REPORT OF AN INTERNSHIP

INVESTIGATING FLEXIBLE

MODULAR SCHEDULING AT

BEACONSFIELD HIGH SCHOOL

IN THE PROVINCE OF

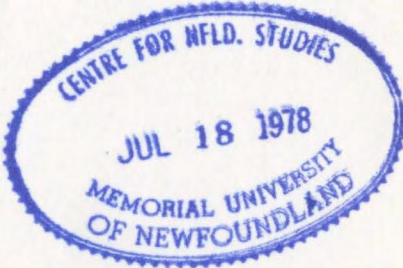QUEBEC

BRIAN F. TAYLOR

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REPORT OF AN INTERNSHIP

INVESTIGATING FLEXIBLE MODULAR SCHEDULING

AT BEACONSFIELD HIGH SCHOOL IN THE

PROVINCE OF QUEBEC

by

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ABSTRACT

The topic of special interest was flexible modular scheduling as it is organized at Beaconsfield High School.

An Open-systems theory for research was used as the conceptual framework. Questions were derived from this theory to guide the investigation during the internship.

The researcher was a participant observer utilizing focused and unfocused interview techniques to gather the information.

The data were analyzed in light of the conceptual framework and recommendations were made for future organizational patterns in Newfoundland's high schools.

ACKNOWLEDGEMENTS

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The writer is also indebted to Dr. V. Snelgrove for his contributions to the internship report.

Special thanks are expressed to Mr. Richard McGrail who made the internship successful by coordinating the activities and by giving so readily of his own experience and knowledge.

To the many teachers and administrators who helped in Quebec, most of whom are not mentioned by name in this report, I thank them for their cooperation and friendship.

To my wife Imelda, I express my sincere thanks for her support during the various stages of this internship but most especially for that other tangible product of our sojourn in Montreal, our daughter Janine who was born on June 5, 1976.

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CHAPTER I

INTRODUCTION

The need for a study of scheduling techniques of relevance to
Newfoundland educators will be explained in this chapter. The topic of
purpose in education will be reviewed to determine whether current
scheduling practices in Newfoundland are in line with the stated purposes
of education throughout North America, Canada, and Newfoundland. Next,
the topic of special interest of this study will be delineated and the
significance of the study for Newfoundland will be explained.

The Rationale

Ostensibly, the subject matter of this internship report, flex-
ible modular scheduling, appears to be much more insular than is actually
true. The school schedule, whether flexible modular, traditional, or
some combination thereof, is a manifestation of the philosophy of the
school and as such cannot be treated in isolation. The intern, there-
fore, cannot avoid the underlying philosophy behind flexible modular
scheduling as he attempts to evaluate flexible modular scheduling with a
review of the literature and through his personal research utilizing the
'participant observer' methodology.

Educational change and reform should not be undertaken if it is
anathema to the philosophical basis and purposes of education. The means
of education should foster ends which are congruent with the purposes of
education. Individualization of instruction is one of a number of

rationales, another being better utilization of time and space, given for the institution of flexible modular scheduling. Yet, individualization of instruction as a means could have unintended consequences such as a loss of student group identity and cohesiveness, which would not be accordant with one of the purposes of education which is to prepare young people to live within the much larger group--society.

Purpose in education has received considerable attention in the various studies and commissions of North America. Some statements of the purposes of education will be overviewed to determine if flexible modular scheduling is objectionable at the conceptual level before it is studied at the operational level.

One of the early statements of this century regarding the purposes of education was made by the U. S. Commission on the Reorganization of Secondary Education (U. S. Office of Education, 1918). Seven broad areas of responsibility for the secondary school were stated as health, command of fundamental processes, worthy home membership, vocation, civic education, worthy use of leisure, and ethical character. Reasoning that secondary education has met the needs of only a few groups, the Commission called for a broadening of subject offerings, adoption of content and methods, and flexibility in organization and administration.

According to Warren, after a review of the literature pertaining to the purposes of education, recent statements tend to reflect the 1918 effort, but there is increasing stress being placed on the ability to think, the ability to learn, humaneness, and a concern for survival (Warren, 1973, p. 75).

The U. S. Kettering Commission Report (1973) expresses concern over the "purely custodial functions" which high schools serve and the

"busywork components designed merely to occupy the time of adolescents who are in school only because the law requires it." The report proposes that teachers be exposed both in their training and through in-service to a variety of teaching and learning alternatives (Passow, 1975, p. 164). The Kettering Report also emphasized "humaneness," the concept which was popularized by Silberman (Silberman, 1970, p. 114).

On the Canadian scene, the Manitoba Committee on the Reorganization of Secondary Education stated in its interim report (1970) that:

> the basic purpose of education is to provide an instrument through which each individual realizes self-respect, self-fulfillment, and his relevance in a dynamic society, and that it is mandatory that the educational system be ongoing, flexible, and centered on the human needs of the students that it is designed to serve. (Warren, 1973, p. 78)

More germane to this internship is the statement of "Aims of Public Education for Newfoundland and Labrador," issued in 1959 by the Newfoundland Department of Education. Fourteen general objectives of education were listed. Intrinsic in several of the aims is 'humaneness,' but as Warren points out, this goal should be more emphasized.

> Students must be taught compassion for and sensitivity to other people; they must be taught to work for the well-being of mankind, including the preservation and improvement of the environment. Ways must be sought to translate these convictions into new kinds of learning, teaching, and institutional styles. An educational system so oriented will not only provide the development of humaneness among students, it will also nourish and sustain the creative, the innovator, and even the heretic. (Warren, 1973, p. 80)

'Responsibility,' as a goal, is specified in Newfoundland's statement of aims, but opportunities for demonstrating responsibility are often lacking. Most of the schools in Newfoundland are simply not organized so that the students can be given very much responsibility.

Warren, after his study of the internal organization of secondary

schools in Newfoundland, stated:

> The organizational structure of the Newfoundland high
> school must be released from the lockstep of time and space.
> Many more opportunities must be afforded students for self-
> direction and responsibility in their educational endeavors.
> Organizational changes that should be implemented include:
> nongradedness, large-group instruction, independent study,
> differentiated staffing, and flexible scheduling. (Warren,
> 1973, p. 134)

The aims and purposes of education across the North American
continent have many similarities. The concern with the development of
'humaneness' and 'responsibility' is as valid for Newfoundland as it is
for the other Canadian provinces and the United States. School internal
organization has changed in many instances across North America to reflect
such purposes, and a question which should be answered is whether
Newfoundland should adopt internal organizational patterns which are more
congruent with the stated aims and purposes of education.

The organizational structure in Newfoundland's high schools which
Warren referred to is the practice of organizing the school program by
subject in periods of equal length and number per week. Although this
internal organization is not mandated by the Department of Education, it
is virtually the only organizational structure presently being used in
Newfoundland.[1] This practice is not unique to the province but dates
back, at least formally, to 1909 when the Carnegie Foundation for the
Advancement of Teaching proposed a standard unit of time to bring
accounting uniformity between different parts of the United States. The
Carnegie Unit is attained by completing 120 hours in a subject during
the school year. Periods of forty to sixty minutes long are used over

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[1] The writer did not carry out a survey but to his knowledge there
are only a few exceptions such as in Labrador City.

the academic year of thirty-six to forty weeks to complete courses com-
prising one Carnegie Unit. The Carnegie Unit was quickly accepted and
has become the standard guide for school internal organization, not only
in the United States but all across Canada. It is interesting to note
that twenty-two of the twenty-five trustees of the Carnegie Foundation
in 1909 were college presidents; and, therefore, their primary concern
was standardization for college admission (Tanner, 1942, p. 45). Never-
theless, there was little immediate criticism from high school educators
in spite of the fact that the majority of high school students were not
college bound.

Despite its widespread acceptance, the Carnegie Unit is not
without its faults since it is a quantitative measure which fails to
recognize qualitative variations in teaching and learning (Tanner, 1972,
p. 46). Tompkins and Gaumnitz (1954) pointed out the following limita-
tions of the Carnegie Unit.

1. It lends prestige to those subjects acceptable to colleges
   in terms of entrance Units, and discriminates against
   other subjects excellent in their own right but as yet
   unacceptable for Unit measure.

2. It considers of equal magnitude all subjects for which
   classes meet an equal number of minutes per semester,
   provided outside pupil preparation is required. Five
   periods of English is equal to five periods of mathema-
   tics, etc.

3. It tends to make inflexible the daily and weekly time
   schedules of the school, for the Carnegie Unit nourishes
   the idea that a class should meet one period a day five
   times a week.

4. It restricts the development of a more functional curri-
   culum based upon students' abilities, interests, and life-
   needs, because it has been difficult for the high school
   to obtain units of credit acceptable to the colleges in
   certain more functional subjects.

5. It measures quantitatively experiences in different sub-
   jects and in different schools and counts them as similar
   in outcome.

6. It ranks pupils in graduating class despite the fact that few of them ever have exactly the same program of studies and despite the fact that seldom are all the years in school counted in the ranking of the pupil.

7. It measures a high school education (and diploma) in terms of time served and credits earned by the pupil. (Tanner, 1972, p. 47) .

Shortly after, in 1956, the National Association of Secondary School Principals (N.A.S.S.P.) established a commission directed by J. Lloyd Trump to study secondary education in America. The outcome of this study was Trump and Baynham's book, Focus on Change--Guide to Better Schools, which was published in 1961. This book marked the demise of unconditional acceptance of those educational principles that are based on administrative convenience rather than on educational theory and research. Two such principles were the Carnegie Unit of time and standard class size regardless of the learning activity.

The "Trump Plan," as this reorganization is popularly known, makes the size and the length of the class vary with the type of learning activity and provides for individual student differences. Trump predicted that the school of the future would have three important school arrangements to provide for individual differences.

A greater proportion of school time and appropriate spaces for individual work, independent of group membership, with a minimum of faculty supervision;

A combination of horizontal (more of the same subject or grade level) and vertical (advanced subjects) enrichment, with professional decisions determining the amount of each, according to the individual student's learning speed and maturity;

Flexibility in grouping and regrouping of students, for example, when the learning goals of a group of individual students are seen to coincide to a workable degree, small groups will be organized on the basis of which students need what kinds of teaching; and large groups will be organized by including those with some similarity in past achievement of skills or of content in the subject in question. (Trump and Baynham, 1961, p. 46)

Bush and Allen (1964) developed flexible modular scheduling (F.M.S.) based on the work of Trump and the N.A.S.S.P. Commission. Flexible modular scheduling is built around a 'mod' ranging from ten to thirty minutes in length so that class length can be any multiple of the mod. Class size is also free to vary under this arrangement, and students are given course options so that each student must have his own timetable. The additional variables of class length and size as well as increased student choice of program make the construction of a flexible schedule much more difficult than that of a traditional schedule. Bush and Allen attempted to utilize the computer. Computer programs were developed, and in 1963-64, four high schools in the United States experimented with computer-generated flexible modular schedules.

After the advent of computer-generated schedules, flexible modular scheduling spread into Canada; and at present, schools from Halifax, Nova Scotia, to Vancouver, British Columbia, have adopted it. There are, however, few schools in Newfoundland which have put flexible modular scheduling into practice.

The Topic of Special Interest

The main purpose of this research is to study flexible modular scheduling experientially by means of an internship and to evaluate it in the light of the literature with special reference to the Newfoundland situation.

The Significance of the Study

Newfoundland's geographical location has kept it on the periphery of cultural and technological change as it has occurred throughout North

America. This is also true in education but is not necessarily negative as the time lapse, more than a decade in the case of flexible modular scheduling, if taken advantage of, can prevent mistakes made elsewhere by only adopting those developments which research has proven meritorious. Such logic is particularly appropriate for the purposes of this internship, as the adoption of flexible modular scheduling represents a profound change from conventional educational philosophy as students are given much greater freedom--as much as forty percent of student time in school may be unscheduled for individual projects and/study.

Within the limitations of the 'observer as participant' approach, the intern attempted to evaluate flexible modular scheduling and its intrinsic philosophy as a realistic alternative for schools in Newfoundland.

The intern proposed to study the preconditions for successful implementation of flexible modular scheduling and the problems inherent in its implementation. The conclusions and guidelines generated from the internship experience were examined for their relevance to schools contemplating a change to F.M.S.

If flexible modular scheduling is implemented in some of Newfoundland's schools, the province will need educators who have had some experience with F.M.S. The intern hopes that his brief experience with flexible modular scheduling may be of some modest benefit to the province if its schools follow the North American trend of increased flexibility.

The majority of Newfoundland's teachers are trained at Memorial University of Newfoundland; and while this has decided advantages in that training is geared to the local, social, and educational milieu, one

disadvantage is that theory and practice may take longer to permeate the provincial scene. A concrete example is the notable lack of a course concerned with the technical aspects of the principalship such as scheduling alternatives. The internship report could be of significance in influencing the Department of Educational Administration to offer such a course.

Organization of the Internship Report

Chapter I has attempted to give the background information pertaining to the internship. To accomplish this, the relationship between school schedules and educational purposes was developed and a brief history of the evolution of school schedules was given. The pivotal point of the internship was stated as a study of flexible modular scheduling. Chapter II develops the conceptual framework, use of which enabled the intern to delineate the specific objectives of the internship and the questions to be used to realize the objectives. The conceptual framework is also used to guide the review of the literature and the presentation of the data collected during the internship. Chapter III reviews the literature related to the internship. Chapter IV outlines the type of internship and the methodology used during the study. The information gathered during the internship is presented in Chapters V and VI. Chapter VII offers some reasons for the differences between scheduling practices in Quebec and Newfoundland, the conclusions, and the recommendations of the writer for education in Newfoundland.

CHAPTER II

THE CONCEPTUAL FRAMEWORK

An open systems approach to educational administration will be
used to overview the role of the principal as an administrator in a
formal organizational context and to indicate the relative mix of skills
required at various levels of management. A systems model for rational
decision making in education will be presented and used to direct the
review of the literature and to generate questions to be pursued during
the internship.

An Open Systems Theory for Research

The formal organization does not operate as a closed system, but
rather as a part of the much wider social system. There is a continuous
transfer of goods, inputs and outputs, between the formal organization
and society. The organization can therefore be considered as an open
system interacting with its environment, the macro-system. In turn, the
system or organization can be broken down into subsystems for the purpose
of analysis.

The hierarchical structure of an organization can be divided into
three levels: the "technical" system, the "managerial" system, and the
"institutional" or community system (Parsons, 1957). Between these three
levels there are two breaks where communication must occur, and in each
of those two interstitials, feedback must move up and down so that the
traditional "line authority" concept where authority is delegated from

superior to subordinate may in practice be too simplistic. Each level

has a certain amount of independence.

Organizations may be classified on the basis of their technical

functions. The most obvious difference would be between those organi-

zations which produce inanimate goods and those which deliver services.

At the latter extreme would be the educational system.

The raison d'etre of the organization is performed by the tech-

nical level. In the educational system the technical functions are

performed by the teachers whereas the managerial level directs and facil-

itates the work of the teachers. The managerial system's relation to

the technical system can be divided into two areas: that of dealing with

the external situation of the organization and that of administering the

organization's internal affairs.

The external responsibilities of the principal would be those in

which he mediates between the technical organization (school) and the

consumers.[2] Another external responsibility is the procurement of

resources--financial, personnel, and physical facilities--needed to carry

out the technical functions.

The internal relation of management to the technical system is

by no means a one-way process of giving directions although the broad

technical tasks may be formulated by decisions of management. This is

very evident in education as teachers may have areas of competence which

cannot be matched by administrators, and this in conjunction with their

_____

[2]The principal can be considered as part of management by virtue
of his authority even though he is a member of the Newfoundland Teachers'
Association and belongs to the same collective bargaining unit as
teachers. This "Collegial Model" setup is coming under increasing pres-
sure as some principals are demanding separation from the teachers'
association.

involvement at the technical level necessitates their inclusion in many technical decisions. Ultimately, however, the principal does have the responsibility to successfully manage the internal affairs of the school such as assigning students and teachers to subjects and grade levels, recording and reporting students' attendance and achievement, and coordinating guidance services and extra-curricular activities.

The formal organization as a subsystem of society receives its meaning and legitimation from its environment. This means that the managerial system is also subject to controls by the community or institutional structure. These higher level controls are of three types. The first control is the set of universal norms which are valid throughout the community. Although not formally enforced, any deviance, if suspected, will incur chastisement. The second control is a formal structure, such as a school board, which represents the diffuse public interest. The third control is one which involves management directly with "public authority." Often some organ of government or sometimes the Church has performed this function. In Newfoundland's educational system both the Church and the State perform this control role in partnership.

Each of the three subsystems—the institutional, the managerial, and the technical—has a certain amount of autonomy. The functions of each level are different and a certain amount of independence must be guaranteed each level so that each is accountable for its own responsibilities. Tenure, in this perspective, is a formal mechanism to protect the professional staff from managerial pressure or from pressure imposed by school boards through management.

The managerial level, in the educational system, ranges from the

principal to the superintendent. Unlike the technical level which primarily deals directly with the level above, management is caught in the middle and must also communicate upward to the institutional level. However, different levels of management do not have the same degree of communication upwards or downwards. The principal has more internal dealings with the technical staff than the superintendent does and the superintendent has more external relations with the community in a broad sense. The skills which a successful principal must employ, while qualitatively the same as those employed by a superintendent, are utilized in quantitatively different amounts.

There are three areas of skill--technical, human, and conceptual--generally agreed to be requisite to a successful manager, but each level of management requires different mixes of these three areas of skill (Katz, 1955). As one moves upward in management, less technical skill will be needed since direct contact with the technical level decreases; and more conceptual skill is needed as the importance of seeing the organization, in its environment, as a whole, increases. Human skills should remain relatively constant in their importance, as management at any level implies working with-people (Hersey & Blanchard, 1972, p. 6). The principal utilizes a diversified array of technical skills as he carries out his responsibilities. A far from exhaustive list could include business skills--the selection, utilization, and control of school supplies; evaluative techniques--the supervision and evaluation of both professional and non-professional personnel; and legal knowledge--knowledge of the rights of students and teachers to ensure a smooth running accident-free operation. Although it would be difficult to rank such skills in order of importance, a very essential skill is

the ability to provide the organizational arrangement to best facilitate
attainment by the students of the educational objectives of the school.

> A basic concept in school organization and administration
> deals with the relationship between the instructional program
> and the organizational pattern that implements it. Good
> theory suggests that the instructional program be built and
> the organizational pattern established that best facilitate
> maximum results for classroom learning. (Trump, 1973, pp.
> 33-34)

The principal, then, should not only be cognizant of scheduling
alternatives but have an in-depth knowledge regarding advantages and
disadvantages and the philosophical basis of each alternative so that he
can lead the staff in the making of a wise decision.

One of the characteristics of administration is the making of
decisions. In congruence with administration generally, decisions in
education have often been based on value orientations simply because
objectives or outcomes cannot often be enunciated in a fashion which is
amenable to quantification. Added to this has been the steady growth in
complexity of most schools and school systems with a resultant decen-
tralization of decision making. Such a management system requires a high
standard of "technical competence" on the part of the decentralized staff
to make administrative decisions which are in line with the goals of the
organization (Banghart, 1969, pp. 5-7). The systems approach to admin-
istration can be considered as a technical skill to be utilized in making
educational decisions. Just as the formal organization can be broken
down into systems for the purpose of analysis, so can problems and deci-
sions be broken down into their component parts to facilitate analysis.
System in this perspective is "an inclusive term that denotes all acti-
vities involved from the original analysis of the problem through the
final implementation of recommendations."(Banghart, 1969, p. 20)

Alkin and Bruno state that there are five elements to the system approach--the objectives, alternatives, costs, model or models, and the decision rule. The first task for the system researcher is to specify the "objectives" to be attained and to assess to what extent the objectives are being realized. "Alternatives" are different strategies or ways of attaining the objective. Each alternative has "costs" such as time or money and acceptance of an alternative means acceptance of its associated costs. "Models" are the substance of a system approach. They represent diagrammatically the cause-and-effect relationship inherent in the situation under study. Alkin and Bruno, in describing the elements of the system approach, state that "the role of the model is to predict the costs and the degree of attainment of specified objectives associated with each alternative"(Alkin & Bruno, 1970, p. 194). The final element of the system approach is a "decision rule" which is used to rank alternatives, thus establishing priorities.

It should be noted that the system approach is a process and not a product (Kaufman, 1970, p. 8). The product is the desired educational outcome, the acquisition of certain skills, knowledge or attitudes. Flexible scheduling, team teaching, individualized study and the system approach itself are examples of processes or means by which the end product is achieved.

Kaufman has developed a model which he terms "a design-process mode of a system approach." He has divided the system approach to the administration of a school into system analysis and system synthesis. Figure 1 depicts his approach (Lipham & Hoch, 1974, p. 35).

The initial step in Kaufman's model is to become aware of the problem or to assess those needs which are not being met. A need is

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                                    SYSTEM DESIGN

          SYSTEM ANALYSIS                              SYSTEM SYNTHESIS

                                    (FEEDBACK)
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STEPS	IDENTIFYING THE PROBLEM	DETERMINING ALTERNATIVES	CHOOSING A SOLUTION STRATEGY	IMPLEMENTING THE SOLUTION STRATEGY	DETERMINING EFFECTIVENESS
TOOLS	NEEDS ASSESSMENT	MBO. BEHAVIORAL OBJECTIVES	PPBS. INPUT-OUTPUT ANALYSIS	NETWORK TECHNIQUES, PERT/CPM	TESTING, OUTCOME EVALUATION
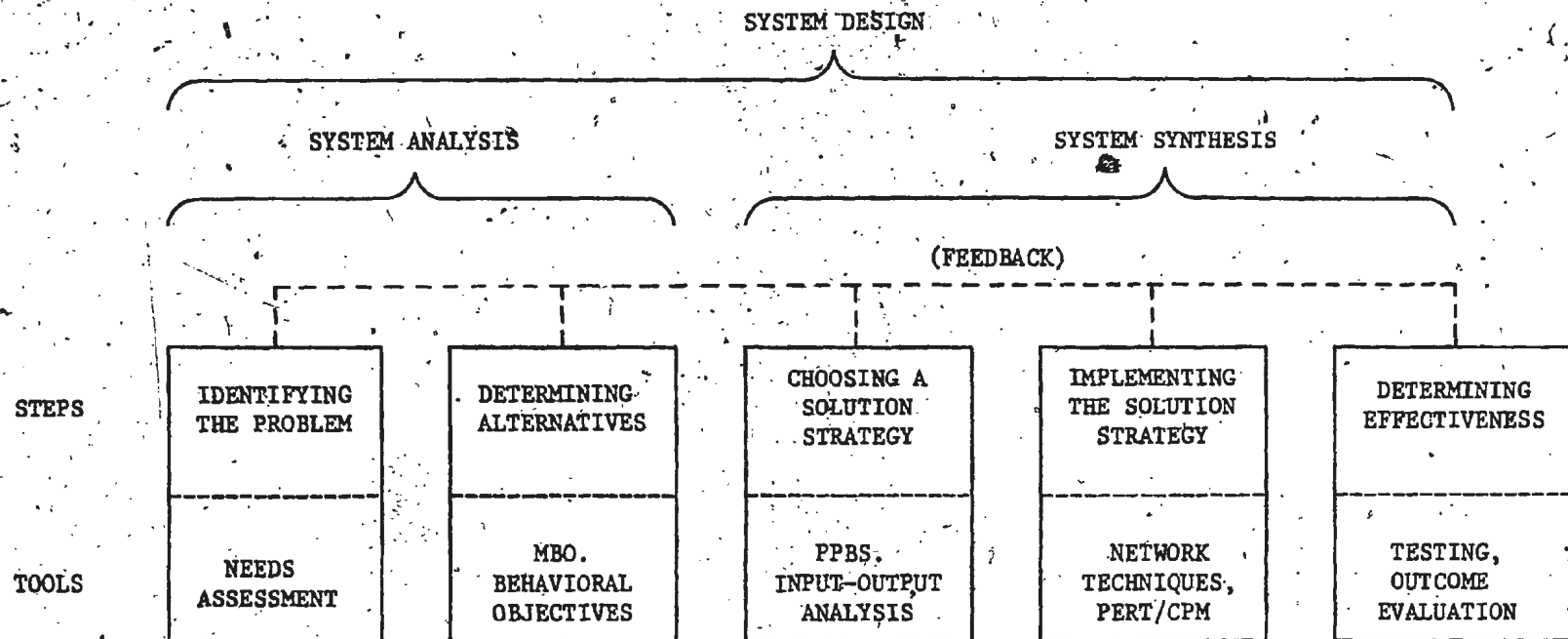
Figure 1
Administration in Terms of System Design, Analysis, Stages,
and Tools for the Improvement of Education

SOURCE: Roger A. Kaufman, "System Approaches to Education: Discussion and Attempted
Integration," in Philip K. Piele, Terry L. Eidell, and Stuart C. Smith (Eds.),
Social and Technological Change: Implications for Education, Eugene, Oregon,
Center for Advanced Study of Educational Administration, University of
Oregon, 1970, pp. 143, 168.

defined as a discrepancy between "what is" and "what should be." Once

educational needs can be stated in terms of discrepancies, measurable

objectives can be stated as the "reduction of needs over time." The

assessment of needs or problems translates into goals or objectives.

The objectives should be stated in operational terms as behaviors rather

than as processes. Such needs assessment enables the principal to

isolate pressing problems and to design alternative solutions (Lipham &

Hoeh, 1974, pp. 35-44).

The second stage of system analysis, determining alternatives,
involves the following:

1. Conducting mission analysis. Mission analysis involves four
   stages:
   (a) Identifying an overall mission objective: "Where are
       we going?"
   (b) Determining constraints: "What are the things that
       will keep us from where we are going?"
   (c) Removing constraints: "How do we eliminate those
       things that keep us from where we are going?"
   (d) Preparing a mission profile: "What are the milestones
       along the way to where we are going?"
2. Performing function and task analysis: "What specifically
   must be done to get to each milestone?"
3. Performing methods-means analysis: "What are the possible
   alternatives for getting each function and task done?"
4. Formulating the criteria to be used in assessing alterna-
   tives.
5. Formulating the decision rules for selecting an alterna-
   tive. (Lipham & Hoch, 1974, p. 37)

Suggested techniques at this stage include management by objectives

(M.B.O.) at the administrative level and the specification of behavioral

objectives at the instructional level.

The third step is choosing a solution strategy from the alterna-

tives. It involves the following activities:

1. Obtaining and assessing criterion information related to each decision alternative.

2. Applying the decision rules to the available criterion evidence. This may be straightforward and unambiguous or highly subjective and intuitive.

3. Choosing one alternative.

4. Reflecting on the efficacy of the indicated choice.

5. Confirming the indicated choice or rejecting it. The decision maker may seek more information, change the decision rules, formulate additional alternatives, or retain the status quo, thereby choosing by default the alternative in use. (Lipham & Hoch, 1974, pp. 37-38)

Such tools as planning-programming-budgeting systems (P.P.B.S.) and cost-benefit (C.B.) analysis are useful in formulating decisions at this stage. Although such tools as P.P.B.S. and C.B. analysis are decision tools in themselves, the Kaufman model attempts to utilize the particular advantages of each to reach more valid decisions.

The fourth step is implementation of the solution strategy, but evaluation should still be ongoing to assess whether the solution strategy is being implemented in the intended manner and to determine if the program is moving towards the objectives.

The final stage, determining effectiveness, is concerned with the extent to which the objectives of the program have been realized. The purpose of this evaluation is to decide if the program should be terminated, continued as is, or expanded. Norm-referenced[3] and criterion-referenced tests[4] are often used to determine if the stated performance objectives have been achieved.

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[3]Norm-referenced tests are used to rank individual students in terms of their ability, knowledge or attitudes by their relative position in a group.

[4]Criterion-referenced tests yield a mark based on accomplishment of certain criteria or performance objectives.

It would be an invaluable experience to utilize the systems approach as outlined, in a practical situation; that is, follow the process from identification of needs to evaluation of the alternative implemented. Any internship, of course, does not lend itself to such an intensive and long-term process.

The highly rational approach of the Kaufman model to planning makes it a valuable addition to the principal's repertoire of technical skills to be used in carrying out the internal functions of his managerial position. The model essentially gives a sequential description of the process to be followed and the relevant questions to be answered if educational changes are to be made. As such, it is particularly suitable as a guide for the literature review of an internship report and serves to generate questions to be answered during the internship itself. The advantages of using a model in this manner are to provide a logical sequence for the review of the literature and to help keep it to a manageable size without leaving out essential information. Also, the literature review might not be as biased if a model is used, since its course will not be as greatly determined by the writer's biases and perceptions.

Objectives of the Internship

The specific objectives of the internship are divided into three categories dealing with the needs which have precipitated flexible modular scheduling and the extent to which these needs have been met, the technical skills and knowledges which are essential to setting up a flexibly scheduled high school, and the role of the principal in a flexible setup. A review of the relevant literature and the internship

experience itself were utilized in an attempt to realize the objectives.

Firstly, an attempt was made to determine the "needs" and situations which have precipitated decisions to adopt flexible modular scheduling. An assessment was made of the success of flexible modular scheduling in ameliorating the perceived needs. Specific questions related to this objective were:

1. Why did Beaconsfield High School adopt flexible modular scheduling?

2. What were the major administrative tasks in moving to flexible modular scheduling?

3. What have been the major administrative problems caused by flexible modular scheduling and how have they been resolved?

4. What evaluative procedures have been carried out to assess the effects of flexible modular scheduling on the students?

5. To what extent has flexible modular scheduling been successful in terms of the needs which precipitated its implementation?

Secondly, the internship was used to gain practical experience in the technical aspects of designing a flexible modular schedule. Diversified instructional techniques inherent in the flexible modular approach were studied with particular reference to the technical skills needed by both administrators and teachers for successful implementation. Specific questions related to this objective were:

1. What process does Beaconsfield High School follow in generating its master schedule?

2. Beaconsfield High School has made an effort to organize its curriculum into three branches. How does this setup compare with the provincial curricular requirements in Quebec? What external

constraints, if any, did Beaconsfield have to circumvent to institute this program? Has the effort been successful?

3. To what extent are volunteer assistants used in the instructional program? How are they recruited and coordinated and what provisions are made for their training?

4. With flexible ability grouping instead of streaming, how was provision for the various achievement levels of students built into the curriculum?

5. How and why was the interdisciplinary team approach introduced at Beaconsfield High School?

Thirdly, the principal's role in changing to flexible modular scheduling was investigated with reference to the planning and in-service training for teachers which are requisite to the institution of a successful flexible program. Also, modification of the principal's role was examined with reference to delegation of responsibility and decentralization of authority. Specific questions related to this objective were:

1. To what extent were the teachers involved in the move to flexible modular scheduling?

2. Was an in-service program initiated to re-educate teachers when flexible modular scheduling was introduced? If so, to what extent has the in-service program been responsible for the success of flexible modular scheduling? Who was responsible for coordinating the in-service program?

3. Has there been a decentralization of authority and responsibility to the 'technical' level as a consequence of the flexible organization of the school?

4. A change in principals is often critical in terms of continuance
of an innovative school's program. What adjustment did Beacons-
field have to make when the principalship passed to a new person?

Summary

The role of the principal was analyzed as an administrative
position, and it was determined that the position, in addition to
requiring broad conceptual skills regarding the philosophical goals of
the organization, also requires extensive technical skills. One such
technical skill involves the arrangement of the organization of the
school.

The systems approach to the administration of a school was
developed, and Kaufman's model utilizing this approach was presented as
a conceptual framework.

The objectives of the internship were derived from the analysis
of the role of the principal operating in an open system. The questions
to be utilized in realizing the objectives were developed from the
Kaufman model.

CHAPTER III

REVIEW OF THE LITERATURE

The five steps contained in Kaufman's systems approach to decision making will be used to guide the review of the literature.

Needs Which Predicated Flexible
Modular Scheduling

Trump and Baynham's Focus on Change--Guide to Better Schools (1961) was the most influential book in inspiring schools to make their programs more flexible. The authors pointed out that schools are not organized to equip students with the learnings which they need to face the latter half of the twentieth century. They stressed such student needs as study skills, individual responsibility, inquiring mind, discussion skills, satisfaction in learning, and talent for effectual human relations. To facilitate the acquisition of such skills by students, teacher needs--greater opportunities to use professional skills, a place to perform professional work, and a higher ceiling on salary; curricular needs--basic curriculum for all, and a depth content for some; and school needs--more flexibility, more use of technology, and better use of school funds, were pointed out (Trump & Baynham, 1961, p. 2).

As a starting point in determining the needs which have influenced schools to adopt some form of flexible scheduling, the student needs discussed by Trump and Baynham will be briefly reviewed.

"Students need opportunities to develop individual responsibility and the skills of independent study."(Trump & Baynham, 1961, p. 5) The

internal organization of schools as described in 1961 is still valid in

Newfoundland and throughout much of North America today. Use of the

Carnegie Unit maintains an inflexible internal organization which exists

for administrative convenience rather than the needs of the student.

> Directed and supported virtually every step of the way
> through high school, too many students find it difficult to
> travel on their own when they reach college or go to work on
> a job. Few high school graduates have achieved adequately the
> skill of independent study, nor has much happened to make them
> feel that they should. (Trump & Baynham, 1961, p. 3)

"Students need opportunities to develop the inquiring mind."(Trump

& Baynham, 1961, p. 5)   Students should have the opportunity to develop

the "spirit of inquiry" for such skills are more valuable than the most

advanced knowledge which may be obsolete in a few years.

> The pupil works his way through a school assignment, shuts
> his book, and moves on in the ordered regularity of his sched-
> ule. Any lingering wonder, any curiosity, is buried under the
> necessity to turn to other work. (Trump & Baynham, 1961, p. 6)

"Tied to the need for effective discussion is need to acquire a

far more complex talent, the talent for effectual human relations."(Trump

& Baynham, 1961, p. 6)   Children are not born with the respect and

appreciation for other human beings which is so necessary in any society.

The classroom offers a unique opportunity through interaction between

students and with teachers for the acquisition of human relation skills.

The lack of small group discussion prevents the shy and inhibited from

engaging in much constructive interaction.

"Students need satisfaction in learning."(Trump & Baynham, 1961,

p. 7)   Satisfaction reinforces what has been learned and provides

motivation to continue the learning process. The principle of immediate

feedback to the student is one way to increase learning satisfaction.

The student needs delineated by Trump are certainly far from

exhaustive.   Trump realizes this but continues:

> The purposes and needs mentioned here are among the most
> highly important of the schools' responsibilities.   They are
> also the most frequently neglected.   The conventional class-
> room inhibits them; traditional scheduling largely ignores
> them. (Trump & Baynham, 1961, p. 7)

Trump's criticisms motivated many schools to assess their needs
and consequently many of them adopted procedures to increase flexibility.
One such school was Easton Area High School in Pennsylvania which started
experimenting with team teaching in 1958 (Peterson, 1966).   At that time
the traditional program was considered adequate by the community, and
the school had received an above average rating a few years previously
by the Middle States Accrediting Agency.

Two factors caused educators at Easton to evaluate their program.
The first was that a new senior high school was being planned, and those
concerned with the planning wanted it to be designed around the most
effective and modern instructional techniques.   The second factor was
the influence that Dr. Trump and the N.A.S.S.P. Commission were starting
to exert.

The evaluation of Easton's program yielded a number of areas of
concern.   Briefly, these were a lack of individual attention for students,
little opportunity for students to function independently, a lack of
professional staff interaction among faculty members, a need for improved
staff utilization, and insufficient student motivation.

As plans at Easton moved into the formative stage, the educators
realized that a lack of flexibility was causing many of their problems.

> It became obvious that ways would have to be found to free
> both teachers and students from the rigidity of a daily sche-
> dule which controlled not only mass movement of individuals
> but also exerted undue influence on the manner in which the

curricular and instructional (italics his) program was carried
out. (Peterson, 1966, p. 8)

The administration at Easton High School arrived at the same
conclusion as did Trump, that the school schedule would have to be made
more flexible if the perceived needs were to be ameliorated. The deci-
sion to achieve flexibility primarily through adopting a more flexible
schedule is only one alternative among many others. These alternatives
should be overviewed as dictated by the Kaufman model.

Alternatives to Achieve Flexibility

An American nationwide inquiry as to how schools achieve flexi-
bility was published in 1972. The authors, Congreve and Rinehart,
attempted to determine the procedures which are currently being used to
achieve flexibility. They wrote to the fifty chief state school officers
and two professors of education in each state and asked them to nominate
three schools or school districts which to their knowledge were imple-
menting procedures to achieve flexibility. Over 300 schools and districts
were nominated; and of these, 225 schools and districts responded to a
questionnaire. The authors classified the various ways in which high
schools have attempted to achieve flexibility under four headings.

The first category was Achieving Flexibility through Organization.
There were three high schools which reported utilizing organizational
techniques to achieve flexibility.

The Lowndes County Schools in Voldosta, Georgia, use a twelve-
week quarter system in their secondary schools. It enables them to
accommodate students who wish to drop in and out of schools, revise the
curriculum without constraint, and utilize teaching talents more effi-

ciently.

Nine-week courses are used in Okemos (Michigan) High School at
the grade eleven and twelve level, and this allows students to select
both their teachers and courses.

A Three House Plan Organization is used in Columbia High School,
South Orange, New Jersey, to counteract the depersonalization that may
be characteristic of large high schools. Seventy-five percent of each
sophomore's time is spent taking courses "within the house;" juniors,
fifty percent; and seniors, twenty-five percent.

The second category was <u>Achieving Flexibility through Continuous
Progress</u>. Two high schools were in this category.

Students work at their own speed and start a new course when one
is completed. The slower students have the necessary time to attain
completion and success while the advanced students can proceed at a rapid
pace.

The third category was <u>Achieving Flexibility through Scheduling.</u>
Fifteen high schools indicated that flexible scheduling, usually modular,
was being used as the primary means to achieve flexibility. The amount
of student freedom and the use of differentiated staffing and team
teaching varied from school to school. Some of the results claimed were
as follows:

1. Students have a positive outlook toward education.
2. The atmosphere of the school has changed so that it seems
   less oppressive to students.
3. There is more participation of students in the learning
   process.
4. There is a greater availability of resources, both human
   and inanimate.
5. Teachers are being released to perform professional tasks;
   students are helped to become more responsible for their
   learning. (Congreve & Rinehart, 1972, p. 11)

The final classification was <u>Achieving Flexibility through
Instructional Plans to Meet Individual Learning Needs</u>. Thirty high
schools were placed in this category which could be considered an eclectic
one.

Several schools reported a "Community School" approach in which
parents and resource people from the community played a role in deter-
mining school objectives and helping with the program.

Some schools varied their curriculum to make it more relevant.
Interrelating mathematics and science and interlocking a vocational
program with an academic program are two examples.

Other examples of innovative practices were teacher-student con-
tracts, involving students in decisions about all aspects of the school
program, and having optional attendance on certain days (Congreve &
Rinehart, 1972, pp. 9-15).

Efforts to achieve flexibility have not been limited to the
United States. Secondary schooling in Ontario has recently undergone a
major shift in emphasis and consequent dramatic changes in internal
school organization. Between 1969 and 1973, an increasing number of high
schools voluntarily adopted the "individualized system" or "credit
system." This system was made mandatory at the start of the 1972-73
school year.[5]

The movement to the individualized system in Ontario is another
example of the growing trend in the western world towards individuali-
zation of instruction. The purpose has been stated as: "to provide

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[5]In 1974, Ontario reintroduced compulsory courses in English and
Canadian Studies and in 1977 the compulsory core will be expanded.

educational programs that are designed in terms of needs, aptitudes and
interests of individual students."(King, 1975, p. 7)

The Ontario experience is important for several reasons: first,
it is an attempt by a Canadian province to institute the individualized
system--the magnitude of the effort involved suggests that "individuali-
zation" is not a passing fad only being adopted by a few innovative
secondary schools; secondly, a great deal of research has been carried
out by the Ontario Institute for Studies in Education (O.I.S.E.) to
determine the effects of the reorganization on students, teachers, and
administrators, and to determine the attitude of parents towards the
change.

The main features which one would expect a school to implement
in adopting the individualized system have been listed by Fleming as:

1. to make available a wide range of subject offerings in each
   area of study for each year and at several levels of diffi-
   culty;

2. to arrange for individual timetables encompassing the
   possibility of courses at different year levels and at
   different levels of difficulty, as well as opportunities
   for independent study under the direction of a teacher
   adviser;

3. to increase student participation in decision-making, with
   particular reference to choice of courses and topics,
   teaching techniques, and school organization and adminis-
   tration;

4. to adapt existing curriculum guidelines and develop new
   courses, within Ministry regulations, to meet individual
   student interests and abilities and student and community
   needs;

5. to adapt teaching methods to make a maximum contribution
   to the development of each student's individual potential;

6. to adapt methods of evaluation to suit various subjects
   and groups of students;

7. in courses of instruction, to emphasize inquiry, analysis,
   synthesis, and evaluation rather than recall of masses of
   fact, and to emphasize multidisciplinary approaches;

8. to adopt such organizational changes as the use of team teaching in large and small groups, the provision of unscheduled time for research and study; the establishment of timetable cycles varying from the standard length, the adoption of annual, semester, or trimester organization, with varying numbers of periods per day for each subject, the use of block or modular scheduling (italics mine), arrangements for out-of-school activities as part of the curriculum, the improved use of media, and the institution of house systems or other devices to provide a sense of community;

9. to improve communication among principal, staff, students, parents, feeder elementary schools, postsecondary institutions, and other parts of the community;

10. to place greater emphasis on cooperative planning and evaluation of programs and on professional development;

11. to improve guidance services and counselling, with regular meetings of teachers and counsellors;

12. to increase integration of the sexes in courses traditionally separated or restricted by sex;

13. to drop all those prerequisites for particular courses that are not readily defensible. (Fleming, 1974, pp. 2-3)

Many of the above features should be a part of any secondary school and are not contingent upon the adoption of an individualized program. It should be noted, however, that many of the features listed cannot be efficiently and effectively implemented without the adoption of a flexible schedule, whether block or modular.

The Preferred Alternative

Application of the Kaufman model has yielded a number of alternatives which some schools are using in their attempts to achieve flexibility. It is likely that some researchers would be interested in how many schools followed such a rational approach as the Kaufman model before implementing changes. Nevertheless, many schools throughout the United States and Canada chose to implement flexible modular scheduling. Perhaps the latter has had broad application because of its all-embracing

nature. Other alternatives such as the 'house system,' 'continuous progress,' 'team teaching,' and an 'interlocking vocational and academic program' are often associated with flexible modular scheduling.

The Flexible Modular Schedule Described

The flexible modular schedule derives its name from the word "mod" which is a standard unit of time, usually between ten and thirty minutes. Various numbers of mods can be scheduled consecutively to yield classes of desirable lengths as determined by the activity to be pursued. Class size is determined by the instructional technique to be utilized; for example, lecture, film, laboratory or discussion group. In addition, there are no rules such as "each class must meet every day" or "each student must have all of his time scheduled." Once prepared, the sche- dule is inflexible and repeats itself week after week.

An individual schedule must be prepared for each student and each teacher. The complexity of the timetable usually necessitates the use of a computer to generate the schedules. Refer to Figures 2 and 3 for sample pupil and teacher flexible modular schedules.

Implementation of Flexible Modular Scheduling

Flexible modular scheduling is relatively new. In 1963-64, only eight schools, four of which used computer-generated schedules, were experimenting with it; a decade later it was estimated that over 2,000 U.S. schools were using it (Swaab, 1974, p. 9). During the past decade and a half a great deal of critical literature has appeared on the subject of F.M.S. This literature will be sampled to yield some light on the general success which schools have had in their experiences with imple-

	Monday	Tuesday	Wednesday	Thursday	Friday
1	World Geography Small Group Room 110	World Geography Small Group Room 110	Biology 2 Small Group or Lab Room 126	World Geography Small Group Room 110	English 3 Small Group Room 111
2					
3					
4	I.S. (Pupil Options) Open Lab I.M.C. Lounge Art etc.	I.S.	I.S.	I.S.	I.S.
5		Art 1 Room 118		Art 1 Room 118	Physical Science Small Group or Lab Room 206
6			Physical Science Large Group Room 203		
7					
8					
9		I.S.	I.S.	I.S.	
10	Lunch		Lunch	Lunch	Lunch
11					
12	I.S.	Lunch	I.S.	Language Lab	I.S.
13	Math 2 Large Group Room 119		Math 2 Large Group Room 119		
14		I.S.			
15				English 3 Small Group Room 111	Math 2 Small Group Room 201
16	I.S.	English 3 Large Group Room 221			
17	Physical Science Small Group or Lab Room 206		I.S.		World Geography Large Group Room 126
18				I.S.	
19		Biology 2 Small Group or Lab Room 126			
20				Biology 2 Large Group Room 126	I.S.
21	I.S.		French 1 Room 109		
22	French 1 Room 109				French 1 Room 109
23		Math 2 Small Group Room 201		Math 2 Small Group Room 201	
24					

Figure 2
Computer Generated Flexible Modular Schedule
(Pupil Sample)

SOURCE: Harold S. Davis and Joseph E. Bechard, Flexible Scheduling, Ohio: Educational Research Council of America, 1968, p. 23.

	Monday	Tuesday	Wednesday	Thursday	Friday
1 2 3	Team Planning Math 1	Math 1 Large Group Sec.1,2,3,4,5,6 (90 pupils) Room 119		Math 1 Large Group Sec.1,2,3,4,5,6 Room 119	Team Planning Math 2
4 5	Math 1 Small Group Sec. 1 Room 203		Math 1 Small Group Sec. 1 Room 203		Math 1 Small Group Sec. 1 Room 203
6					
7 8	Math 1 Small Group Sec. 2 Room 203	Math 1 Small Group Sec. 2 Room 203		Math 1 Small Group Sec. 2 Room 203	
9 10	Math 1 Small Group Sec. 3 Room 203		Math 1 Small Group Sec. 3 Room 203		Math 1 Small Group Sec. 3 Room 203
11 12	Lunch	Lunch	Lunch	Lunch	Lunch
13 14 15	Math 2 Large Group Sec. 1-4 Room 119	Team Planning Gen. Math	Math 2 Large Group Sec. 1-4 Room 119		Math 2 Small Group Sec. 4 Room 201
16 17					
18 19	Gen. Math Large Group Sec. 1-6 Room 119				
20 21 22					
23 24		Math 2 Small Group Sec. 4 Room 201		Math 2 Small Group Sec. 4 Room 201	

Figure 3
Computer Generated Flexible Modular Schedule
(Teacher Sample)

SOURCE: Harold S. Davis and Joseph E. Bechard, Flexible Scheduling,
Ohio: Educational Research Council of America, 1968, p. 25.

mentation of F.M.S.

Berg states that moving to a flexible schedule incorporates at least four elements: an individualized educational program for each student, better utilization of the available facilities, better utilization of the available faculty, and utilization of individual and group staff competencies (Berg et al., 1970, p. 1).

Davis and Bechard, in their introduction to a review of nine different types of flexible schedules, ask a number of questions about the traditional schedule: Why must all students regardless of ability be limited to the same number of courses per year? Why must all classes be of equal length, meet five times per week, and be of the same size? (Davis & Bechard, 1968, p. 1). Davis and Bechard answered that the typical traditional schedule serves the major function of being administratively convenient rather than being used to enhance the instructional process.

Trump, after asking the question "What is the ultimate in flexible scheduling?" responded:

> No one knows for sure, but the goal necessarily is to return to teachers and students as much freedom as is reason-able (italics mine) in the use of time, space, numbers, and content for instruction. (Trump, 1969, p. 4)°

The key word is "reasonable," for the determination of what is reasonable by a school's faculty and administration will determine how much flexibility is allowed in that particular school. The type of flexible schedule selected will, of course, be contingent upon how much freedom has been deemed "reasonable" and will also decide how many of the questions raised by Davis and Bechard will be accommodated.

The flexible modular schedule was seen by Trump as being the

schedule of the future. Other flexible schedules limit all students to

a pre-determined number of courses and mandate that all pupils must

complete a given subject in the same amount of time. Flexible modular

scheduling does not have these limitations and in addition allows stu-

dents completely unstructured time during the school day to pursue topics

of current individual interest. Swaab, in relating the successful exper-

ience of Norwick Senior High School, Norwick, New York, with flexible

modular scheduling, states:

> It allows the school to increase its options for program
> development while substantially reorganizing the curriculum
> and teacher/pupil meeting pattern in a more efficient manner.
> Team teaching, individualized instruction, independent study,
> small grouping and the development of individual student res-
> ponsibility can all be systematically programmed through the
> proper organization of the schedule. (Swaab, 1974, p. 9)

Not everything written about flexible modular scheduling has

been positive, however. The educator, John De Cecco, writing in the

popular _Psychology Today_ magazine, recently stated:

> And in the halls, which are often crowded because of flex-
> ible scheduling we found arguments, fights, noise, and in some
> cases, a brisk traffic in drugs and sex.
>
> Blank open-campus policies, as well as flexible or "mod-
> ular" scheduling, have thus produced more (italics his) con-
> flict, and the common response has been simply to revoke the
> new privileges. Many schools are again locking their doors
> and reverting to uniform class schedules, hall passes and
> monitors. (De Cecco, 1975, p. 55)

De Cecco and his co-author, Richards, were not degrading flexible sched-

uling per se although the cursory reader might receive that impression.

In the previous paragraph they stated:

> Concessions like these, however, often resulted from the
> simple capitulation of adults to student demands--from the
> avoidance, that is, rather than the negotiation of conflict--
> and many open-campus practices have therefore worked badly.
> (De Cecco, 1975, p. 55)

In any case, the message is clear: flexible scheduling is not a panacea for all our educational ills as many schools have discovered.

The Ford Foundation was responsible for funding many educational innovations in such areas as curriculum, staffing, scheduling, technology, and organization during the decade of the 1960's. A report entitled "A Foundation Goes to School," issued in December, 1972, was an evaluation of the success of the Ford Foundation's 30 million dollar effort. Many of the projects had no lasting effect on the cooperating schools and school districts. This was especially evident in scheduling innovations as virtually all of the members were affected. Also, size was correlated with success as smaller, less complex schools and school systems changed faster than larger ones. A number of principles to guide future change emanated from the report, the most important of which was that "there is almost no way that educational innovations to improve learning in schools can succeed without the active participation of the instructional team." (Meade, 1973, p. 22)

Any innovation or change which is adopted in response to a set of problems will often result in the creation of new problems, especially during a period of adjustment and certainly if planning is not adequate. Perhaps a uniqueness of flexible modular scheduling is that its potentially strongest characteristic, the creation of unstructured time for students to work independently, may be its downfall. McCoffery and Turner assert the importance of planning in relating their successful experience with flexible modular scheduling:

> An innovative program should anticipate changes in student behavior. Inherent in the concepts of independent study and modular scheduling are certain problems with respect to student control that must be confronted. The important thing is to be cognizant of the nature of these problems and to plan

effectively for the change. If such planning is accomplished, there is no need to fear the effects of innovative programs on student discipline. (McCoffery & Turner, 1970, p. 491)

Gard has listed a number of factors which should be considered before flexible modular scheduling is implemented.

1. That planning of the "master schedule" is truly adequate to minimize the number of impossible student schedules.

2. That students are not scheduled for larger loads than the school can support,

3. That faculty members expect to work harder and to put in longer hours with students.

4. That administrators, board members, students, and community recognize the price of reduced control--in absenteeism, failure and even possible violence to person and property. (The community must be prepared for the cost and unpopularity of firm grounds-control measures should this eventuality prove necessary.)

5. That ample space is available for study and research-- adequate even for the necessary inefficiency of voluntary usage--and to accommodate the one in four who probably will need full-time supervision.

6. That faculty support measures (aides, supervisors, materials, services) are adequate to leave teachers free to teach and to plan. (Gard, 1970, p. 429)

The onus for planning is on the administration, in particular the principal who must ensure that teachers as well as students are prepared for the new program. Flexible modular scheduling puts increased demands on teachers. Successful large group instruction, discussion groups, and individualized instruction require specialized pedagogic skills; and teachers have to retrain either formally or individually through hard work and personal research. "Modular scheduling absolutely demands a complete rethinking and reorganization of instructional methods."(Steward & Shank, 1971, p. 537)

Six relevant concerns about flexible scheduling reported by teachers are as follows:

1. How does one use large group instruction effectively for
    teaching a foreign language?

2. How can technological media, including the language labor-
    atory, best be used? Can students learn independently
    from media other than books?

3. Can the various group and individual activities be linked
    into a cohesive instructional system?

4. How does one make up for the loss in actual instructional
    time so that learning will not suffer?

5. Can ways be devised so that students will use wisely the
    individual study time available to them?

6. How can the schedule be modified to fit instructional needs
    which unexpectedly but inevitably arise? (Arendt, 1970,
    pp. 7-8)

Such concerns are very legitimate and point out the increased number of

technical skills which are required of teachers under flexible modular

scheduling.

It is interesting to note that these same teachers were not inti-

midated by their concerns but listed six advantages of flexible sched-

ules:

1. They open up the school day so that students may elect
    more subjects than in the traditional schedule, thus
    reducing competition between foreign languages and other
    electives.

2. They provide the opportunity for teachers to work with
    small conversation groups and with small groups who have
    other special instructional needs or interests.

3. They make it easy to justify continuing classes with small
    enrollments and even individualized study programs. Since
    the burden for learning falls upon the student, he can
    invest the amount of time and effort that his goals jus-
    tify. Maintenance or skill courses can be scheduled, as
    can a wider variety of special-interest courses.

4. Staff members with various strengths can be used where
    they will most benefit instruction. At the same time teams
    can plan teaching strategies and duties that can be per-
    formed by paraprofessionals, such as teachers' aides and
    clerk/typists.

5. Special facilities, such as language laboratories and
    learning centers, can be used more readily.

6. Instruction may be more easily individualized than in the conventional schedule. (Arendt, 1970, p. 9)

There are many advantages to flexible modular scheduling, at least on paper, but the question must be asked whether the advantages outweigh the disadvantages. This question paraphrases the final stage in Kaufman's system model, "determining effectiveness" or evaluation.

Evaluation of Flexible Modular Scheduling

It is very difficult and usually prohibitively expensive to compare one educational program with another even if the goals are very similar. Control of all the intervening variables which can affect the results is very difficult and often in practice impossible. Therefore, evaluation, or as Petrequin terms it, validation, "of any educational program must be in terms of the objectives of that program"(Petrequin, 1968, p. 166) The problem is that flexible modular programs usually stress behavioral goals which do not lend themselves to valid measurement by current instruments which are primarily designed to measure cognitive goals.(Speckhard, 1968, p. 33).

Attempts at evaluation can be roughly dichotomized into achievement tests which attempt to measure cognitive skills and questionnaires which have been administered to students, parents and teachers to assess opinions and attitudes.

Speckhard compared two Colorado high schools in 1965 and again in 1968 in an attempt to control for extraneous variables. One school was using a traditional schedule and the other was using a flexible-modular schedule. Speckhard used standardized achievement tests as well as opinion questionnaires. He noted after the two evaluations:

The test results disclosed that the students at the modularly scheduled high school perform as well or better than students in a school with a traditional schedule. However, the superiority in critical thinking, described in 1965, was not maintained in 1968.

The conclusions can be summed up by saying that Broomfield's program, generally good in 1965, has maintained about the same level of quality with slight improvements in certain areas of the modular system. The opinions of the school program are highly favorable, and growth in academic achievement is equal to or greater than the achievement at a relatively comparable control school in the same school district. (Speckhard, 1968, p. 33)

The research to 1969 was summarized by Hansen:

1. Students are sold. A large majority of students who have been involved in both flexible and conventional programs prefer the flexible. And students in flexible schools most frequently state that flexibility and self-responsibility are the things they like most about their school. On the other hand, students in conventional schools most frequently criticize the regimentation on open-ended questions.

2. Students under independent and self-directive study plans make much greater use of resource materials and special facilities than they do under a conventional program.

3. Students in flexible programs score significantly higher than students in traditional classes on tests of critical thinking.

4. On standardized achievement tests, such as the I.T.E.D.,[6] there are no systematic differences between mean scores by students in flexible and traditional schools.

5. However, teachers rate student achievement higher for students under independent study than for students under conventional class instruction.

6. Teachers in flexible and conventional schools rate student behavior about the same. This is true also on "before" and "after" ratings by teachers who have been involved in a change-over.

7. Teachers involved in the transition from conventional to modular vote to continue with the modular after one year or more of experience in a large majority of schools that have changed. Also, teachers in schools with both types of classes rate the flexible program higher than the conventional.

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[6]Iowa Tests of Educational Development.

8. Teachers and students consistently rate independent study and small group instruction higher than large group instruction.

9. Teachers report that they have and use more time in preparation under a flexible program than under a conventional one. However, this is reported as one of the problem areas by teachers in flexible programs, with teachers indicating that they believe they do not use unscheduled time as constructively as they should.

10. Teachers believe that they put in longer hours and their work load is heavier under a flexible program than under a traditional program. However, classroom hours and student loads are no greater, and often are lighter.

11. Studies on teacher morale in flexible and traditional schools show no important differences. (Swaab, 1969, pp. 147-148)

Fleming has summarized the results of five studies which examined the "individualized system" which has been implemented in Ontario. The studies were conducted in 1972/73 and sponsored by the Ontario Institute for Studies in Education. Interviews and questionnaires were utilized to tap the attitudes of the students, parents, teachers and administrators regarding the effects of the individualized system. Although the studies were not focused on flexible modular scheduling per se, the findings may have some generalizability to flexible modular scheduling since some of the schools were using it and because the philosophy behind the "individualized system" and that behind flexible modular scheduling is the same.

The majority of students and educators supported the individualized system. "There was very little evidence that any significant number of educators would take the stand that the traditional rigidities and compulsions are essentially beneficial to the students."(Fleming, 1975, p. 75) Parents and the general public were considerably more doubtful; however, the researchers felt that this apprehension was due to lack of

information and understanding of what was happening.

Not all the objectives of the program were being met. It was found that students were pursuing courses more suitable to their interests and capabilities, but there had been relatively little change in core content and teaching techniques. Although evidence indicated that the lecture method did not appeal to many students, it continues as the dominant instructional practice.

A common fear that individual timetables and the disappearance of the regular classroom (homeroom) group would make students feel alienated and isolated was not supported. Both teachers and students concurred that this was not a problem.

It was felt that the dropout rate might increase during the transition period of implementation, but this conclusion was suspect. Student retention was not, however, improved by adoption of the individualized system (Fleming, 1974, pp. 75-79).

In general, it appears from the research that students in schools with flexible programs do not achieve any higher on subject matter evaluations than do students in schools with traditional programs; however, students' and teachers' opinions are usually favorable to flexible modular scheduling and individualization of instruction. Teachers will have to internalize the new teaching methodologies and curricular changes may have to occur before the full benefits of individualization can be felt.

If students can acquire the learnings described by Trump—individual responsibility and skills of independent study, an inquiring mind, skills of effective discussion, talent for effectual human relations and achievement of satisfaction from learning—then they will be better prepared to leave the structure of the school environment and continue

successfully in college or work. At present, internal organizational changes in the school such as flexible modular scheduling to facilitate the individualization of instruction hold the greatest promise of facilitating the attainment of such goals.

Summary

The problems which have predicated the desire for increased flexibility in schools, the alternatives for achieving increased flexibility, flexible modular scheduling as the solution strategy, implementation of flexible modular scheduling, and evaluation of flexible modular scheduling were dealt with in turn as the Kaufman model dictated.

CHAPTER IV

METHODOLOGY

The type of internship pursued during the placement period will be described. The methodology utilized and its inherent advantages and disadvantages will be overviewed.

The Internship

Type of Internship

The objectives of the internship at Memorial University are stated in a Descriptive Statement of the Internship in Educational Administration (M.U.N., 1974). The internship should provide an opportunity for the intern to develop a more comprehensive view of educational administration; that is, to integrate his knowledge of theory with what actually occurs in practice; to obtain some experience in carrying administrative responsibility; and to benefit from the experiences of his cooperating administrator.

Three major types of internship have been identified as meeting the requirements for the Master's Degree in Educational Administration at Memorial University. The first, the diversified internship, emphasizes a composite of experience to give the intern a broad overview of the field of educational administration; the second, the specific internship, emphasizes more focused experiences leading to in-depth knowledge in a more specific area; and the third, the integrated internship, is a combination of both the diversified and the specific.

The subject matter of this internship lends itself to either the
specific approach or the integrated one. The latter approach was pro-
posed as the more appropriate since 'flexible scheduling' as stated in
the introduction should not be approached as a mere scheduling change
but rather as a comprehensive modification of educational assumptions and
philosophy and as such the general ramifications of instituting such a
program should be investigated.

Placement and Duration

The internship took place at Beaconsfield High School which is
located in Beaconsfield, Quebec, under the jurisdiction of the Lakeshore
School Board. The internship was of eight weeks duration from April 26,
1976 to June 18, 1976. The internship was approved by Mr. Leslie
Clarke, the director-general of the Lakeshore School Board, and Mr.
Richard McGrail, the principal of Beaconsfield High School.

Beaconsfield High School was chosen for several reasons. First,
it has been using a modular schedule since 1968. The writer felt that
this eight year history would provide him with enough information to meet
the objectives of the study. Second, it has been written up in the
literature as a school which possesses a varied curriculum and an inno-
vative philosophy (Shapter, 1971, pp. 20-22). Third, high schools in
Quebec offer a five year high school program as do Newfoundland's central
high schools.

Methodology

The intern utilized a common social scientific methodology known
as participant observation. Schwartz and Schwartz have defined partici-

pant observation as

> a process in which the observer's presence in a social
> situation is maintained for the purpose of scientific inves-
> tigation. The observer is in a face-to-face relationship with
> the observed, and, by participating with them in their natural
> life setting, he gathers data. (Schwartz & Schwartz, 1969,
> p. 91)

Participant observation is a broad term in that the researcher
could occupy a number of different roles; for example, participant as
observer, observer as participant, and observer as non-participant. The
intern's choice is limited since the "participant as observer" role,
considered the most advantageous for research purposes, requires the occu-
pation of a legitimate position within the social situation. This being
impossible, the intern has chosen the "observer as participant" role
since it will yield "a less limited view of the inner processes of his
system than the observer as a non-participant"(Lutz & Iannaccone, 1969,
p. 114)

Four questions have been identified as germane to participant
observation whatever the purpose of the study. They are as follows:

1. What should be observed?
2. How should observations be recorded?
3. What procedures should be used to try to assess the accu-
   racy of observation?
4. What relationship should exist between the observer and
   the observed, and how can such a relationship be estab-
   lished? (Sellitiz et al., 1959, p. 205)

Each question will be considered in turn.

What was observed was determined mainly by the subject matter of
the internship and the specific questions which were generated to guide
the investigation and as such impinged upon as many facets of Beacons-
field High School's internal organization as was possible within the

eight-week time period. The intern was free to informally visit any of the departments at Beaconsfield High School for observation of daily routine. In addition, he was invited to administrative meetings both within the school and at the school board level. Six meetings were attended in all. Much of the data was gathered from a total of twenty-two interviews held with the staff and administration at Beaconsfield High School. The intern also visited seven other schools to observe their internal organizations for comparison purposes.[7]

The primary method of recording observations was note taking. Where possible, notes were taken on the spot to keep distortions of memory and biases to a minimum. Where note taking was impossible or would interferewith the naturalness of the situation, observations were recorded at the first opportunity. Most of the interviews were recorded on tape and later transcribed. The intern maintained a comprehensive daily record of observations.

Several methods were used to ensure that the information is as accurate as possible. Observations were accompanied by both focused and unfocused interviews. Focused interviews help prevent biases in interpretation which are caused by unavoidable selective perception during observations. The reliability of the interview itself, however, may be affected by a number of factors: the accuracy of the data, the relationship of the interviewer and the interviewee, memory biases of the interviewee, and investigator biases where preconceived notions structure the direction of the interview. Data gathered from observations and interviews were checked where possible with previous written evaluations,

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[7] Refer to Appendix A for an itinerary of the internship.

principals' annual reports, and school handbooks. Finally, data gathered from observations and interviews could often be mentally juxtaposed to cross check information. For example, the intern appreciated and understood the scheduling problems enunciated by several of the interviewees much more fully after he attended a meeting in which the representatives of the computer company responsible for generating the schedule discussed scheduling problems for the coming year with the administrators.

The intern, as a student of educational administration was a guest in the cooperating educational system. He was responsible to a coordinator who is also a member of the intern's research committee. As such, the intern occupied the dual role of researcher and student; and activities were determined in consultation with the coordinator and his designates.

Advantages and Disadvantages of Participant Observation

The major advantages of participant observation have been listed by Lutz and Iannaccone. Investigations of areas which are not open to other researchers are open to those using participant observation; constant feedback allows the researcher to rephrase questions and refocus activities along more meaningful lines of inquiry; in-depth study is better achieved using participant observation; and the researcher is freer to explain his data—unlike the experimentalist who must work within the limitations of his hypotheses (Lutz & Iannaccone, 1969, pp. 115-116).

Some of the disadvantages are also listed by Lutz and Iannaccone. The method is expensive in terms of money and time; extensive training is needed to carry out competent research; some important interactions may not be open to the researcher; biases may be present in reporting and

analyzing data; and statistical analysis of data is usually not possible

(Lutz & Iannaccone, 1969, pp. 116-117).

CHAPTER V

THE SETTING AND ORGANIZATION OF BEACONSFIELD

HIGH SCHOOL

The history of Beaconsfield High School and its present internal organization will be described. The hierarchical structure of the formal organization will be used to guide the presentation of the background information.

Beaconsfield High School: Historical Perspective

Beaconsfield High School in the late 1950's housed approximately 600 pupils in Grades VIII, IX and X. The school population gradually rose to some 1,100 students in 1966. During this time, Beaconsfield was a relatively conservative, traditional high school which concentrated on the academic subject areas and emphasized order and discipline. A rise in the school population necessitated a split system during the 1965-66 school year in which grades VIII and IX attended school from 8 A.M. to 2 P.M. and grades X and XI from 10:30 A.M. to 4:30 P.M. Many extra curricular activities were lost, individual assistance to students was restricted, and parents were inconvenienced during this year. The following year the grade VIII's were accommodated in two new elementary schools. In 1966, Beaconsfield underwent a dramatic expansion and became one of Quebec's first Regional Comprehensive High Schools. The enrollment leaped to 1,700 students in September of 1967. The floor space was trebled and such facilities as an auditorium, a library, a second

gymnasium, shops and commercial areas were added. In short, the new
school now had the potential to offer a much more comprehensive program
to a greater number of students.

Almost a decade has passed since Beaconsfield underwent the
expansion. The school is still a comprehensive high school offering
technical and commercial courses in addition to its many academic options.
During the 1975-76 school year, there were 102 teachers on the staff
serving a total of 1,714 students. In addition, there were 4 full-time
administrators, 3 vice-principals and a principal.

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Beaconsfield High School: Internal
Organization

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Beaconsfield's prospectus for the school year 1976-77 opens with
the following statement of educational philosophy.

> At Beaconsfield High School we consider the growth of the
> individual to be of primary importance in a student's educa-
> tional career. By growth we mean the progressive development
> of an individual in relation to himself and the world around
> him. However, enlightened maturity does not spring into focus
> at a given point or from a given stimulus. We--the home, the
> school, and the community--must work together to provide the
> environment in which growth takes place. The rest is up to
> you the individual. (Environment for Growth, 1976, p. 1)

The above statement is representative of Beaconsfield High School's phil-
osophy for the past eight years. Priorities do change, however, from
year to year and Beaconsfield outlined five for the 1976-77 school year.

1. To place increased emphasis on the development of self-
   discipline, mutual personal respect for the property of
   others.

2. To further develop communication skills with particular
   attention to Reading and Writing. These are the basic
   tools of communication between human beings and we feel
   they need constant priority.

3. To integrate our French Immersion Program with our overall
   school curriculum and to coordinate this with improved
   French instruction at other levels in the school.

4. To continue to expand our educational environment to "beyond four walls" by moving out into the world around us while encouraging community participation with the school.

5. To extend the recognition of individual differences among students by developing both curricular and co-curricular programs that focus on the heterogeneous nature of our class, school and community populations. (Environment for Growth, 1976, pp. 1-2)

The administration has delineated five aspects of its organization which they feel help to accomplish their goals. The first is Subject Promotion. Students are held back only in these subjects in which improvement is needed. Beaconsfield High School is also a Comprehensive School. Technical and vocational courses are offered to students who wish to broaden their knowledge and interest. The third organizational feature of Beaconsfield High School is the School Within a School concept where the school is divided into two cycles. Grades VII and VIII are included in Cycle I and grades IX, X and XI are referred to as Cycle II. The reasons for this arrangement are stated as to: "provide for the personal, social and educational needs of our young students on the one hand who are new to a large high school and at the same time for our senior students who are making specific plans for their future."(Environment for Growth, 1976, p. 2) The students in Cycle I as well as grade IX are organized into interdisciplinary teams. Another emphasis is The Community School Concept where such activities as outdoor education programs, work-experience programs, cultural exchanges, field trips, industrial orientation programs, and community service activities are encouraged to broaden the educational experiences of the students. The final feature which the administration at Beaconsfield High School feels to be distinctive is the Modular System. The rationale for flexible modular scheduling is given in the 1976-77 Prospectus as:

The modular schedule has afforded us a great deal of flexibility to "tailor time and space to meet students' needs and subject requirements." It also provides us with the opportunity to increase or decrease the size of a class to gain an educational advantage. The Modular Schedule, with its flexibility, enables us to make the time and space needed for a subject to suit the particular lesson to be taught. The unscheduled time granted to each student over and above his class room instruction affords him an opportunity to pursue his needs and interests during the school day through extra teacher assistance, individualized instruction and independent study. During this unscheduled time, the student may take advantage of all the school's resources, both human and physical, to help enrich and direct his growth. (Environment for Growth, 1976, p. 3)

The school day at Beaconsfield High School runs from 9:00 A.M. to 3:40 P.M. This 6 hours and 40 minutes day is divided into 20 mods of 20 minutes duration each. There are thus 100 mods in a week and this round figure makes it simpler to compute the density of the schedule. For example, a student who is in class for 70 mods per week would have a scheduling density of 70 percent. During the 1975-76 school year students in Cycle I were scheduled at a density of approximately 80 percent. Thus these students received an average of 5 hours and 20 minutes of classroom instruction per day. Students in grade IX were scheduled at a density of 76 percent and students in grades X and XI had a scheduling density between 60 and 70 percent depending upon their program of studies. Teachers teach between 45 and 50 mods per week in the classroom but they spend part of their unstructured time working with students in the subject resource centers.[8]

The Prospectus states that these features—subject promotion, comprehensive school, the school within a school concept, the community school concept, and the modular system—are interwoven to form a system.

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[8] See Appendix B for sample student and teacher schedules.

As such, the study of flexible modular scheduling has impinged upon all
of these features of Beaconsfield High School's internal organization.

The Community System

Beaconsfield is a high socio-economic area and many of the resi-
dents are well-educated professional people who place a high value on
education (Interview with Mr. Clarke, June 15). An indication of par-
ental attitudes towards education can be seen by the fact that several
technical shops have been closed down at the school because students are
more interested in preparing for university by doing academic courses.
Such parents are also interested in what the school is doing and the
administration and staff have to justify their programs to the public,
both to the school board as legal representatives of the community and
at parent teacher meetings.

A factor which has served to mollify the residents of Beacons-
field is the proximity of a second high school, Macdonald High School,
also operating under the Lakeshore School Board. Macdonald High School
has served as a traditional alternative throughout the years for those
students who could not cope with the modular system at Beaconsfield High
School. One hundred students presently attending Macdonald High School
have transferred from Beaconsfield High School.

The Managerial System

Beaconsfield High School is under the jurisdiction of the Lake-
shore School Board. The school board is broken up into an east and a
west district. Beaconsfield High School belongs to the west district.
Monthly meetings are held in each of the two districts between central

office personnel and the school principals.

Senior administration at the board level has been supportive of the innovations which have occurred at Beaconsfield High School. Mr. Leslie Clarke, the present Director General of the Lakeshore School Board, was Director of Studies when flexible modular scheduling was introduced.

Beaconsfield High School has had two principals during its history as a comprehensive school. Mr. Eric King, principal of Beaconsfield High School from 1967 to 1974, is the person who has been given the most credit by the teachers and other administrators for the introduction of the modular system and the innovations which followed in its wake. Mr. King completed his graduate work at Columbia University during the late 1950's, an experience which profoundly affected his educational outlook. He came to believe deeply in such concepts as democratic leadership, individualized instruction, utilization of the community resources in the school program and humanization of education (Interview with Mr. King, June 3). The teachers at Beaconsfield had a great respect for Mr. King, not only as a man who possessed a unique philosophy of education but as a person who had the faith and courage to put his philosophy into practice by delegating his authority to the vice-principals, department heads and teachers (Interview with Mrs. Gaunce, May 12).

The incumbent principal, Mr. R. McGrail, was a vice-principal at Beaconsfield High School during the period when flexible modular scheduling was introduced. He played a leadership role in the initial implementation of modular scheduling. In fact, he built the first modular schedule by hand during the summer of 1968. Mr. McGrail left Beacons-

field High School in 1971 to become principal of Lindsay Place High School, also under the jurisdiction of the Lakeshore School Board. Lindsay Place High School is a much more traditionally organized high school than is Beaconsfield High School and this experience caused Mr. McGrail to have second thoughts regarding the looseness of the modular system at Beaconsfield High School. Mr. McGrail's previous experience at Beaconsfield High School insured that he understood the philosophy under which the school was organized but his interim experience at Lindsay Place High School tempered his previous enthusiasm for flexible modular scheduling. Many of the changes at Beaconsfield High School since Mr. McGrail's return, such as increased scheduling densities in grades VII, VIII, and IX, reflect his concern for retaining the advantages of the modular system while increasing control to eliminate problems such as absenteeism and misuse of unstructured time by segments of the student body.

In addition to the principal, there are three vice-principals at Beaconsfield High School. Each vice-principal has responsibility for either Cycle I, grade IX, or grades X and XI in addition to other tasks which are determined on a yearly basis. An administrative assistant has responsibility for other administrative tasks such as preparing the scheduling data for the computer company. Table 1 summarizes the administrative duties of the principal, the three vice-principals, and the administrative assistant for the 1974-75 school year.

Department heads play a role in the formulation of school policies, instructional improvement, and budget control. The responsibilities of the department heads are contained in Table 2.

Table 1
Administration Duties of Principal, Vice-Principals
and Administrative Assistant

Principal	Vice-Principals			Administrative Assis.
R. A. McGrail	P. A. Baker	J. D. Cooke	J. D. Gore	D. Orr
Leadership & General Direction	Cycle II - Administration	Sec. III - Discipline & Assemblies	Cycle I - Administration, Discipline, Curriculum	Student Scheduling
Supervision of Administration	Sec. IV & V - Discipline & Assemblies	Departments - French, Math & Science, Business Education, Technical/Vocational, Physical Education (G.M.I.A.A. Rep)	Special Education	Central Accounting
Coordination of Department Heads	Departments - Guidance, English & Social Studies, Music, Art, Home Economics		Elementary School Liaison	Locker Assignments
School Council Liaison			Teacher's Handbook	Student Transportation (Buses, Passes)
School Committee Liaison	Student Affairs	Physical Plant & Caretaking	Student Teaching	Budget Administration
Coordination of School Visitations	Student Union Liaison	High School Leaving Examinations		Purchasing & Inventories
Budgeting Supervision	Media Center & Library	Statistics		Rentals & Calendar Coordination
Staffing	Supervision of Scheduling Reporting	Fire Drill Procedures		High School Leaving
	Student Handbook	Teacher Certification		Examination & Reporting Details
	Office Management	Professional Days		Office Management
		Substitute Teaching		

SOURCE: Beaconsfield High School Annual Report for 1974-75, Richard McGrail.

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Table 2

Responsibilities of the Department Heads

Major Responsibilities	Departmental Tasks
To assist in formulating policies for the school	Supervision of curriculum
	Coordination of instruction
To assist teachers with methodology, materials and encouragement and thus improve instruction	Coordination of teachers to properly evaluate pupils
To provide leadership and assistance to new teachers	The substitution of colleagues for teachers absent from duty
	The development of the resource center and the establishment of assistance for needy students
	Textbook control and inventory
	Ordering of equipment and supplies
	Budget control

SOURCE: Beaconsfield High School Annual Report for 1974-75, Richard McGrail.

The Technical System: The Teachers

Provincial legislation and collective agreements between teachers and school boards have attempted to define the relationship between the managerial level and the technical level. Administrators and teachers in Quebec have not been in the same bargaining unit since 1968 and "school councils" have been set up in each school to represent the technical level. Article 4 -- 2.06 of the Local Collective Agreement between the Lakeshore Regional School Board and the Lakeshore Teachers Association specifies the areas of responsibility of the school council. School council involvement with administration is itemized under the headings of Pedagogical and Disciplinary, Staffing and Staff Relations, Budgeting and Financing, and Parents and Pupils.[9]

Teachers at Beaconsfield High School feel that they are given a fair amount of autonomy in their job; however, they are not sure whether this is due to the modular system or to the styles of leadership to which they have been exposed. Several teachers did state that they must be given responsibility to do their work if a modular system is to be successful.

The most tangible indication that the staff at Beaconsfield High School expects to be delegated authority and responsibility is found in a statement adopted by the Beaconsfield High School Council on March 4, 1974. The statement was prepared as an input into the selection of the next principal upon the retirement of the incumbent. Three of the items read as follows:

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[9]Refer to Appendix C for the regulations governing the school council.

4. The belief that teachers can be trusted to make decisions that directly influence them and their students. Teachers are competent and professional educators.

6. The belief that the educative process can best occur in a free, trusting atmosphere where there is freedom with responsibility and accountability.

11. The belief that the principal's authority can be delegated to the vice-principals, department heads, and teachers where they are qualified to act. (Beaconsfield High School Council, 1974).[10]

The administration at Beaconsfield High School felt that teachers are given a lot of autonomy. In fact, it would be very difficult to strictly administer such a school, in that the modular system prevents keeping a close watch on teachers just as it does on students. New administrators have had to adapt their more traditional styles of supervision to the more informal working atmosphere at Beaconsfield High School, and this is indicative that teachers expect and will demand the autonomy and responsibility requisite to their professional position (Interview with Mr. Jim Gore, June 18).

Summary

A brief history of Beaconsfield High School was given and the present philosophy and major organizational features were described. The community, the managerial level, and the technical level were discussed to lay the foundation for a more in-depth analysis of the organization.

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[10] Refer to Appendix D for the complete statement.

CHAPTER VI

DATA ANALYSIS

The specific objectives of the internship will be realized via a discussion of the relevant information collected at Beaconsfield High School. This information will be integrated to conform to the rational approach of the Kaufman model.

The associated activities which played an important role in leading the intern to his conclusions will be overviewed.

The Decision to Adopt Flexible Modular Scheduling at Beaconsfield High School

Beaconsfield High School first opened as a comprehensive high school in September of 1967. A traditional block schedule was used during that year. Mr. Leslie Clarke who was Director of Studies with the Lakeshore School Board, and Mr. Eric King who was in his first year as principal at Beaconsfield High School quickly realized that their old internal organization did not enable them to take advantage of the school's facilities (Interview with Mr. King, June 3).

A. S. Howling, a teacher at Beaconsfield throughout its history as a comprehensive school, enumerated some of the problems during the 1967-68 school year.

1. Floor space was not being used in an economical way. The noon hour and recess resulted in wasted classroom space for one-sixth of the total school day. Apart from lunch and recess, the cafeteria, seating 400, was not in use at all. Similar waste of classroom space occurred frequently when teachers had their free period. The library was only used effectively for about 20 per cent of the day. The

new auditorium was unused for most of the day. Shops and commercial areas were not being used to their full potential. Instructional media was lying idle whenever classrooms were not in use.

2. The population of Beaconsfield was growing rapidly so that our school built for 1,600, enrolled over 1,700 when it opened and an even larger enrollment was expected. The increased enrollment would have meant working multi-shifts and a lengthening of the school day. (Howling, 1971, p. 1)

Another alternative to accommodate the increased enrollment besides multi-shifts is flexible modular scheduling. In a school with a modular schedule, up to 40 percent of the students may not be in class at a given time, and therefore more students can be accommodated throughout the day in a given number of classrooms.

Although it is significant that Beaconsfield High School was overcrowded and could not fit every student in a classroom at the same time, it would be a discredit to the administration and staff to overemphasize this factor in the decision to adopt modular scheduling. Flexible modular scheduling, as stated previously, is based on a set of educational assumptions and a philosophy which may be quite different from those adhered to in a traditional high school. Mr. King had a philosophy of education which flexible modular scheduling appeared to support. Although he could not take the time himself to visit schools using a modular schedule, he supported the vice-principals, department heads, and teachers in their visitations and study of flexible modular scheduling (Interview with Mr. King, June 3).

Quebec educators were expected to implement such innovations and changes as team teaching, large group instruction, small group instruction, and technical vocational studies in the educational system with the move to comprehensive schools (Smithman, 1970, p. 1). The teachers and administrators at Beaconsfield High School became convinced that

modular scheduling presented the best organizational pattern to accomplish such changes. The staff voted overwhelmingly in favor of adopting a modular schedule. The Lakeshore School Board supported Beaconsfield High School in its decision to implement flexible modular scheduling provided that there was no great community dissent (Interview with Mr. Leslie Clarke, June 15).

Implementation of Flexible Modular Scheduling

The teachers at Beaconsfield High School were consulted throughout the year previous to the adoption of the modular schedule. Selected teachers and department heads as well as administrators visited a number of schools which were using a modular schedule.[11] These teachers reported their experiences to other staff members. Guest speakers and films were also utilized and the pros and cons of modular scheduling were explained so that the teachers would know what they were getting into. A plebiscite of the teachers was taken and the great majority voted in favor of a move to a flexible modular schedule (Interview with Mr. Eric King, June 3). The teachers who were interviewed felt that they had a significant voice in the change to the modular system.

The extent of involvement of the teachers in moving to flexible modular scheduling can certainly be considered a valuable in-service experience in that it prepared them for the move to modular. In-service seminars were also held prior to the opening of school in September, 1968

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[11] The schools were all in the United States. Pelham High School, Pelham, New York; Abington High School, Abington, Pennsylvania; Nova Schools, Fort Lauderdale, Florida; De La Salle High School, Minnesota; Marshall High School, Portland, Oregon; Montcalm High School, New Jersey.

to prepare new staff members for the modular system and to bring old staff members up to date (Howling, 1971, p. 4).

In the years following the change-over however, the teachers interviewed agreed that there had not been enough follow-up in the in-service program. Although staff turnover at Beaconsfield High School has been relatively low over the years, the number of original teachers is gradually diminishing. New teachers must be educated as to the philosophy behind the modular system and appropriate teaching methodologies to use in such a system if Beaconsfield High School is not to continue to revert to more traditional styles of pedagogy.

There is no one person who has the responsibility for coordinating an in-service program to ensure that teachers recognize the potentialities of the modular system.

A great emphasis is put on the philosophy of Beaconsfield High School when interviewing prospective teachers and teachers are hired who the administrators feel can work in and contribute to such a system. Teachers stated that the teacher training institutions did not prepare them for working in a modular system and the intern observed that several of the newer teachers to Beaconsfield do not have as much commitment to flexible modular scheduling as do the original teachers who were at the school when modular was introduced.

Major Administrative Problems Caused by Flexible Modular Scheduling

The major problems delineated by the intern at Beaconsfield High School are similar to those gleaned from the review of the literature. They were community support, scheduling problems, student use of unstruc-

tured time, and control at both the technical and managerial levels.

Community Support

The administration of Beaconsfield High School realized from the experiences of other schools which had tried modular scheduling that community support was a prerequisite to success. Community pressure has been responsible for many schools moving back to a traditional timetable. Parents find it difficult to accept seeing students in the corridors or socializing in the lounges. Accordingly, efforts were made before modular was introduced to inform the parents of the possible ill effects of reduced student control as well as the positive aspects of the modular system. The parents did accept flexible modular scheduling; however, community relations has continued to be a major administrative task. Mr. Leslie Clarke who is the present Director General of the Lakeshore School Board feels that "the modular system has been under a cloud" since its inception (Interview with Mr. Clarke, June 15). In fact, several crisis situations with the public have occurred during Beaconsfield High School's eight years on modular but in each case other people from the community have leaped to the school's defense. One such instance occurred when one of Beaconsfield High School's students died in a drug related accident in 1973. The school received nation-wide press coverage and great community pressure was brought to bear against the school. Several prominent citizens from the community helped defend Beaconsfield High School publicly and the crisis was averted (Interview with Mr. Eric King, June 3).

The socio-economic level of the community of Beaconsfield and the presence of Macdonald High School which acts as an alternative to

Beaconsfield High School are two factors which greatly enhanced Beacons-
field High School's chances for success with flexible modular scheduling.

Beaconsfield High School has utilized parent volunteers since
modular was introduced and one of the positive benefits of this practice
is the public relations work which these parents have accomplished.
Parent volunteers often have preconceived negative attitudes regarding
the modular system, but many of these become converts and often act as
ambassadors of the school in the community. During the first years of
modular, parent volunteers sponsored coffee parties throughout the commu-
nity to expose parents to the modular system. Mr. Bruce Walker, head of
Community Resources Department at Beaconsfield High School, and one of
the administrators would drop in and explain to the parents what they
were doing in the high school. Mr. Walker feels that they had some
success but not enough such efforts have been made to keep the community
informed (Interview with Mr. Walker, May 7). Approximately one hundred
volunteers worked at Beaconsfield High School each week during the 1975-
76 school year. The volunteer program is coordinated by the Community
Resources Department.

Scheduling

A second major problem has been the development of the school's
schedule. Although Beaconsfield High School moved to computerized sched-
uling in 1969, scheduling continues to be one of the most formidable
problems of the modular system.

The process of scheduling was described by Mr. Harris in 1969 as
part of an evaluation of the first year of computerized scheduling.

1. Involvement of Administration, Staff Council, Heads of
   Department, Staff Members in Formulation of Curriculum

2. Brochure Preparation and Head Office Approval of Curriculum

3. Preparation of Student Request Form and Distribution of Materials

4. Student-Counselor Interview to Determine Course Selection—Subject to Parental Approval

5. Organization of, and Submission of, Student Request Forms to Data Center

6. Hand Tally and Tentative Staffing

7. Course Structure Determined by Staff

8. Master Schedule Preparation (Harris, 1969, p. 1)

This process remains essentially the same in 1976.

A change in computer companies in 1972 did little to alleviate Beaconsfield High School's scheduling problems. Mr. McGrail stated in the Principal's Annual Report for 1975-76: "Although there are so many benefits to the modular system, the cost in time and effort is high. Each year is started with renewed energy and then we face September with the timetable mess (McGrail, 1976, p. 33)." The problem is a philosophical one as the staff and administration must be ready to accept 30 to 40 percent unstructured time if the scheduling problems are to be solved (McGrail, 1976, p. 33). The administration and faculty have not been willing to accept this restriction especially in Cycle I where scheduling densities of 80 to 85 percent are desired.

Scheduling problems have disrupted the first month and a half of school, created student conflicts and unbalanced classes, and prevented some students from carrying a full academic load (McGrail, 1975, p. 1). The advantages of varying length and size of class with a modular schedule have been largely unattainable because of the increased scheduling complexity.

There is a constant danger that scheduling decisions will be made

which will not be based upon the philosophy of the system. For example, students are presently permitted to change courses in September after consultation with the guidance counsellors, the philosophy being that students should be responsible for their own education and it is better for them to make mistakes at school where help is readily available. Changing courses in September, however, causes new scheduling problems and makes the computer generated records inaccurate. The decision to change such a policy should be based on a change in philosophy rather than administrative convenience (Interview with Mr. Pat Baker, June 17).

Student Use of Unstructured Time

The most overt of Beaconsfield High School's problems and indeed of any school using the modular timetable is student use of unstructured time. At any given time during the school day up to one-third of the students are not in a formal classroom situation. The school climate at Beaconsfield High School resembles that of a university more than that of a traditional high school. Students may pursue any of a number of options during their unstructured time--study in the library or one of the subject resource centers, seek remedial help from a teacher, visit the guidance department, participate in a club activity, play or exercise in the gymnasium, or relax in the cafeteria or lounge. The problem is simply that many of the students do not utilize their unstructured time for constructive activities (Interview with Mr. McGrail, May 4). This problem may be compounded as teachers in Quebec are not required to supervise students outside the classroom situation (Teachers Collective Agreement, 1972). Great efforts have been made to provide structures so that better use will be made of free time. In fact, three of the four

priorities for 1975-76 dealt with the problem of utilization of unstructured time and general discipline.

For the first five years of modular, grades VII to XI were time-tabled using the same modular structures with its inherent 30 to 40 percent unstructured time. It was found that the younger students could not cope with the unstructured time as could the older students. Added to this was the problem of "identity" where the younger students had many different teachers and classmates during the day depending upon their individual options, a drastic change from elementary school where students spend most of the day in the same class with the same teacher. In an effort to counteract this depersonalization, the "School within a School" concept was implemented in September of 1973. Grades VII and VIII became Cycle I and it was organized on an interdisciplinary team basis. The advantages are that students and teachers are given the opportunity to work together in close relationships and also that teachers can integrate subject matter and exchange ideas. Cycle I no longer operates on a modular schedule but has returned to the block schedule although each student does have approximately 20 percent free time including his lunch break.

The interdisciplinary team approach was adopted in grade IX for the 1975-76 school year. The reasons for this were similar to those given for the team approach in Cycle I. It was felt that the students had too much unstructured time and no one group of teachers knew the students who as a consequence suffered academically. The scheduling density was moved up to 76 percent in grade IX with the introduction of the team approach (Interview with Mr. Jim Gore, June 18).

Attempts to encourage the positive use of free time have been

made throughout the history of modular at Beaconsfield High School. One such attempt tried several times under different names has been to provide a number of clubs sponsored by teachers in their areas of interest such as chess, cooking or Glee Club. Such attempts have been generally unsuccessful mainly because of the problem of finding common free times for a group of students and a teacher. A renewed effort in this direction was made in 1975-76 with the appointment of three student life coordinators to coordinate activities during and after school. The success of the student life coordinators was mainly confined to extra curricular activities as scheduling problems, student and staff participation, and the negotiations with the government generally combined to limit in-school-activities (Interview with Mr. Grant Thomas, June 15).

The problem of unstructured time usage is one of which the administration and staff are consciously aware and one that they will have to contend with as long as the modular system exists. An irony exists in that in an effort to promote better utilization of free time, the tendency is to schedule students more rigidly which not only compounds scheduling problems but moves the school away from its original philosophical convictions regarding the development of self-discipline and responsible students via the modular system. Either the administration and staff must accept a certain mismanagement of unstructured time by the students or increased scheduling problems will necessitate a return to the traditional block schedule.

Control

A fourth problem inherent in modular concerns the lack of administrative control for teachers as well as administrators. For example,

it is often impossible to tell a parent where a given student is at a particular time. Absenteeism from class is also more difficult to control as students who are skipping classes are impossible to identify in the corridors. The psychological factor that students may not feel "out of place" when skipping class since they are often legitimately out of class may increase absenteeism. During the first year any student who missed class was given detention the next day; however, over a two week period the number of detentions grew from 30 to 60 per day. Teachers are now expected to call a parent when a child misses three classes. While many teachers fulfill this obligation diligently, there are some teachers who do not bother to phone parents (Interview with Mr. McGrail, May 4).

The lack of administrative control also applies to teachers in that a teacher who wishes to abrogate his responsibilities finds it much easier to do so in the modular system. While the majority of teachers work well beyond their contractual obligations, there are a few who do not use their unstructured time working with students. Teachers at Beaconsfield High School do not meet the minimum number of teaching minutes per week set by the provincial Department of Education and this requirement is fulfilled by the time teachers are supposed to spend in working individually with students. There have been occasions in which teachers have not shown up at school until they have scheduled classes (Interview with Mr. McGrail, May 4). A high degree of professionalism among teachers is necessary if the modular system is to be successful.

Table 3
Evaluations of Flexible Modular Scheduling at
Beaconsfield High School

Author	Title	Date
Mary McRae	A Commercial Teacher Looks at Modular Scheduling	1969
A. S. Howling	The Modular System at Beaconsfield High School	1970
J. D. Harris	Report on Scheduling at Beaconsfield High School, 1968-69	1969
Beaconsfield High School Administration	A Report on the Modular System at Beaconsfield High School, 1968-69	1969
Harold Smithman	Evaluating Modular Scheduling at Beaconsfield High School--Progress Report	1970
James F. Shuddeboom	A Comparison of Academic Achievement in Modular and Traditional High School on Province of Quebec High School Leaving Examinations	1973

the faculty. His response rates were 60.4 percent, 88.8 percent, and

80.3 percent respectively. He attempted to measure learner behaviors

and faculty behaviors which the administration of Beaconsfield High School

and Central Office felt would occur with the introduction of modular.

He concluded that modular scheduling is an effective method of school

administration, and that the modular pattern permits a certain flexi-

bility in grouping students for learning. On the negative side he con-

cluded that attention must be given to providing more productive exper-

iences for students during free time, a reported low "school spirit"

requires additional inspection, and once the timetable is constructed

there is little opportunity to change the pattern so that the whole pro-

blem of flexibility should be considered in future planning (Smithman,

Evaluation of Flexible Modular Scheduling

The evaluations of the modular system at Beaconsfield High School which have been completed previously will be overviewed. The interview data collected in conjunction with the previous written evaluations will be used to provide a brief, subjective interpretation of the extent to which the original objectives of the modular system have been attained.

Previous Evaluations

A number of evaluations were carried out during the first two years following the introduction of the modular system at Beaconsfield High School. In addition, a teacher at Beaconsfield High School wrote a Master's thesis comparing Beaconsfield with a matched school. The evaluations are listed in Table 3.

The MacRae, Howling, Harris and the Beaconsfield High School Administration evaluations can be considered "participant as observer" evaluations. As such, they are very valuable in that they contain the impression of people who lived through the transition to the modular system. These evaluations are also important in that they preserve on paper the original reasons why Beaconsfield High School moved to modular and the immediate and long term objectives which the faculty felt it could accomplish by such a move. The major disadvantage of the evaluations is that they are not generalizable to the present time because Beaconsfield High School has continued to refine its internal organization and many staff and administrative changes have occurred since they were written.

Dr. Smithman's evaluation consisted of sets of questionnaires which were administered to 250 parents, 500 students and 107 members of

1970, pp. 27-28). Dr. Smithman stated that no final conclusion could be drawn from the data because the modular system had been in operation for a short time, less than two years, and the numerous uncontrollable variables such as team teaching and the new facilities might be responsible for observed changes (Smithman, 1970, p. 6). A study such as Dr. Smithman's would have much greater validity at this time since any "halo effects" would likely be dissipated.

Mr. Shuddeboom's thesis compared Beaconsfield High School with a matched school using a traditional schedule. Quebec High School Leaving Examinations were used to compare examination marks in six areas: English Composition, English Literature, French Oral, French Written, Geometry and History.

Mr. Shuddeboom's thesis makes a valuable contribution to the information needed to ascertain whether the students at Beaconsfield High School are benefiting from the modular system; however, the absence of randomization and control of extraneous variables as well as sole reliance on cognitive achievement as the dependent variable detract from its importance.

The administration of Beaconsfield High School feels that an in-depth evaluation of the modular system should be carried out and it requested the school board to carry out such a one during the 1975-76 school year without success (Interview with Mr. Baker, June 11).

An Evaluation in Terms of the Original Objectives

The administration of Beaconsfield High School developed a number of immediate and long term objectives for the school year 1968-69. The objectives reflect the needs which prompted the school to adopt the

modular system. The objectives are subdivided under instruction and curriculum development, teacher development, student development, and utilization of the plant. The interview data collected will be juxtaposed with the previous evaluations to provide a brief impressionistic interpretation of the extent to which the original objectives have been attained.[12]

Instruction and curriculum development. One of the advantages of modular cited in the literature is the ability to vary time to make it suitable to the particular subject being taught. Several teachers at Beaconsfield High School have experimented with lengths of class but many teachers like the five times two mod (5 x 2 mod) arrangement which translates into the traditional five periods per week of forty minutes duration each (Interview with Mr. Pat Baker, June 17). Short language lab periods of one mod duration were found to be too short for the students to get down to work. Technical courses benefit by the flexibility to have three mod classes of sixty minutes duration. The sciences benefited greatly from the flexibility to vary time for laboratory work (Interview with Mr. McGrail, May 4). "Open science labs" of a morning or afternoon duration where students may attend voluntarily have been quite successful.

Many of the problems with the scheduling of Cycle I this year (1976) are caused by teachers who are varying class lengths (Meeting with C.O.G.I.T.O. representatives, June 16).[13]

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[12] The original objectives in their entirety are contained in Appendix E.

[13] C.O.G.I.T.O. is the computer company which generates the schedule for Beaconsfield High School.

Instruction and curriculum change did occur during the first years of modular. Two teachers, Mrs. June Bolger and Mrs. Tania Gitts, won a Hilroy fellowship for their work in developing a history course. The course is no longer in use. Some teachers worked with the media specialist, Mr. Bob Brown, to develop Learning Activity Packages but they have not been used for several years. Mr. Oliver Stevens developed and still uses a contract system to teach his English courses. The instruction and curriculum change was often done on an individual basis, and when the teacher(s) concerned lost interest or moved to another school, the project was usually terminated. Certainly, the flexibility of the modular system has provided a greater "opportunity" for instruction and curriculum change; however, most teachers have reverted back to traditional teaching methodologies (Interview with Mr. McGrail, May 4).

The degree of attainment of the "continuous progress" and "individualized instruction" objectives are difficult to determine because it is contingent upon the individual teacher and students. The modular system does free teachers and students so that they may meet in subject resource centers during the day. Teachers state that the opportunity for increased contact with students on an individual basis is one of the biggest advantages of the modular system.

Mr. Eric King presented a paper to the staff of Beaconsfield High School in 1969 entitled Educational Guidelines--Beaconsfield High School: 1969-70. In this paper he outlined the curriculum of the future as having a two-fold emphasis.[14] A core of basic skills would be emphasized throughout elementary school and to the end of Cycle I. This core would

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[14] See Appendix F for Mr. King's curriculum design.

continue into Cycle II in a remedial sense. Integration of the academic disciplines would be emphasized in Cycle II under three broad areas:

1. Interpreting Your World: Humanities, Communication (English Literature, Languages, Art, Music, etc.)

2. You in Your World Community: Social Studies, Sociology, Anthropology, Political Science, Economics, etc.

3. You in Your World of Science and Work: Science and Mathematics, Technical, Vocational, Commercial, Health, Physical Education, etc. (King, 1969, p. 2)

Each area was to include two types of courses; those mandated by the Department of Education, and enrichment or optional courses.

The three broad areas envisioned by Mr. King became little more than names as little real integration of the subject areas occurred. Attempts were made to combine subject areas under one department, for example, mathematics and science. This approach did not work well because it was difficult to find teaching personnel who were acceptable to two or three departments. Teachers from different subject areas were also reluctant to combine subject resource centers. The large size of the school and its traditional departmentalization were factors which prevented integration of the disciplines. The external exams which are organized by subject areas was also an important factor in influencing teachers to retain the status quo (Interview with Mr. Baker, June 11).

In the _Principal's Annual Report_ for 1972-73, Mr. King included a section on the emerging role of the department head at Beaconsfield High School. In the report he recognized the departmentalization according to subject disciplines and stated that "individual differences among department heads, makes uniform directional change very difficult" (King, 1973, p. 8) Efforts to overcome this problem were to be made by using "directional priorities as a basis for establishing departments--Instruc-

tional Media; Outdoor Education; Cycle I; Student Life, etc." (King, 1973, p. 8)   The department headship was to be a staff rather than a line position and was to be retained only as long as the assignment remained a priority. Subject department heads were to be retained so that the positive advantages of the traditional departmentalization would not be lost.

Beaconsfield High School has achieved some notable success in the creation of departments with responsibilities other than subject disciplines and an emphasis is still put in this direction.

Teacher development. The opportunity for professional development through improved communications is a definite advantage of the modular system at Beaconsfield High School. Department head meetings and departmental meetings are often held during the school day. In addition, teachers are organized in teams in Cycle I and this improves communications, while in Cycle II teachers are in close contact as they have their offices centralized around subject resource centers.

Large group instruction and team teaching have not worked out as expected. Adequate facilities are not available for this mode of instruction. The auditorium was found to be inadequate because of recurrent sound system problems. Teachers do not like the inflexibility of the large group presentation once the schedule has been finalized and often find it difficult to integrate valuable large group presentations into a course every week. Large group instruction is planned by the English and French departments for 1976-77 but the science department has dropped it as a method of instruction (Interview with Mr. McGrail, June 16).

Student development. More opportunity is available for informal

student-teacher contact. Great efforts have been made with limited
success to involve students in clubs, hobbies, and athletics. The guid-
ance department benefits greatly from the modular system as students can
drop in during free mods. Perhaps the most impressive feature of
Beaconsfield High School is the use which is made of the library. It is
constantly filled during the school day as many students use their
unstructured time to complete their assignments.

The Shuddeboom thesis showed no significant differences in
achievement as measured by Provincial Examinations between Beaconsfield
High School and a matched school using a block schedule. However, the
removal of the older boys attending the modular school from the data
analysis resulted in an increase in the mean scores of the main body of
the sample from that school. At the block scheduled school, the removal
of the older boys had the opposite effect (Shuddeboom, 1973, p. 50).
The success of flexible modular scheduling in terms of academic achieve-
ment is ultimately contingent upon the discipline of the individual
student. Some students will achieve more in a structured learning
environment.

Parents feel that not enough enrichment is available for the high
achieving students and this subject is becoming a priority with the
administration (Administrators' meeting, June 8).

The intern used the amount of vandalism at Beaconsfield High
School in comparison with other schools in the district as an indicator
of "the development of individual responsibility." The business manager
for the school board stated that Beaconsfield High School was having less
internal and external vandalism than the other two schools of comparable
size in the district. This was not true until three years ago and may

be due to the fact that students of the last three years have completed their whole high school career at Beaconsfield High School (Interview with Mr. Leslie Clarke, June 15).

Flexible ability grouping instead of streaming has been a policy at Beaconsfield High School since the inception of flexible modular scheduling. The rationale for flexible ability grouping was stated by Mr. Eric King in 1969 as follows:

There is no such entity as a homogeneous class

Exposed for a short time to good teaching any so-called homogeneous class rapidly becomes heterogeneous.

Accepting this fact, our problem becomes not one of streaming but of making optional grouping--arrangements within a class. Grouping should be kept flexible, should be based upon interest and/or ability with assignments differentiated accordingly. (King, 1969, p. 10)

One of the potential advantages of the modular system is the unstructured time available for teachers to give individual attention to students who need remedial work. At Beaconsfield it is quite common to find teachers working with students in the subject resource centers. The teaming approach in Cycle I and grade IX gives teachers an opportunity to get involved with students as individuals and therefore recognize their problems so that remedial or enrichment action may be taken.

In Cycle II flexible ability grouping is thwarted as students tend to differentiate according to ability as they take courses of varying levels of difficulty.

One of the priorities for the school year 1976-77 reads as follows: "To extend the recognition of individual differences among students by developing both curriculum and co-curricula programs that focus on the heterogeneous nature of our class, school and community populations." The administration and staff are continuing their efforts

to make their program more advantageous to the individual rather than catering to the nonexistent average student.

The informal natural environment for learning at Beaconsfield High School is a striking development of the modular system.

Utilization of the plant. More efficient use is made of the school's facilities under the modular system.

The audio-visual center is located off the library and is in constant use by both teachers and students. The gymnasia and the guidance facilities also are used to a greater extent.

One of the most successful departments at Beaconsfield High School has been the Community Resources Department under the direction of Mr. Bruce Walker. Mr. Walker's department has extended Beaconsfield High School's program beyond the physical limitations of the plant into the community. Some of the activities coordinated by this department during 1975-76 were a student exchange program, courses in which students were involved in practical work outside the school, community service projects, and an industrial orientation program in which three hundred and forty students were involved in visiting various industrial and business establishments and educational institutions.[15]

Summary

The evaluation of Beaconsfield High School in terms of the original objectives yields several areas of concern particularly under the objectives dealing with instruction and curriculum development, and

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[15] A report of the activities coordinated by the Community Resources Department during 1975-76 is included in Appendix G.

teacher development. This may be partly attributable to the ambition of the original objectives in that flexible modular scheduling would have to be a panacea if all the objectives were to be attained.

The opportunities for teachers to work with students on an individual basis, the informal working atmosphere, the general behavior of the students during unstructured time, the number of students utilizing the library, and the success of the Community Resources Department in extending Beaconsfield High School's program into the community are indications of the potential of the modular system. It should be stressed, however, that the success of the modular system at Beaconsfield High School is mainly attributable to the high degree of professionalism and commitment of the faculty.

Associated Activities

The intern visited a number of high schools in addition to Beaconsfield and attended two administrative meetings of the Lakeshore School Board. These experiences were relevant to the internship either directly, in that the schools visited had introduced flexible modular scheduling, or indirectly, in that the intern was exposed to other types of schedules and organizational structures.

Only those activities which played a major role in leading the intern to the conclusions of this report will be summarized:

Schools Within the Lakeshore School Board

The intern visited two other schools within the jurisdiction of the Lakeshore School Board: MacDonald High School and John Rennie High School.

Macdonald High School. MacDonald High School has been referred to in Chapter V, page 54 of this report as being an alternative to Beaconsfield High School. It is essentially an academic high school which does not offer technical-vocational courses. Students in grades X and XI may have some unstructured time depending upon the course loads which they select; however, all unstructured time periods must be spent in either the library, the study hall, or the student lounge. Students are not permitted to move from one area to another during free periods.

John Rennie High School. John Rennie High School became a fully comprehensive high school in 1969. It immediately adopted an "arena loading" or "walk around" method of scheduling which has been used since that date in the construction of student schedules. Students in Cycle I (grades VII and VIII) are not given any free time; however, students in grade IX have two unstructured periods while those in grades X and XI have one or more unstructured periods per day depending upon their program of studies. Students with unstructured time must go to one of a number of designated areas.

The day at John Rennie High School is divided into 8 periods of 45 minutes each. One period is used for lunch. Longer time periods for labs or shop courses are gained by placing 2 periods in succession.

The school has had excellent success with computer generated master schedules and there are seldom any serious conflicts. A unique aspect of the scheduling process at John Rennie High School is that students in Cycle II arrange their own class schedules. Students in consultation with the teachers and guidance counselors select appropriate courses for the following year. The courses selected are subject to

parental approval. The computer company provides punch cards for each student place in each section of each course offered in Cycle II. A day is set aside each year for students to choose the particular teachers and sections of the courses they plan to take in the following year. While students do not usually get every teacher they want, the priority of choice is their own personal decision. The "walk around" system at John Rennie High School is similar to the system used at Memorial University of Newfoundland.

The advantages of the "walk around," cited by the administration at John Rennie High School, are to give the student the responsibility for making his own timetabling decisions and the inherent flexibility of the system as students can change courses or teachers and in fact be given a whole new schedule at any time. Strict control is kept over timetabling changes and only educationally sound reasons are accepted. The efficiency of the scheduling process was demonstrated to the intern as six requested courses were scheduled without conflict in less than five minutes.

Schools Using Flexible Modular Scheduling

The intern visited a small all-grade school, Ste. Agathe High School, which has had a modular schedule at the high school level since 1968. A visit was also made to Riverdale High School because it had used a modular schedule from 1970 to 1975.

Ste. Agathe High School. St. Agathe High School is a small all-grade school of three hundred and twenty pupils. Students in grades VII to XI are timetabled using a modular schedule. The problems encountered at Ste. Agathe were similar to those at Beaconsfield High School. While

both schools have had to backtrack on their initial conceptions of
modular scheduling with one-third unstructured time, the administrators
at both schools concur that the introduction of modular acted as a
catalyst in inspiring teachers to experiment with new teaching methodol-
ogies and consciously try to improve their relationships with students.

The size of the student population, a lack of program options,
and an inadequate resource center limit flexibility in grouping for
instruction and independent study. Apart from reported teacher effects
and changes in school climate, the intern could not discern any notable
advantages to using a modular schedule at Ste. Agathe High School.[16]

Riverdale High School. Riverdale High School used a modular
schedule for five years from 1970 to 1975. The school building is
designed for twenty-seven hundred students although the present enroll-
ment is only twenty-one hundred. It has excellent facilities including
a large library which holds approximately one hundred and eighty pupils
and resource centers in each of the subject areas.

The intern interviewed the principal and a vice-principal
regarding their experiences with modular scheduling.

The reasons given for the adoption of modular scheduling were
typical of those in the literature--to give students unstructured time
for study and to give them a chance to exercise responsibility; to uti-
lize different instructional methodologies and to build periods of vary-
ing lengths to fit the purpose of the class; and to experiment and to
try something new.

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[16] A sample student schedule is included in Appendix H.

The year previous to the introduction of modular scheduling at Riverdale High School was spent in study of its potentialities and its disadvantages. Teachers were involved throughout this process and over eighty percent of them voted for the change to modular. The staff became very closely tied together during this time.

Five years after modular was introduced, a staff vote split on whether it should be continued. The principal, Mr. Oulton, made the decision to abandon modular scheduling in favor of a traditional schedule featuring a two-day cycle.

The factors given by the administrators of Riverdale High School which contributed to the failure of the modular system were as follows:

1. No more than twenty to twenty-five percent of the students uti-lized their unstructured time constructively. Vandalism in the building increased tremendously. The school became a haven for drug pushers and many students smoked marijuana on the school grounds. Attendance at classes dropped and many students left the school grounds and caused trouble around the community.

2. Parents were not satisfied with the modular system; they felt that the students were given too much freedom. This was in spite of the fact that at the beginning of each school year new parents were exposed to the positive features of the system. The admin-istrators spent part of each school day talking to parents trying to reassure them about the system, but parents could not be con-vinced that the students were benefiting from the unstructured time. The principal now believes that the parents were right. Riverdale High School is on the fringes of the Protestant School Board of Greater Montreal and there is no school in the area

which could act as an alternative for those students who cannot adjust to modular scheduling. Mr. Oulton stated that modular cannot be justified if students are not given an alternative to it.

3. Building the schedule for the school was a major problem and a change in computer companies did not resolve the problem. The schedule was not straightened out until November of one year with the McBee Computer Company and school opened with seven hundred conflicts with C.O.G.I.T.O. another year. In order to resolve conflicts, large blocks of time set aside for labs or shop work had to be cut back so that the advantage of varying period lengths to suit the activity was lost by the time the schedule was completed.

4. When modular was introduced the staff was very committed to its success. Teachers worked together using large group instruction and team teaching and cooperated in resource centers to tutor students when they were not teaching. As time passed a change in staff attitude occurred and it became less committed to modular scheduling. Many key teachers either moved or were promoted out of the school. Over a two-year period, fifteen key people were lost through promotions.

Teachers started to disagree among themselves and did not want to participate in team teaching. Some teachers did not want to tutor students in resource centers whom they were not teaching. Each year teachers became more structured, even closing down resource centers, but they continued to vote in favor of modular scheduling until June of 1975.

Mr. Oulton feels that Riverdale High School is a much better school without modular scheduling. Instead of teaching students responsibility, he stated that they were teaching them how to avoid responsibility by skipping classes. He raised the question of how students learn to become responsible: "By practising responsible behavior in a rigidly structured school or by being given the chance to act responsibly when they usually do not take advantage of their unstructured time."

The principal of Riverdale stressed the key to a good education as being a good teacher in a classroom with motivated students. With the two-day cycle a teacher still has flexibility in that students can be sent to the library with a note to the librarian so that the remaining students can be given small group and individual attention. Interdisciplinary teams of three teachers are still used in Cycle I and parent volunteers have also been retained.

Teachers have found that their workload is no heavier than it was under modular and in many cases it is lighter.

While students would never have voted to leave modular scheduling, Mr. Oulton has found that many of them are happier with the two day structured schedule. Students find the day shorter and like the regularity where they don't have to be continually deciding where they are going.

Although Riverdale High School adopted a traditional schedule for the 1975-76 school year, another school under the jurisdiction of the same school board decided to try modular scheduling.

Schools With Block Schedules

The intern spent two days as a guest of the Eastern Townships

Regional School Board. Two comprehensive high schools, Alexander Galt High School and Richmond High School, were visited. Both schools have very similar internal organizations although they vary greatly in size with Alexander Galt housing twenty-six hundred students and Richmond High School nine hundred students. Only the schedule used at Alexander Galt High School will be described in detail because of this similarity.

Alexander Galt High School. Alexander Galt High School was moving towards modular scheduling soon after the school was constructed in 1969, but this route was abandoned for several reasons. In order to generate the schedule it would have had to lengthen the school day, schedule students through lunch and lose the common lunch period, and give students forty percent unstructured time. Also, the teachers were not ready for a modular schedule and the community puts a great emphasis on discipline and might not readily have accepted a modular system.

The schedule which was retained may be termed a flexible block schedule.[17] It is composed of six periods per day and runs over an eight-day cycle. Full courses are given six periods per cycle and half courses three periods per cycle. The first periods of the morning and afternoons are one hour long and the remaining periods are of forty-five minutes duration. The timetable is patterned such that each course receives an equal number of the long and short periods. Students in grades VIII to XI are scheduled for seven courses and teachers are scheduled for six courses; thus, all students except the grade VII's are given six unstructured periods every eight days.

[17] The schedule used at Alexander Galt High School is contained in Appendix I.

Teachers found that with the introduction of free time, tensions in the classroom were reduced and there was far less teacher-student confrontation. Recently, however, there has been a counter movement with some teachers wanting students to be scheduled on a full-time basis. There is a problem with some skipping of classes as it is impossible to identify which pupils are legitimately out of class. To counteract this problem, teachers record attendance in every class.

At Richmond High School students are introduced more gradually to unstructured time. Grades VII and VIII students do not have any free periods, grade IX students have three unstructured periods every eight days, and grades X and XI students have six periods free every eight days.[18]

Conclusions

Flexible modular scheduling was adopted in September of 1968 by Beaconsfield High School as an attempt to accommodate an overlarge student population by making better use of its facilities, and to encourage teachers to innovate and adopt the latest teaching methodologies to improve the instructional program.

After eight years, only grades X and XI can be considered as being on a truly flexible modular schedule. Grades VII, VIII and IX are scheduled at a high density of approximately 80 percent using a block schedule although the grade IX schedule does articulate with the modular schedule in grades X and XI for option subjects.

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[18] The schedule used at Richmond High School is contained in Appendix J.

After an initial "Hawthorne effect" during which many teachers varied class length, size and instructional methodologies, the great majority of teachers reverted to traditional styles of teaching. In-service training has been largely neglected at Beaconsfield High School during the intervening years since modular was introduced and this may partially explain why teachers have generally reverted back to traditional teaching methodologies. Staff turnover will inevitably occur over a period of eight years and new teachers cannot be expected to understand the philosophy and potentialities of the modular system if they have never been exposed to it.

Student use of guidance facilities, the library and resource centers, and the resources within the community has been greatly enhanced by the adoption of the modular system.

The limited data available do not indicate that students at Beaconsfield High School are suffering on the Provincial Examinations with the possible exception of the older boys.

The relaxed school climate and the increased opportunities for informal student-teacher communication are two attributes which qualify Beaconsfield as a humane institution unlike many of its more tradition-ally organized contemporaries.

The principal of Beaconsfield High School posed the question to the intern: "What can be accomplished under the modular system that cannot be accomplished under the block system?" The intern incorporated this question into his interview schedule at Beaconsfield High School and at the other schools visited and arrived at the conclusion that most of the potentialities of the modular schedule can be realized with a flexible block schedule. Class lengths and sizes can be varied and team

teaching can be utilized by paralleling classes. For example, if two or more classes in the same subject but taught by different teachers are scheduled at the same time, the teachers can cooperate to utilize large group instruction, discussion groups, individual instruction, and project work and independent study at the resource center. Under such a setup the strength of each teacher can be harnessed to improve the instructional program. Unstructured periods can be gradually introduced in a more controlled manner to foster the development of student responsibility as well as to provide students with opportunities to utilize the library and guidance facilities, and the resources of the community. Reduced scheduling difficulties, and an immediate increase in control for both teachers and administrators with a resultant improvement in community relations would likely result with a flexible block schedule.

The danger with a school such as Beaconsfield High School returning to a block schedule is that the potentialities of the block system for retaining flexibility in line with the philosophy behind flexible modular scheduling might not be realized because the change could be interpreted as a return to traditionalism instead of a move to retain flexibility with increased control.

CHAPTER VII

IMPLICATIONS FOR NEWFOUNDLAND

The more germane differences between schools in Quebec and
Newfoundland which affect the internal organization of secondary schools
will be stated. Then the writer will discuss these differences as they
affect scheduling in Newfoundland's high schools. Next, drawing upon
the material which was presented in the previous chapters, a number of
conclusions regarding scheduling will be offered. Finally, some recom-
mendations regarding future scheduling practices in Newfoundland will be
presented.

The Quebec and Newfoundland Settings

Population density and provincial policy differences have con-
tributed to three major differences between schools in Newfoundland and
Quebec. Firstly, schools in Quebec are generally much larger than in
Newfoundland. This is a function not only of population size and density
but also of Quebec's provincial policy since 1966 of building large
regional comprehensive secondary schools (Cloutier, 1974, p. 219).
Secondly, schools are not comprehensive in Newfoundland in the sense that
program offerings are limited to academics. In Quebec, every student
who attends a comprehensive school has the opportunity to pursue studies
in the technical and commercial areas as well as the academics. Thirdly,
Quebec has a credit system whereby students accumulate courses over a
two-year period in order to graduate with a high school diploma. Speci-

fically, a student must accumulate a minimum of eighteen units of credit, at least ten of which must be in courses designated as Secondary V (Grade XI). The other eight courses may be from either Secondary IV or V. The Secondary V units of credit must include at least two in the language of instruction, and at least two in the second language. In Newfoundland, students are required to write provincial examinations at the end of grade XI. To qualify for a Grade XI Pass Certificate a candidate is required to pass five courses of which English is compulsory. The comprehensive schools visited in Quebec offered approximately fifty electives to Secondary IV and V students while even the largest of Newfoundland's high school are confined to eighteen credit courses in grade XI by Department of Education Public Examinations Regulations.

Scheduling in Quebec and Newfoundland

The effects of the three major differences delineated between schools in Quebec and Newfoundland will be discussed as they affect school scheduling practices.

School size. A school must be of a certain minimum size before a successful flexible modular schedule can be instituted whereby both size and length of class can be varied. The writer suggests a minimum of 100 students per grade in order for a flexible modular schedule to have any real advantages in terms of flexibility. This figure is suggested partly as a consequence of the intern's visit to Ste. Agathe High School. Only a handful of schools in Newfoundland meet this minimum size requirement; that is, 500 students for a central high school encompassing grades VII to XI (Integrated Education Directory, 1977).

Dr. Warren listed three major approaches to providing a better

education for high school students in Newfoundland. These are as
follows:

1. The elimination of as many small high schools as possible,
   typically impoverished in staff, curriculum and facili-
   ties, by consolidation or the creation of high school com-
   plexes.

2. Identifying small high schools that are "remote and neces-
   sary" and initiating a program for their revitalization.

3. Making large and medium-sized schools relevant, personal,
   and individual; in other words humanizing these schools.
   (Warren, 1973, p. 153)

The first two recommendations refer to school size, a factor which would

take a profound change in provincial educational policy to change. This

internship has relevance to the third recommendation as flexible

modular scheduling is one alternative which has the potential to make

schools more "relevant, personal, and individual."

Comprehensive schools. A flexible modular schedule has more

potential in a comprehensive school where there are a variety of pro-

grams requiring differing class lengths for classroom instruction, labor-

atory work, shop and practical work. Also, the number of options requires

that a schedule with inherent flexibility be utilized. Flexible modular

scheduling is only one scheduling alternative, however, which can be used

to achieve such flexibility. The schedules utilized at Richmond High

School and Alexander Galt High School as well as the "walk around" used

at John Rennie High School also provide such flexibility.

Subject promotion. The absence of a credit system, in addition

to small school size, reinforces inflexible scheduling practices in

Newfoundland whereby students are promoted by grade rather than by sub-

ject. A credit system would ensure that high school students never have

to repeat a course which they have passed. The alternative, subject promotion, is not often practiced even in large schools because it would necessitate more flexible schedules with some students very likely having unstructured time. Instead of being a disadvantage of a flexible schedule, unstructured periods of time, if allocated in a planned and controlled manner, can be one of the most rewarding aspects of a school's learning environment for senior high school students. It should be stressed, however, that the step should not be taken lightly as a great deal of faculty planning and effort are needed to ensure that the majority of students constructively utilize their unstructured time.

In small schools with only one class per grade level, subject promotion is very difficult with strict subject teaching. If teachers in such schools are versatile enough in terms of training and experience to teach different subjects in consecutive grades, then it is possible to have limited subject promotion by paralleling class times for particular subjects in the grades concerned.

Conclusions

Provincial policies and school size are important considerations as they together dictate not only what is to be accomplished but often how. Nevertheless, there were several conclusions generated from the internship which the writer feels are generalizable to the Newfoundland situation.

1. Each school board should publish a general philosophical statement concerning the education of those students within its jurisdiction. Each school should produce an annual handbook containing the school board's statement of philosophy, its own

statement of philosophy, objectives, and a statement of its yearly priorities.

2. Each high school should select a schedule which will enable it to put into effect its stated aims and objectives.

3. High schools in Newfoundland follow very inflexible scheduling practices in comparison with the schools which the intern visited in Quebec. Inflexible scheduling practices are often not compatible with recent philosophical statements of education stressing the development of humaneness and responsibility as goals of the educational system.

4. Small school size, a low number of elective courses, and the absence of a credit system are factors which have contributed to the inflexible organizational structure of Newfoundland's secondary schools.

5. The majority of senior high school students are capable of constructively utilizing unstructured time if it is allocated in a controlled manner and if the proper facilities—resource center, lounge, guidance area, gymnasium—are available to them.

6. A flexible modular schedule provides the ultimate in flexibility; however, there are a number of preconditions which a school must meet before it should entertain a move to flexible modular scheduling. These preconditions are as follows:

   a. the background of the student population as it affects students' general behavior and ability to work during unstructured time;

   b. community acceptance of an unstructured learning environment;

c. faculty awareness of existing problems and a commitment to change the organization of the school to ameliorate the problems;

d. the school building--appropriate physical facilities must be accessible to students during their unstructured time and suitable rooms for large and small group instruction must be available; and

e. where possible, a more structured school should be available to act as an alternative for those students who cannot cope with a flexible modular schedule.

If the above preconditions have been met, there are a number of steps which a school should follow before implementing a flexible modular schedule:

a. the faculty should study a number of different schedules by reading books and articles, listening to guest speakers who have had experience with the schedules being considered, and as many teachers as possible should visit schools where flexible scheduling is being practised;

b. the faculty should vote to decide whether or not a flexible modular schedule or some other type of schedule should be implemented;

c. one person, probably a vice-principal, should be given the responsibility for generating the schedule;

d. a public relations program should be carried out to inform the community why changes are being made and the advantages and disadvantages of the proposed changes; and

e. the needs which precipitated the planned changes in school

organization and the objectives to be accomplished with the change should be recorded.

After the new schedule has been implemented:

a. periodic evaluations in terms of the original objectives of the change and the new objectives stated after the change should be carried out; and

b. in-service training should be ongoing to keep teachers from inadvertently regressing into their former traditional roles and teaching methodologies and to inform new teachers of the potentialities of the school's internal organization.

7. The major problems which a school will have to contend with if a flexible modular schedule is adopted are community relations problems, scheduling problems, student misuse of unstructured time, absenteeism from class, and teachers who do not spend time working individually with students.

8. It is a very difficult transition for students to move from an elementary school where they work with the same teacher and students during most of the day to a high school in which they may have different teachers and classmates each period of the day. Such structure should be altered gradually with only students at the senior high level having a true flexible modular schedule.

9. A school can vary size and length of class and provide for team teaching and unstructured time by using a block schedule while retaining more control over student use of unstructured time than with a flexible modular schedule.

Recommendations

It is the writer's contention that schools in Newfoundland generally have inflexible internal organizations and that changes should be made so that students may develop at their own pace in high school subjects through subject promotion; and furthermore, that changes should be made to bring school schedules more in line with the stated Aims of Education for Newfoundland in which "responsibility" is stated as a goal. The writer also maintains that there is no one schedule which can act as a panacea and that each school after careful introspection and study must choose a schedule which reflects its particular philosophy, needs, and objectives. Keeping these considerations in mind it is recommended that:

A. Department of Education

   1. That the Department of Education institute a credit system whereby credits will be accumulated over grades X and XI to qualify for a grade XI diploma.

   2. That the number of elective courses be increased so that the larger schools will be able to offer more diversified secondary school programs.

B. School Boards

   1. That school boards develop statements of philosophy for their districts.

   2. That superintendents set up committees of secondary school principals to examine the advantages and disadvantages of alternative schedules.

C. Schools

1. That schools develop a prospectus or handbook outlining their
    philosophy, objectives, and the facets of their organization
    which enable them to accomplish their goals.

2. That each school select a schedule which will reflect its
    philosophy, educational objectives, and the needs of the
    community and school.

3. That schools which have resource centers and educational
    support personnel such as guidance counselors consider the
    introduction of unstructured time to senior students.

D. Memorial University

1. That the Department of Educational Administration at Memorial
    University coordinate an in-service program for practising
    school administrators who have not been exposed to the alter-
    natives for increasing flexibility in high schools.

Summary

It has been shown that flexible modular scheduling is a viable
approach to school organization provided that a number of preconditions
have been met. There are other scheduling alternatives, however, which
have the potential to provide most of the flexibility inherent in
flexible modular scheduling with less danger of loss of control.

Within Newfoundland, small school sizes, programs restricted to
the academic, and the lack of a credit system have reinforced inflexible
scheduling patterns. Attempts should be made by the Department of
Education, School Boards, and individual schools to provide more flexi-
bility in secondary education.

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Mr. J. Gore, June 18, 1976

Mr. D. Harris, May 20, 1976

Mr. E. King, June 3, 1976

Mrs. H. Koutton, May 31, 1976

Mrs. C. Lindsay, May 7, 1976

Mr. Long, May 26, 1976

Mr. R. McGrail, May 4 and June 16, 1976

Mr. Oulton, May 27, 1976

Mrs. J. Randle, May 13, 1976

Mr. J. Shuddeboom, May 19, 1976

Mr. Bruce Taylor, June 1, 1976

Mr. G. Thomas, June 15, 1976

Mr. B. Walker, May 7, 1976

APPENDIX·A

ITINERARY OF THE INTERNSHIP

ITINERARY OF THE INTERNSHIP

April 26	Introductory tour of Beaconsfield High School. Discussions were held with the principal and a vice-principal regarding the purposes of the internship and possible activities in which the intern would be involved.
April 27	Attended a meeting of Beaconsfield High School administration. Started review of literature at Beaconsfield High School regarding the move to modular scheduling.
April 28	Continued review of local literature. Attended a meeting regarding a proposed work study program in special education for 1976-77.
April 29	Toured Beaconsfield High School with the principal while discussing informally some of the changes which have occurred over the years. Participated in informal discussions with members of the faculty.
April 30	Teacher strike.
May 3	Visited social sciences department, audio-visual center, library and Community Resources Department.
May 4	Attended meeting of grade IX teachers. Met with principal to plan internship in detail. Participated in a tour of Beaconsfield High School for five educators from New York State.
May 5	Interviewed the chairman of the Staff Scheduling Committee. Visited Mathematics Resource Center. Held an unstructured interview with the principal of Beaconsfield High School.
May 6	Teacher strike.
May 7	Started formal interviewing of faculty of Beaconsfield High School utilizing the questions delineated to fulfill the objectives of the internship.
May 10	Visited John Rennie High School.
May 11	Attended Lakeshore School Board (West District) administrators meeting.
May 12-14	Continued interviews with faculty of Beaconsfield High School.

May 17	Visited MIND--an alternative high school.
May 18-19	Continued interviews at Beaconsfield High School.
May 20	Visited MacDonald High School.
May 21	Continued interviews at Beaconsfield High School.
May 25	Planned further activities for the internship.
May 26	Visited Ste. Agathe all-grade school.
May 27	Visited Riverdale High School.
May 28	Evaluated progress to date.
May 31 - June 1	Visited Eastern Townships Regional School Board.
June 2	Organized the information gathered during the visit to the Eastern Townships.
June 3	Interviewed a former principal of Beaconsfield High School--Mr. E. King.
June 4	Visited MIND for the second time.
June 7	Attended a meeting of Beaconsfield High School administration.
June 8	Attended administrators meetings of the West District of the Lakeshore School Board.
June 10	Xeroxed and organized the written materials at Beaconsfield High School which are relevant to the internship.
June 11	Interviewed the vice-principal in charge of scheduling.
June 14	Spent the day in the staff room at Beaconsfield High School discussing the modular system.
June 15	Interviewed a student life coordinator. Interviewed the Director General of the Lakeshore School Board. The computer printout of the first computer run of the schedule arrived at Beaconsfield High School.
June 16	Attended scheduling meeting of the administration and two representatives of the computer company.
June 17	Tied up some loose ends regarding the scheduling process at Beaconsfield High School.

June 18   Interviewed the vice-principal in charge of grade IX.
                 Interviewed the school union representative.

APPENDIX B

SAMPLE STUDENT AND TEACHER SCHEDULES

AT BEACONSFIELD HIGH SCHOOL

SAMPLE PUPIL SCHEDULE--GRADE X

Beaconsfield High School

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Eng. 422 Section 7	Eng. 422 Section 7	Eng. 422 Section 7	Eng. 422 Section 7	
2					
3	Math 422 Section 5				Math 422 Section 5
4		Math 422 Section 5	Math 422 Section 5	Math 422 Section 5	
5					
6					
7	Hist. 412 Section 3		Hist. 412 Section 3	Phy.Ed. 420 Section 5	
8		Lunch			Lunch
9		Comp. 421 Section 1	Lunch	Comp. 421 Section 1	
10	Lunch				
11		Phy.Ed. Section 5			
12				Lunch	
13	French 422 Section 6	French 422 Section 6	French 422 Section 6	French 422 Section 6	French 422 Section 6
14					
15	Comp. 421 Section 1	Basic Arith. I & II Section 1	Basic Arith. I & II Section 1	Basic Arith. I & II Section 1	Comp. 421 Section 1
16					Eng. 422* Section 1
17					
18		Hist. 412 Section 3		Hist. 412 Section 3	
19	Basic Arith. I & II Section 1				Basic Arith. I & II Section 1
20					

*Large group instruction -- All grade X students for grammar.

SAMPLE TEACHER SCHEDULE

Beaconsfield High School

	Monday	Tuesday	Wednesday	Thursday	Friday
1		Chem. 512 Section 1		Chem. 512 Section 1	
2					
3					
4		Chem. 512 Section 2		Chem. 512 Section 2	
5					
6					
7	Chem. 512 Section 3		Chem. 512 Section 3		
8					
9					
10					
11		Chem. 552 Section 1		Chem. 552 Section 1	
12					
13		Chem. 512 Section 2		Chem. 512 Section 2	
14					
15	Chem. 552 Section 3		Chem. 552 Section 3		
16		Chem. 512 Section 1		Chem. 512 Section 1	
17					
18	Chem. 552 Section 2		Chem. 552 Section 2		
19					
20					

APPENDIX C

REGULATIONS GOVERNING THE SCHOOL COUNCIL

REGULATIONS GOVERNING THE SCHOOL COUNCIL

4-2.00   SCHOOL COUNCIL

4-2.01   Within the school there shall be a school council associated
          with the competent authority at this level.

4-2.02   The syndical unit shall recognize as the competent authority of
          the school: the principal, the vice-principal or the head
          teacher of that school.

4-2.03   The school council shall be composed of at least three (3)
          members of the teaching personnel elected by their colleagues.
          The syndical delegate and the competent authority in the school
          shall be members of the council ex officio.

4-2.04   The school council must study and express its opinion on any
          question referred to it by the competent authority of the
          school, a member of the teaching personnel of the school, the
          syndical unit, or the school board.

4-2.05   Between the date of the request to the school council for advice
          and the date of implementation of a measure, the school council
          must have a reasonable period of time in order to fulfil the
          obligation that it has to forward to the competent authority of
          the school its recommendation or its decision, according to the
          power which it is granted by this agreement or by the working
          conditions provided by Order in Council 3811-72, or to indicate
          its inability to give a reply.

4-2.06   The competent authority of the school must consult the school
          council on the following matters:

          the manner of applying in the school decisions of a pedagogical
          or disciplinary nature emanating from the school board, the
          School Council of the Island of Montreal, the Ministry of
          Education or its agents; and all matters which would establish
          a different or modify an existing pedagogical or disciplinary
          organization of the school:

          A) PEDAGOGICAL & DISCIPLINARY

              1.   the formulation and application of school regulations;

              2.   the application within the school of teaching methods
                   and criteria for determining the rating of pupils in
                   their studies;

              3.   the preparation of the school programs and the deter-
                   mination of the educational objectives of the school;

              4.   the general organization of extra-curricular activities;

5. general working conditions in the school;

6. the implementation in the school of regulations and directives emanating from the Department of Education;

7. student privileges and the climate of discipline;

8. the activities for days in the school calendar on which pupils are not required to be in class;

9. the evaluation and reporting procedure for students;

10. the organization of pedagogical services within the school, e.g., budgets, library, audio-visual, etc.;

11. the co-ordination and sharing of external pedagogical services, e.g., consultants, medical, etc.;

12. the study of short-term and long-term goals of the school.

B) STAFFING & STAFF RELATIONS

1. emergency substitution procedures, in accordance with clause 8-5.03 D) of the working conditions provided by Order in Council 3811-72.

2. the distribution of teachers' workload in the school, in accordance with clause 8-3.04 A) of the working conditions provided by Order in Council 3811-72;

3. the determination of the type of teachers needed to accomplish the programs and objectives, in accordance with clause 8-3.03 of the working conditions provided by Order in Council 3811-72;

4. the reception, accommodation and distribution of student teachers within the school;

5. the integration of teachers new to the staff, particularly those who have not taught before;

6. the organization and operation of the teacher probation system;

7. the methods of evaluation of teachers, especially new teachers;

8. the scheduling of secretarial help for teachers as provided by clause 8-5.01 of the working conditions provided by Order in Council 3811-72.

9. the time, date and agenda of staff meetings and parents' meetings, as provided in article 4-4.00 of this agreement and clause 8-5.08 of the working conditions provided by Order in Council 3811-72.

C) BUDGETING & FINANCING

1. the school's budgetary estimates for the following year, within ten (10) days of receipt and in no case later than the 30th of April;

2. the general policies and procedures for the establishment of budgetary priorities, the purchase and distribution of teachers' supplies and modifications to the school plant which affect pedagogical conditions.

D) PARENTS & PUPILS

1. the division of the school calendar for pupils in the school;

2. recommendations received from the school committee;

3. parent-teacher relations;

4. the classification and grouping of students.

4-2.07 Following authorization by the Director-General or his delegate on behalf of the school board and notification to the syndical unit the consent of the school council must be obtained before any solicitations of funds, any sale or any distribution of publicity material for the benefit of outside organizations may be carried out by a teacher.

The school council shall determine the specifications of the teachers' collaboration.

Under no circumstances may a teacher be held responsible for the loss or theft of any monies which may be involved in the sale or distribution of material by outside organizations.

4-2.08 The school council shall encourage the teachers in the school to take advantage of the provisions of clauses 7-3.04, 7-3.05 and 7-3.06 of the working conditions provided by Order in Council 3811-72.

4-2.09 OPERATION OF THE SCHOOL COUNCIL

1. At its first meeting, the school council shall appoint a chairman and a secretary from among its members.

2. The school council shall meet at least once per month between the 1st of September and the 30th of June.

3. The agenda for school council meetings should be drawn up and circulated in due time, but at least forty-eight (48) hours, prior to each meeting to allow reflection and consultation on items.

4. The school council shall adopt all rules of internal procedure.

5. In order to reach a decision, an absolute majority of members of the school council shall be required.

6. Whenever any matter is under consideration, the school council shall hear, during its meetings, at no cost to the school board or the syndical unit, any person whom a member of the school council wishes to be heard for the purpose of enlightening the school council on questions which fall within its competence.

   However any member of the school council, who intends to have such a person heard, must give prior notice to the chairman of the school council.

7. The school council must inform all members of the teaching personnel of the school of its resolutions by distributing minutes of its meetings to each teacher and must report to them on its deliberations at staff meetings or at meetings called for this purpose.

8. In the interest of efficiency a school council should not exceed eleven (11) members in total and the number of members shall be constant for the school year.

APPENDIX D

PHILOSOPHICAL VALUES OF BEACONSFIELD HIGH SCHOOL

PHILOSOPHICAL VALUES OF BEACONSFIELD HIGH SCHOOL

A statement adopted by the Beaconsfield High School
Council on March 4, 1974

1. The belief that each individual is distinctly different from all
   others and that he has different abilities and learning patterns.
   Thus, a climate must be maintained that allows for individual growth
   and development.

2. The belief that the individual needs a climate of openness and
   advisement, not structure and regulation.

3. The belief that students can become informed, reasoning, socially
   aware and concerned adults. Thus, the total program must be struc-
   tured to provide a balance between all of the branches of knowledge.

4. The belief that teachers can be trusted to make decisions that
   directly influence them and their students. Teachers are competent
   and professional educators.

5. The belief that the main role of the principal is that of change-
   agent. He is the central catalyst and source of energy which starts
   change which then generates much of its own power. Thus, an atmos-
   phere for change is created, guidelines are drawn, and encouragement
   is given.

6. The belief that the educative process can best occur in a free,
   trusting atmosphere where there is freedom with responsibility and
   accountability.

7. The belief that education does not take place only within the school
   building. Thus, continued emphasis is placed on field trips,
   exchanges, outdoor education, etc.

8. The belief that the school and community are closely intertwined and
   that each can serve the other both inside and outside school hours.

9. The belief in the consultative process in decision-making which
   allows for student, staff, and community participation in determining
   school policy, curriculum, and structures through the effective use
   of legal councils and ad hoc committees.

10. The belief that the principal is a philosopher as well as an admin-
    istrator so that the principal is familiar with past and current
    educational theory and practice.

11. The belief that the principal's authority can be delegated to the
    vice-principals, department heads, and teachers where they are
    qualified to act.

APPENDIX E

THE OBJECTIVES OF THE MODULAR SYSTEM AT

BEACONSFIELD HIGH SCHOOL--1968-69

THE OBJECTIVES OF THE MODULAR SYSTEM AT

BEACONSFIELD HIGH SCHOOL--1968-69

Immediate

Instructional and Curriculum Development

1. To make the time and space available
   at Beaconsfield High School more
   suitable to each individual subject.

   a) Short language lab periods,
      longer technical lab periods, etc.

   b) Appropriate utilization of the
      chemistry lab, auditorium, etc.

Teacher Development

1. To provide more opportunities for
   professional development through
   improved communications.

   a) Department head meetings during
      the school day.

   b) Department meetings during the
      school day.

   c) School council meetings.

2. To provide better opportunity for
   improved teaching.

Long-Term

2. To provide more opportunity for
   instruction and curriculum change.

   a) Continuous progress, individualized
      instruction, etc.

   b) Development of the spirit of
      regulation!

Immediate

a) Team teaching, large group instruction, seminars, tutorials, etc.

b) Preparation time for teachers, etc.

c) Grouping inexperienced teachers with experienced teachers to provide leadership and assistance.

Student Development

1. To provide opportunities where students and teachers may meet on a less formal individual basis for educational and personal development.

   a) Enrichment.

   b) Clubs, hobbies, athletics.

   c) Individualized study, independent study.

Long-Term

2. To provide opportunities for the development of individual responsibility among high school students.

   a) Freedom of choice during unstructured time.

   b) The availability of all school resources for educational and personal development at all times during the school day.

   c) Guidance interviews, assemblies, clan.

3. To provide a less formal, more natural environment for learning within the school.

   a) The availability of student areas within the school.

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b) The availability of a heterogen-
eous group of students on unstruc-
tured time throughout the school
day.

Utilization of the Plant

1. To provide more efficient use of the
   school buildings.

   a) Extensive utilization of large
      and small group instruction areas,
      e.g., auditorium.

   b) Extensive utilization of the
      school facilities for the purposes
      for which they were intended,
      e.g., library, cafeteria, science
      labs.

2. To provide effective use of the school
   equipment and resources.

   a) More and better opportunities for
      the use of AIV equipment.

   b) More opportunities for meaningful
      utilization of community resources.

APPENDIX F

PROPOSED CURRICULUM DESIGN FOR

BEACONSFIELD HIGH SCHOOL—1969

CURRICULUM DESIGN

The curriculum of the future will be given a two-fold emphasis:

A. <u>Core of Basic Skills (Elementary to end of Cycle I)</u>

Fundamental to success in high school is one's reading ability which in broad context includes communication and study skills.

Mathematics, too, is a precise subject wherein it is possible to measure "level" and to develop individual programmes.

The above skills should not terminate at grade VI level. Extended into high school, they should constitute a "compulsory core" through Cycle I and will be continued remedially into Cycle II for needy students.

B. <u>Peripheral Areas</u>

Our traditional course of study has been sharply compartmentalized. The modern school is moving in the direction of integration.

Initially we shall divide our "peripheral" program into three general areas: each course should, insofar as possible, contribute to the implied aims of the area with which it is identified.

1. <u>Interpreting Your World:</u> Humanities - Communication
(English Literature, Languages, Art, Music, etc.)

2. <u>You in Your World Community:</u> Social Studies, Sociology, Anthropology, Political Science, Economics, etc.

3. <u>You in Your World of Science and Work:</u> Science and Mathematics, Technical-Vocational, Commercial, Health, Physical Education, etc.

Each area will include two types of courses: (1) basic courses laid down by the province; (2) enrichment (optional) courses--some of a semester's duration.

Our elective offering will be flexible. A student, for example, who prefers Social Studies will be permitted to elect a fairly heavy weighting from Area #2 and to reduce his quota accordingly in one or both remaining areas.

<u>Cycle I will consist of:</u>

1. <u>A Central Skills Core:</u> (uninterrupted continuation of skills of elementary school--Reading and Mathematics).

2. <u>Common Learnings:</u> Setup under three general headings: "Understanding Your World," "You in Your World Community," "You in Your World of Science and Work."

3. __Exploratory Cluster__: A "reaching down" from senior high school in technical-vocational, commercial, etc. areas.

4. __Avocational and Recreational__: (through co-curriculum program).

__Cycle II__ will consist of:

1. Continuation of Skills program for those who require it.

2. Common learnings in each of above three areas.

3. A fairly wide diversity of complementary courses in each of the above three areas (semester or trimester).

4. Avocational and recreational offering (co-curricular).

APPENDIX G

COMMUNITY RESOURCES DEPARTMENT--A REPORT

ON THE ACTIVITIES FOR 1975-76

COMMUNITY RESOURCES DEPARTMENT—A REPORT

ON THE ACTIVITIES FOR 1975-76

Department Head: Bruce Walker

The following is a brief report on the activities that our department
has coordinated this year.

Volunteer Program

There are approximately 100 volunteers working in the school each
week in various areas—library, media center, resource centers,
tutoring in French, language arts, arts and crafts, typing, etc.

Student Exchange Programs

Education Canada Program: Five of our students have visited various
parts of Canada. We have hosted students from the Yukon;
Kittimat, B.C.; Kyle, Alberta; Winnipeg, Manitoba and Verennes,
Ontario. This program provides Year IV and V students the oppor-
tunity to visit any part of Canada and to live in other students'
homes and attend their school. A student can be away anywhere
from one month to a maximum of five.

Winnipeg Exchange: 18 students from Winnipeg in Year II and III are
now visiting students in our school for five days (May 29-June
2). Our students will perhaps be visiting Winnipeg in the fall.

Rouyn-Noranda French Exchange: 36 students from Rouyn-Noranda
visited here April 1-5. Twenty-two students from Beaconsfield,
four from John Rennie and ten from Lindsay Place visited Rouyn-
Noranda April 29-May 3.

Arvida French Exchange: Forty-four Year III, IV and V students from
Arvida visited here February 5-11. Twenty Beaconsfield students
and twenty-two John Rennie students visited Arvida March 5-11.

Courses

Dentistry and Dental Hygiene: Ten students were involved in a course
being conducted by Dr. G. Pratt and Dr. J. Taylor of the Kirkland
Dental Clinic. The course involved theory and practical work.

Child Care Worker: Eight to ten students took this course conducted
by professionals from the Garry Taylor Center for retarded
children. It involved theory one hour per month and practical
three mods per week at the school.

Introduction to Education: Twenty students took this course at
Beaconsfield Elementary. It involved theory one hour per month
and practical three mods per week at the school.

Graphic Design: Heather Stark took this course at John Abbott every
Wednesday afternoon.

Administration of Criminal Justice: David Heywood and Blake Morrison
attended George Springate's course every Friday morning at John
Abbott. One student led the class with 91. The other student
received 81. The class average was 67.

Community Service Projects

Mini Day Care Center: Every Thursday from 1:30-3:30 p.m. Coordi-
nated by one volunteer mother and 12-15 Beaconsfield High School
students. Average attendance of 16-20 pre-schoolers every week.

Adult Drop-In Center: Every Wednesday 9:30-11:00 a.m. with two West
Island Social Workers. Twenty to thirty parents attended for
the ten week session. It provided an opportunity for parents to
discuss teen problems, communication problems, etc.

John F. Kennedy School: Sixty students worked at John F. Kennedy
during their free mods in the swimming pool, gym, home economics
and classrooms.

Elementary Schools: Approximately 20-25 students assisted teachers
in the various elementary schools in the area, working in the
gym, classroom and tutoring.

Beaconsfield High School Tutors: Approximately 10-12 students
tutored other students in French, mathematics and language
skills.

Senior Girls and Boys Discussion Group: Film and discussion group
with Hannah Fisher of the National Film Board. Five sessions
held--two with girls only. The following three with boys and
girls. The average attendance was 12-15 students.

Career Seminars

Seminars have been held on the following topics: veterinary
sciences - 35 students; stewardess and flight attendant - 45 students;
chemistry and bio-chemistry - 40 students; law and police technology -
40 students; pilot training - 10 students.

Industrial Orientation Program

340 students have participated in the program this year. 117 various
industrial and business establishments and educational institutions
have taken our students this year. Students in the program have
participated in some very exciting assignments:

- Air Canada: pilot training program

- Ciba-Geigy: lab technician work

- Edith Serei: cosmetology course

- Liesse Animal Hospital: surgery on cats and dogs

- Lakeshore General Hospital: nursing in surgery, intensive
  care, delivery and pediatrics wards

- C.P. Rail, Fina, P.A.P.T.: secretarial work

- Harland Auto and Beacon Ford: motor mechanics and working on
  transmissions, brakes, air conditioning, etc.

- Pharma Research: pharmacology research

- Ernesto, Commodore, Mode Hairstyling: 4 girls in hair-dressing
  have been offered part-time work

- Consolidated Investigation & Security Agency: working with an
  investigator

- Montreal Trust: appraising houses, data processing

- Montreal General Hospital: food services, radiology, pathology

- RCA Recording Studio: learning how to record a song and how
  a record is made

- Merck, Frosst: medical research

APPENDIX H

SAMPLE STUDENT SCHEDULE AT STE. AGATHE HIGH SCHOOL

STE. AGATHE HIGH SCHOOL

Individual Timetable

Name _____   Year __5__   Term __1975-76__

	Monday	Tuesday	Wednesday	Thursday	Friday
9:20-9:33					
9:36- 9:56	Fr. 1	Fr. 1	Fr. 1	Fr. 1	Fr. 1
9:59-10:19	Fr. 1	Fr. 1	Fr. 1	Fr. 1	Fr. 1
10:22-10:42	Eng. 9	Eng. 9	Eng. 9	Eng. 9	Eng. 9
10:45-11:05	Eng. 9	Eng. 9	Eng. 9	Eng. 9	Eng. 9
11:08-11:28	Study 7	Study 7	Chem. 6	Study 7	Biol. 6
11:31-11:51	Study 7	Study 7	Chem. 6	Study 7	Biol. 6
11:54-12:14	--	--	--	--	--
12:17-12:37	--	--	--	--	--
12:40- 1:00	--	Geom. 6	--	--	Geom. 6
1:03- 1:23	Rel. 8	Geom. 6	--	Math 3	Geom. 6
1:26- 1:46	Rel. 8	Math 3	Math 3	Math 3	Math 3
1:49- 2:09	Math 3	Math 3	Math 3	Biol. 6	Math 3
2:12- 2:32	Math 3	Biol. 6	Art 1	Biol. 6	Biol. 6
2:35- 2:55	Phys. 3	Biol. 6	Art 1	Phys. 3	Biol. 6
2:58- 3:18	Phys. 3	Biol. 6	Art 1	Phys. 3	Phys. 3
3:21- 3:41	Geom. 6	Phys. 3	Phys. 3	Geom. 6	Phys. 3
3:44- 4:04	Geom. 6	Phys. 3	Phys. 3	Geom. 6	--

APPENDIX I

SCHEDULE DESIGN AT ALEXANDER GALT HIGH SCHOOL

ALEXANDER GALT TIMETABLE

Day	1	2	3	4	5	6	7	8	
									8:50
	Home Room								
									9:15
P 1	A	F	Y	B	A	F	X	B	
E									10:15
	Recess								
R									10:30
I 2	B	A	F	X	B	A	F	Y	
O									11:15
D 3	X	B	A	F	Y	B	A	F	
									12:00
	Lunch								
									1:00
4	D	G	C	S	D	G	C	S	
									2:00
5	S	D	G	C	S	D	G	C	
									2:45
6	C	S	D	G	C	S	D	G	
									3:30

APPENDIX J

SCHEDULE DESIGN AT RICHMOND HIGH SCHOOL

RICHMOND REGIONAL TIMETABLE

Day	1	2	3	4	5	6	7	8	
									8:40
	Home Room								8:55
P 1	A	H	G	F	E	D	C	B	
E									10:15
R	Recess								10:25
I 2	B	A	H	G	F	E	D	C	
O									11:10
D 3	C	B	A	H	G	F	E	D	
									11:55
	Lunch								1:00
4	D	C	B	A	H	G	F	E	
									1:45
5	E	D	C	B	A	H	G	F	
									2:30
	Recess								2:40
6	F	E	D	C	B	A	H	G	
									3:20