] Final only at end of year.

[2] Three term exams only.

[3] One term exam + final exam.

[4] Two term exams + final exam.

[5] _____

(2) Do you pattern your major examinations after the public examinations to the extent that

- the same ratio of content is reflected? [1] yes [2] no 34

- the format (instructions, number of objective questions, number of main questions, etc.) is the same?
[1] yes [2] no 35

- writing conditions are replicated as far as possible? (e.g. specified exam week, use of gymnasium, etc.)
[1] yes [2] no 36

TOTAL MARKS = 5518 R(SP) =0.709 R(SF) =0.892 R(PF) =0.945

i.e. (1) Do you mark your examinations [ ] 37

[1] paper by paper

[2] question by question

(2) In cases where several teachers teach the same subject do you use a panel of markers?

[1] yes [2] no [3] N/A [ ] 38

(3) In cases where several teachers teach the same subject is all assessment of achievement contributing to the final school mark common to all classes?

[1] yes [2] no [3] N/A [ ] 39

If No, please elaborate _____

_____

_____

_____

2. a. (1) Personal information

(a) sex [1] M [2] F [ ] 40

(b) age [ ][ ] 41-42

(c) years experience [ ][ ] 43-44

(d) education qualifications

B.A.	major _____	[1] yes	[2] no	[ ] 45
B.Ed.	major _____	[1] yes	[2] no	[ ] 46
B.A. (Ed.)	major _____	[1] yes	[2] no	[ ] 47
B.Sc.	major _____	[1] yes	[2] no	[ ] 48
M.A.	major _____	[1] yes	[2] no	[ ] 49
M.Sc.	major _____	[1] yes	[2] no	[ ] 50
M.Ed.	major _____	[1] yes	[2] no	[ ] 51
Other	_____	[1] yes	[2] no	[ ] 52

(e) How many years have you taught in this school including the present year? [ ][ ] 53-54

(f) Give your teaching assignment in this school for the past four years as follows where it applies.

1975 [1] Algebra [2] English [3] History [4] Biology [ ] 55

1974 [1] Algebra [2] English [3] History [4] Biology [ ] 56

1973 [1] Algebra [2] English [3] History [4] Biology [ ] 57

1972 [1] Algebra [2] English [3] History [4] Biology [ ] 58

(g) How many teachers, including yourself, taught your subject during 1975? [ ] 59

2. b. (1) Do you mention the fact in class often that the students have a public examination to write?

[1] yes [2] no ☐ 60

(2) Do you stress during the year the kind of question that most likely will appear on the public examination

[1] yes [2] no ☐ 61

(3) If you taught examination candidates prior to your school going on shared evaluation, do you stress public examinations just as much now as before?

[1] yes [2] no [3] N/A ☐ 62

2. c. (1) Approximately when do you finish your formal teaching and start preparing your students for the public examinations?

[1] February [2] March [3] April [4] May [5] June ☐ 63

(2) To what extent do you use examples from past examination papers during your review? ☐ 64

[1] as many as are available

[2] some selected questions

[3] seldom used

[4] _____

_____

(3) How do you prepare your students for the public examinations?

Review using text questions [1] yes [2] no ☐ 65

Review using past exam questions [1] yes [2] no ☐ 66

Review using teacher made questions [1] yes [2] no ☐ 67

Students review mainly on their own [1] yes [2] no ☐ 68

Others: _____

_____

_____

2. d. (1) (a) Are your students told their school mark prior to writing the public examination?

[1] yes [2] no ☐ 69

(b) Approximately how many calendar days prior to school closing are they told their marks? ☐☐ 70-71

3. a. (1) Do you list objectives (not necessarily behavioral) for each unit of your course?

(a) For yourself [1] yes [2] no ☐ 72

(b) For your students [1] yes [2] no ☐ 73

(2) (a) Are your objectives, written or not, the same as those of the Department of Education?

[1] yes [2] no ☐ 74

(b) Do you add more to the course than required by the syllabus?

[1] yes [2] no ☐ 75

(3) (a) Does the Department of Education provide sufficient guidelines on what you should teach in your course?

[1] yes [2] no ☐ 76

(b) Are the objectives made sufficiently clear?

[1] yes [2] no ☐ 77

(4) Do you use the school portion of shared evaluation to teach objectives which you think important but which are not included in the syllabus?

[1] yes [2] no ☐ 78

(5) Do you see the syllabus as being a minimum which is meant to be augumented by the teacher?

[1] yes [2] no ☐ 79

(6) Do you have ample time to teach the syllabus?

[1] yes [2] no ☐ 80

(7) Do you have ample time to include extra items you believe to be important?

[1] yes [2] no ☐ 87

3. b. (1) Is your final school mark adjusted

	Often	Occasionally	Seldom	Never	
(a) to recognize unusual progress of a student with a weak background	[1]	[2]	[3]	[4]	☐ 88
(b) to recognize work beyond the required	[1]	[2]	[3]	[4]	☐ 89
(c) to recognize conscientious students who work hard but cannot achieve a passing grade	[1]	[2]	[3]	[4]	☐ 90
(d) to achieve a reasonable proportion of passes	[1]	[2]	[3]	[4]	☐ 91
(e) to satisfy the requirements of Guideline 2:00 i.e. regarding 65%	[1]	[2]	[3]	[4]	☐ 92

(2) (a) What percent of the students in your class have a weak background in your subject?

_____ % ☐☐ 93-94

(2) (b) How do you make adjustment for these students? ☐ 95

[1] N/A.

[2] removed from class for remedial work.

[3] grouped within the class for systematic remedial work.

[4] given extra time to complete section/unit while remainder of class does enrichment topics.

[5] given same treatment as remainder of class with extra tutoring on a time available basis.

[6] identified early and required to repeat the subject in Grade X.

[7] _____

_____

_____

(3) If you have more than one class, does each class get the same major assignments, quizzes, etc.?

[1] yes [2] no [3] N/A ☐ 96

4. a. (1) Approximately what percent of your students repeat?

Grade IX ____% ☐☐ 97-98

Grade X ____% ☐☐ 99-100

(2) Is subject promotion practiced in your course?

[1] yes [2] no ☐ 101

(3) What is the policy of your school regarding subject promotion?

_____

_____

_____

_____

_____

(4) How many courses do you offer in Grade XI? ☐☐ 102 – 103

(5) How many courses were taught in Grade XI in 1975? ☐☐ 104 – 105

9. b. (1) Please indicate the extent to which you agree with each statement by placing a check mark in the appropriate column.

Abbreviations:

SA Strongly agree
A Agree
N Neutral
D Disagree
SD Strongly disagree

100

	SA	A	N	D	SD	
- External examinations are necessary to set a minimum provincial standard which graduating students must meet	[1]	[2]	[3]	[4]	[5]	106
- The school mark is just as good a predictor of success as the PE mark	[1]	[2]	[3]	[4]	[5]	107
- External exams lead to artificial methods of teaching.	[1]	[2]	[3]	[4]	[5]	108
- External exams handicap good teachers.	[1]	[2]	[3]	[4]	[5]	109
- External exams handicap the average teacher.	[1]	[2]	[3]	[4]	[5]	110
- External exams are necessary as a guide to teaching	[1]	[2]	[3]	[4]	[5]	111
- External exams separate low achievers from high achievers better than do school exams.	[1]	[2]	[3]	[4]	[5]	112
- School exams provide a better overall assessment of student achievement.	[1]	[2]	[3]	[4]	[5]	113
- Shared evaluation has resulted in a more valid assessment of pupil achievement.	[1]	[2]	[3]	[4]	[5]	114
- Shared evaluation has allowed teachers to teach more creatively	[1]	[2]	[3]	[4]	[5]	115
- Under shared evaluation the students creative instincts are more fully developed.	[1]	[2]	[3]	[4]	[5]	116
- Shared evaluation has allowed students to be more involved in project work	[1]	[2]	[3]	[4]	[5]	117
- Teachers now do more of what the student wants to do rather than having to stick to the text.	[1]	[2]	[3]	[4]	[5]	118
- Students are better motivated because the pressure of writing the final examination is not so great.	[1]	[2]	[3]	[4]	[5]	119
- There is more emphasis on self-evaluation	[1]	[2]	[3]	[4]	[5]	120
- Students are less motivated to study because the pressure of writing the final examination is not so great.	[1]	[2]	[3]	[4]	[5]	121
- Student study habits have deteriorated since the advent of shared evaluation.	[1]	[2]	[3]	[4]	[5]	122
- Too many pupils are reaching Grade XI unprepared.	[1]	[2]	[3]	[4]	[5]	123
- There is less influence from parents on pupils and schools.	[1]	[2]	[3]	[4]	[5]	124

(2) If you taught examination candidates prior to your school going on shared evaluation

(a) N/A ☐ 125

(b) did you believe that shared evaluation would improve instruction?

[1] yes [2] no ☐ 126

(c) do you now believe that it has?

[1] yes [2] no ☐ 127

(d) do you feel free now to teach the way you wanted to prior to shared evaluation?

[1] yes [2] no ☐ 128

(e) please comment, if you wish, on how shared evaluation has affected your teaching.

_____

_____

_____

_____

_____

_____

_____

4. c. (1) (a) Does your school offer a school leaving certificate to students whom it is felt could not pass the public examination or who do not desire to write the public examination.

[1] yes [2] no ☐ 129

(b) Is there a special examination for this certificate?

[1] yes [2] no [3] N/A ☐ 130

(c) What percent of students in your school take this route?

_____ % ☐☐ 131-132

(d) Was this certificate a result of shared evaluation?

[1] yes [2] no [3] N/A ☐ 133

(2) (a) Do you allow certain university bound students to bypass the public examination in favor of a recommendation from you to the University?

[1] yes [2] no ☐ 134

(b) What percent of students in your school take this route?

_____ % ☐☐ 135-136

(c) Was this procedure a result of shared evaluation?

[1] yes [2] no [3] N/A ☐ 137

4. d. (1) Does your school have an evaluation committee

[1] yes [2] no ☐ 138

(2) How often does it meet?

[1] N/A

[2] Three times per year ☐ 139

[3] Less than three times per year

[4] More than three times per year.

(3) How many members are on the committee? ☐☐ 140-141

(4) Are students represented on the committee?

[1] yes [2] no [3] N/A ☐ 142

(5) Has your school taken part in evaluation workshops?

[1] yes [2] no ☐ 143

(6) When mark adjustment is necessary, who sets the policy? ☐ 144

[1] District administration

[2] School administration

[3] Departments in the school (if any)

[4] Individual teachers

[5] Teachers as a group.

[6] Evaluation committee

[7] N/A

4. e. (1) If your class deviated more than normally expected from the provincial mean of the school examination, the reason probably was

(a) N/A ☐ 145

(b) A tendency to overrate weaker students [1] yes [2] no ☐ 146

(c) Overestimating ability of students [1] yes [2] no ☐ 147

(d) Underestimating ability of students [1] yes [2] no ☐ 148

(e) Students do not work to the level of their ability

[1] yes [2] no ☐ 149

(f) The provincial mean is unrealistically [1] high [2] low ☐ 150

(g) _____

_____

_____

_____

_____

(2) If your class deviated more than normally expected from the provincial mean of the public examination, the reason probably was

(a) N/A ☐151

(b) Expected because different objectives were tested

[1] yes [2] no ☐152

(c) Stressing oral skills while placing less emphasis on other skills.

[1] yes [2] no ☐153

(d) Distributing marks of school evaluation too early resulting in students seeing no need to work further in order to pass.

[1] yes [2] no ☐154

(e) Tendency for some students to give up on exams and not complete nearly as much as they could under more trying conditions.

[1] yes [2] no ☐155

(f) The provincial mean is unrealistically

[1] high [2] low ☐156

(g) _____

_____

_____

4. f. (1) What changes would you like to see in the high school evaluation procedure?

[1] no change

[2] return to public examinations in Grades IX, X and XI

[3] return to public examinations in Grades X and XI

[4] eliminate public examinations in Grade XI ☐157

[5] Total external examination in Grade XI only

[6] System as it exists with a compulsory pass mark of ____ in the public examination. ☐☐158-159

[7] _____

_____

_____

_____

_____

_____

_____

ENGLISH LITERATURE 1972

0 TOTAL MARKS = 4363 R(SP) =0.548 R(SF) =0.874 R(PF) =0.879

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	67.50	60.91	64.01
STDDEV =	11.86	11.84	10.43
PCT PASS =	95.00	89.00	94.80

MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	1	4	0
5 - 9	2	3	0
10 - 14	1	7	1
15 - 19	2	14	5
20 - 24	12	21	8
25 - 29	7	29	13
30 - 34	16	49	18
35 - 39	24	95	40
40 - 44	91	132	103
45 - 49	62	126	39
50 - 54	345	591	451
55 - 59	386	709	641
60 - 64	747	972	911
65 - 69	643	682	846
70 - 74	888	454	636
75 - 79	446	282	385
80 - 84	397	146	176
85 - 89	166	39	80
90 - 94	110	8	10
95 - 99	16	0	0

ALGEBRA - 1972

0 TOTAL MARKS = 4488 R(SP) =0.742 R(SF) =0.907 R(PF) =0.951

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.14	61.61	63.64
STDDEV =	15.77	21.55	17.45
PCT PASS =	87.30	77.21	82.91

MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	1	35	0
5 - 9	0	58	3
10 - 14	3	78	14
15 - 19	8	80	32
20 - 24	22	79	54
25 - 29	19	131	80
30 - 34	77	113	130
35 - 39	81	149	148
40 - 44	205	194	235
45 - 49	154	106	71
50 - 54	534	420	468
55 - 59	337	332	468
60 - 64	629	407	492
65 - 69	416	470	519
70 - 74	644	410	484
75 - 79	363	459	405
80 - 84	447	388	376
85 - 89	210	266	275
90 - 94	223	218	157
95 - 99	86	90	74

HISTORY - 1972

0 TOTAL MARKS = 4534 R(SP) =0.697 R(SF) =0.902 R(PF) =0.935

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.98	58.19	62.37
STDDEV =	14.26	16.84	14.33
PCT PASS =	91.07	75.50	85.69

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	0	3	0
5 - 9	0	10	0
10 - 14	4	23	1
15 - 19	1	40	13
20 - 24	15	56	24
25 - 29	20	144	44
30 - 34	50	172	71
35 - 39	55	192	113
40 - 44	130	301	302
45 - 49	130	170	81
50 - 54	476	684	634
55 - 59	375	472	552
60 - 64	708	566	628
65 - 69	524	502	644
70 - 74	706	406	498
75 - 79	408	355	393
80 - 84	437	255	281
85 - 89	213	108	162
90 - 94	219	59	81
95 - 99	60	15	12

BIOLOGY - 1972

0 TOTAL MARKS = 2923 R(SP) =0.648 R(SF) =0.904 R(PF) =0.912

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	69.12	62.15	65.43
STDDEV =	13.64	14.17	12.62
PCT PASS =	93.57	86.86	92.47

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	0	0	0
5 - 9	0	0	0
10 - 14	2	0	0
15 - 19	2	3	1
20 - 24	1	24	1
25 - 29	7	28	7
30 - 34	25	69	18
35 - 39	27	86	41
40 - 44	62	88	113
45 - 49	62	86	39
50 - 54	275	429	336
55 - 59	180	383	363
60 - 64	413	483	490
65 - 69	345	362	423
70 - 74	479	297	379
75 - 79	302	229	302
80 - 84	375	202	194
85 - 89	177	95	144
90 - 94	156	50	61
95 - 99	33	9	11

ENGLISH LITERATURE - 1973

0 TOTAL MARKS = 4964 R(SP) =0.567 R(SF) =0.873 R(PF) =0.886

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	67.12	56.10	61.39
STDDEV =	11.80	12.04	10.56
PCT PASS =	94.90	73.73	91.98
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	0	0
5 - 9	0	3	0
10 - 14	1	1	0
15 - 19	0	4	0
20 - 24	4	9	1
25 - 29	5	54	7
30 - 34	26	127	19
35 - 39	25	168	61
40 - 44	87	412	165
45 - 49	105	526	145
50 - 54	432	920	879
55 - 59	510	884	908
60 - 64	841	751	947
65 - 69	763	485	754
70 - 74	798	285	518
75 - 79	578	164	318
80 - 84	433	99	155
85 - 89	222	52	63
90 - 94	111	16	19
95 - 99	23	4	5

ALGEBRA - 1973

0 TOTAL MARKS = 5241 R(SP) =0.791 R(SF) =0.926 R(PF) =0.958

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.37	56.18	61.05
STDDEV =	16.09	21.16	17.64
PCT PASS =	87.77	69.64	78.71
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	31	0
5 - 9	2	89	6
10 - 14	4	93	10
15 - 19	6	106	43
20 - 24	18	162	81
25 - 29	41	215	126
30 - 34	73	201	163
35 - 39	106	220	211
40 - 44	211	304	302
45 - 49	180	170	174
50 - 54	610	694	667
55 - 59	487	460	589
60 - 64	633	554	584
65 - 69	566	480	564
70 - 74	633	378	499
75 - 79	437	376	400
80 - 84	473	281	313
85 - 89	318	208	261
90 - 94	276	137	168
95 - 99	131	81	80

HISTORY — 1973

0 TOTAL MARKS = 5460 R(SP) =0.644 R(SF) =0.862 R(PF) =0.939.

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.15	46.85	56.29
STDDEV =	14.05	20.31	15.63
PCT PASS =	90.29	53.08	71.45
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	53	0
5 - 9	3	138	1
10 - 14	4	200	7
15 - 19	5	185	24
20 - 24	16	381	68
25 - 29	26	252	139
30 - 34	46	379	267
35 - 39	71	415	356
40 - 44	491	318	475
45 - 49	168	241	222
50 - 54	544	800	886
55 - 59	535	510	672
60 - 64	831	496	647
65 - 69	684	354	531
70 - 74	795	270	475
75 - 79	550	199	295
80 - 84	480	163	226
85 - 89	253	64	110
90 - 94	200	29	48
95 - 99	54	11	11

BIOLOGY — 1973

0 TOTAL MARKS = 3725 R(SP) =0.721 R(SF) =0.915 R(PF) =0.939

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	67.99	57.90	62.71
STDDEV =	14.11	16.52	14.19
PCT PASS =	91.89	68.27	86.93
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	0	0
5 - 9	0	0	0
10 - 14	0	4	0
15 - 19	2	19	2
20 - 24	6	39	8
25 - 29	8	96	19
30 - 34	40	139	57
35 - 39	50	193	83
40 - 44	105	313	193
45 - 49	91	379	125
50 - 54	341	418	613
55 - 59	293	425	498
60 - 64	542	425	484
65 - 69	430	357	456
70 - 74	553	269	389
75 - 79	431	225	308
80 - 84	397	189	218
85 - 89	210	129	165
90 - 94	149	85	76
95 - 99	64	18	29

ENGLISH - 1974

0 TOTAL MARKS = 7164 R(SP) =0.546 R(SF) =0.871 R(PF) =0.855

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.45	57.08	61.52
STDDEV =	11.81	10.97	10.07
PCT PASS =	94.60	83.49	90.90
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	1	0
5 - 9	1	2	0
10 - 14	0	3	0
15 - 19	1	12	1
20 - 24	6	12	4
25 - 29	7	59	11
30 - 34	25	129	31
35 - 39	45	214	58
40 - 44	167	430	276
45 - 49	135	321	271
50 - 54	674	1685	1014
55 - 59	795	1334	1403
60 - 64	1294	1244	1432
65 - 69	1099	862	1130
70 - 74	1093	456	791
75 - 79	726	273	439
80 - 84	622	97	231
85 - 89	288	22	63
90 - 94	152	7	9
95 - 99	26	1	0

ALGEBRA - 1974

0 TOTAL MARKS = 5726 R(SP) =0.784 R(SF) =0.923 R(PF) =0.955

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	67.06	58.44	62.50
STDDEV =	16.36	21.35	17.85
PCT PASS =	88.47	65.61	77.12
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	3	0
5 - 9	2	29	0
10 - 14	7	78	8
15 - 19	7	125	24
20 - 24	22	154	69
25 - 29	34	197	109
30 - 34	85	260	164
35 - 39	98	353	230
40 - 44	238	349	420
45 - 49	167	421	286
50 - 54	655	434	638
55 - 59	495	512	547
60 - 64	690	462	567
65 - 69	549	458	543
70 - 74	683	427	550
75 - 79	518	395	484
80 - 84	568	344	394
85 - 89	379	290	305
90 - 94	314	257	242
95 - 99	160	163	140

HISTORY - 1974

Ø TOTAL MARKS = 5518 R(SP) =0.709 R(SF) =0.892 R(PF) =0.945

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	65.99	54.28	59.88
STDDEV =	14.84	20.45	16.37
PCT PASS =	89.04	59.79	74.47
MARK	FREQUENCY	FREQUENCY	FREQUENCY
Ø - 4	Ø	13	Ø
5 - 9	1	32	1
10 - 14	4	65	4
15 - 19	5	141	14
20 - 24	18	202	58
25 - 29	27	280	94
30 - 34	73	319	178
35 - 39	106	352	259
40 - 44	188	409	319
45 - 49	183	406	282
50 - 54	567	542	654
55 - 59	538	460	659
60 - 64	835	488	617
65 - 69	655	421	552
70 - 74	692	366	501
75 - 79	493	340	409
80 - 84	532	279	320
85 - 89	273	211	241
90 - 94	247	132	119
95 - 99	75	43	37

BIOLOGY - 1974

Ø TOTAL MARKS = 4671 R(SP) =0.737 R(SF) =0.902 R(PF) =0.952

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	68.26	57.68	62.72
STDDEV =	13.71	19.08	15.33
PCT PASS =	92.53	65.62	81.61
MARK	FREQUENCY	FREQUENCY	FREQUENCY
Ø - 4	Ø	2	Ø
5 - 9	Ø	7	Ø
10 - 14	Ø	20	3
15 - 19	4	76	5
20 - 24	7	104	16
25 - 29	12	168	44
30 - 34	39	214	95
35 - 39	48	283	152
40 - 44	113	321	347
45 - 49	126	411	197
50 - 54	395	407	567
55 - 59	415	441	519
60 - 64	641	459	605
65 - 69	569	417	525
70 - 74	704	308	486
75 - 79	535	320	387
80 - 84	498	252	302
85 - 89	300	228	258
90 - 94	225	143	146
95 - 99	38	50	17

ENGLISH - 1975

0 TOTAL MARKS = 6902 R(SP) =0.550 R(SF) =0.871 R(PF) =0.651

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.12	54.48	60.05
STDDEV =	11.64	10.92	9.99
PCT PASS =	95.03	77.12	87.95

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	0	0	0
5 - 9	0	2	0
10 - 14	0	6	0
15 - 19	0	10	0
20 - 24	4	36	6
25 - 29	13	104	10
30 - 34	28	163	32
35 - 39	47	278	99
40 - 44	127	564	350
45 - 49	124	416	335
50 - 54	685	1845	1105
55 - 59	809	1236	1376
60 - 64	1218	1108	1371
65 - 69	1102	657	1043
70 - 74	1060	281	659
75 - 79	727	132	327
80 - 84	536	44	142
85 - 89	253	18	44
90 - 94	142	2	3
95 - 99	26	0	0

ALGEBRA - 1975

0 TOTAL MARKS = 5239 R(SP) =0.777 R(SF) =0.918 R(PF) =0.959

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	68.41	51.08	59.49
STDDEV =	15.60	21.29	17.42
PCT PASS =	90.72	52.32	72.61

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	0	28	0
5 - 9	1	72	5
10 - 14	4	115	7
15 - 19	3	168	33
20 - 24	8	228	63
25 - 29	23	297	109
30 - 34	54	306	187
35 - 39	63	401	266
40 - 44	192	429	488
45 - 49	138	454	277
50 - 54	498	473	644
55 - 59	468	409	619
60 - 64	647	412	513
65 - 69	577	355	501
70 - 74	661	288	443
75 - 79	506	246	328
80 - 84	491	204	291
85 - 89	355	170	219
90 - 94	339	112	174
95 - 99	170	64	71

HISTORY - 1975

0 TOTAL MARKS = 4095 R(SP) =0.716 R(SF) =0.906 R(PF) =0.944

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	65.51	50.15	57.59
STDDEV =	14.54	18.67	15.41
PCT PASS =	88.47	56.31	71.16

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	0	9	0
5 - 9	0	24	0
10 - 14	1	75	4
15 - 19	2	103	18
20 - 24	14	177	33
25 - 29	13	277	88
30 - 34	47	270	139
35 - 39	61	288	250
40 - 44	175	334	413
45 - 49	159	232	336
50 - 54	457	579	524
55 - 59	408	393	501
60 - 64	606	360	505
65 - 69	454	293	438
70 - 74	556	261	343
75 - 79	341	180	268
80 - 84	381	142	180
85 - 89	219	70	110
90 - 94	158	26	41
95 - 99	39	0	3

BIOLOGY - 1975

0 TOTAL MARKS = 4465 R(SP) =0.724 R(SF) =0.909 R(PF) =0.943

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.33	49.60	57.72
STDDEV =	14.64	18.11	15.22
PCT PASS =	89.61	55.57	72.23

MARK	SCHOOL FREQUENCY	PUBLIC FREQUENCY	FINAL FREQUENCY
0 - 4	1	0	0
5 - 9	0	25	1
10 - 14	2	84	7
15 - 19	5	106	14
20 - 24	12	189	28
25 - 29	24	293	88
30 - 34	41	293	153
35 - 39	53	313	249
40 - 44	167	436	402
45 - 49	159	245	298
50 - 54	469	715	613
55 - 59	463	433	594
60 - 64	591	391	556
65 - 69	537	334	466
70 - 74	591	214	366
75 - 79	442	153	250
80 - 84	399	134	179
85 - 89	247	60	126
90 - 94	183	35	67
95 - 99	73	12	8

ENGLISH - 1976

2000 TOTAL MARKS = 7289 R(SP) =0.604 R(SF) =0.868 R(PF) =0.892

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.24	57.07	61.40
STDDEV =	11.57	12.61	10.89
PCT PASS =	94.72	73.17	88.04

MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	2	0
5 - 9	0	2	0
10 - 14	0	3	1
15 - 19	0	7	1
20 - 24	4	30	4
25 - 29	12	75	12
30 - 34	19	170	26
35 - 39	32	315	96
40 - 44	146	522	343
45 - 49	172	830	389
50 - 54	676	1043	1075
55 - 59	916	1171	1290
60 - 64	1300	1060	1272
65 - 69	1109	853	1073
70 - 74	1078	596	795
75 - 79	764	362	531
80 - 84	627	165	283
85 - 89	277	62	80
90 - 94	135	15	15
95 - 99	20	6	3

HONOURS MATHEMATICS - 1976

2000 TOTAL MARKS = 1131 R(SP) =0.716 R(SF) =0.901 R(PF) =0.948

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	76.53	66.40	71.22
STDDEV =	13.37	18.19	14.65
PCT PASS =	98.64	82.32	92.66

MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	0	0
5 - 9	0	2	0
10 - 14	0	4	0
15 - 19	0	6	0
20 - 24	0	11	2
25 - 29	0	17	2
30 - 34	2	26	9
35 - 39	4	40	15
40 - 44	12	55	26
45 - 49	20	59	29
50 - 54	41	87	73
55 - 59	42	94	97
60 - 64	93	102	119
65 - 69	109	106	108
70 - 74	127	109	131
75 - 79	149	124	142
80 - 84	175	115	147
85 - 89	144	88	121
90 - 94	144	82	80
95 - 99	44	24	30

MATRICULATION MATHEMATICS - 1976

2000 TOTAL MARKS = 4590 R(SP) =0.755 R(SF) =0.914 R(PF) =0.954

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.79	56.40	61.35
STDDEV =	14.77	19.56	16.11
PCT PASS =	90.20	63.99	78.26
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	2	0
5 - 9	0	28	0
10 - 14	2	49	4
15 - 19	4	78	11
20 - 24	6	131	40
25 - 29	16	185	68
30 - 34	47	195	115
35 - 39	67	268	177
40 - 44	143	309	358
45 - 49	165	408	225
50 - 54	509	432	559
55 - 59	479	401	542
60 - 64	597	464	531
65 - 69	537	369	471
70 - 74	537	366	452
75 - 79	489	315	391
80 - 84	413	252	289
85 - 89	275	187	198
90 - 94	197	108	116
95 - 99	90	41	43

HISTORY - 1976

2000 TOTAL MARKS = 3840 R(SP) =0.717 R(SF) =0.899 R(PF) =0.950

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	66.39	56.92	61.41
STDDEV =	14.67	20.46	16.31
PCT PASS =	89.53	69.40	78.13
MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	13	0
5 - 9	0	35	0
10 - 14	2	47	4
15 - 19	1	60	11
20 - 24	9	120	26
25 - 29	17	148	86
30 - 34	50	188	106
35 - 39	64	205	166
40 - 44	133	206	278
45 - 49	126	153	163
50 - 54	395	501	439
55 - 59	379	359	447
60 - 64	512	358	439
65 - 69	441	322	374
70 - 74	528	311	406
75 - 79	389	284	320
80 - 84	349	203	270
85 - 89	229	171	189
90 - 94	174	96	102
95 - 99	39	32	13

BIOLOGY - 1976

2000 TOTAL MARKS = 4484 R(SP) =0.711 R(SF) =0.903 R(PF) =0.939

	SCHOOL	PUBLIC	FINAL
MEAN MARK =	67.09	62.00	64.30
STDDEV =	14.42	17.99	15.02
PCT. PASS. =	90.59	74.89	84.79

MARK	FREQUENCY	FREQUENCY	FREQUENCY
0 - 4	0	0	0
5 - 9	0	2	0
10 - 14	3	6	1
15 - 19	1	26	3
20 - 24	6	37	12
25 - 29	13	83	40
30 - 34	38	145	50
35 - 39	74	197	121
40 - 44	159	253	255
45 - 49	128	377	200
50 - 54	460	434	519
55 - 59	440	496	556
60 - 64	572	439	529
65 - 69	568	429	484
70 - 74	606	385	468
75 - 79	409	372	426
80 - 84	471	308	392
85 - 89	266	218	251
90 - 94	191	164	143
95 - 99	77	57	34

Appendix 6. Summary of Chief Readers Remarks from the Public Examination Reports.

1. English Literature 1971

"... an improvement on many papers of former years."

English Literature 1972

"... the paper was a good one in some respects." The faults were not in content but in the directions to the students.

English Literature 1973

There were no general comments regarding this paper.

English 1974

"The concensus was that the paper was fair and comprehensive. It was felt that grade XI students ought not to have much difficulty with it."

English 1975

"Generally it was the feeling of the readers that the paper was not overly challenging and that most students should be able to cope with it. However, fears were expressed for average and below average students due to the paper's length and the amount of reading and writing required by it."

2. Algebra 1971

On part I of the paper the average number of correct answers was nine out of twenty-eight. "Obviously it was too difficult for this years graduating class." The "poor showing" on this paper was attributed to the fact that a new course was being examined and the students lacked an adequate background in the new mathematics courses.

Algebra 1972

No readers comments but it is obvious from reading the 1971 paper and the 1972 paper that the 1972 paper was less difficult. There was a greater choice within questions and the questions themselves were less difficult.

Algebra 1973

No general comments were made but each question was criticized. Part I was generally well done and there was no major criticism of the questions in Part II.

Algebra 1974

Part I was considered a "fairly good paper" and the same comment was made for Part II.

Algebra 1975

"It appears that this part (Part I) of the paper presented great difficulty to the majority of students. This suggests that either the questions were too difficult or the students were poorly prepared." "(Part II) was geared to the above average students, whereas the average and below average experienced great difficulty with most questions and as a result the examination was poorly answered."

3. History 1971

"A major weakness of the paper was the ignoring of significant and important topics and the emphasis on relatively minor events. Many of the questions required information on items receiving superficial treatment in the text."

History 1972

"The opinion of the markers was that the history paper, in general, was a very good one." The major criticism was that several questions were taken from a magazine not used by many schools."

History 1973

"Readers felt that this examination was not overly difficult - certainly not difficult enough to account for the poor results." The major criticism was that the paper was too long and the students had to spend too much time deciding which question to answer. Another interesting observation was, "With most schools working on the 50% school evaluation system, students often find themselves tied down with essays, research projects, debates, book reviews, current events and other activities. This detracts from the study of the textbook and gives much less time in preparing for the final examinations."

History 1974

No general comments were made but the comments on individual questions leave the impression that the examination was good.

History 1975

"This examination provided a good coverage of the course of study - the choice of questions provided a challenge for the good students but at the same time, the average student should have no difficulty obtaining a passing grade." The reason proposed for the low pass rate is that the course is not geared to the non-academic student who is contributing to a larger percent of the enrollment each year. The academic students are either doing World Problems, two sciences or not writing examinations at all. "With the exception of general students any student who did even a minimum of work during the year should have passed this examination."

Finally we shall summarize the biology readers' report.

4. Biology 1971

There were no general comments regarding the paper but the comments on each individual question were favourable.

Biology 1972

"The markers considered the paper satisfactory in most instances." "The relatively poor performance of the students could be partially due to the technical wording of the questions." "The readers felt that the material of the course was well covered by the questions."

Biology 1973

"... it was a very good examination ... better than any given within the last three or four years." There was some concern over the haphazard way in which the students approached the questions. Another comment of note was, "Those teachers in schools with shared evaluation found that in speaking with their students, many stressed that they kept saying that they only needed —— marks to get a pass.' Teachers also noted that many of their better students left the exam room quite early having, quote 'plenty of marks for university, etc.'

Biology 1974

The panel felt that Part I was well representative of the course and that Part II was a fair examination for most students. There was ample choice but few questions to challenge brighter students.

Biology 1975

"A very bad paper!" "It was not geared to the average student. The impression given is that whoever made up the examination was not involved in teaching the grade XI course or otherwise was involved only with exceptional students."