THE SEARCH FOR OPEN EDUCATION

IN

NOVA SCOTIA

A SURVEY OF SEVEN RANDOMLY SELECTED HALIFAX COUNTY SCHOOLS WITH A COMPARISON TO SCHOOLS IN CAPE BRETON ISLAND AND THE UNITED STATES

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Abstract

This study is an attempt to identify and compare the extent to which certain practices pertaining to open education are implemented in a sample of randomly selected Halifax County elementary schools.

Many programs of research and evaluation have been carried out to determine the extent of openness in classrooms and schools. But early paradigms of nongradedness or continuous progress are merely descriptive. The concept of open education or continuous progress is indeed difficult to define. Many renowned educatiors, such as Goodlad and Anderson (1963) and Spodeck and Walberg (1975) have proposed definitions for the concept of open education, but to date no definition adequately defines this innovation in education.

In the last decade empirical directions in measuring continuous progress or open education have involved the construction of models by defining the practices characteristic of openness, then measuring the implementation of the individual practices. Many educators devised instruments for evaluating nongradedness based upon the work of Carbone (1961). The themes of Bussis and Chittenden (1970) provided the basis for the model constructed by Walberg-Thomas (1971). The instruments employed in this thesis are traced to these early studies.

Open education is what is measured by the practices listed

in such a questionnaire. The most suitable model discovered in my research was the Walberg-Thomas Observation Questionnaire and the parallel Teacher Questionnaire.

My sample comprised 168 teachers. The pilot testing involved 66 university student teachers, 44 secondary level teachers, whose expert advice gave the "traditional school" baseline for the study, and 58 Halifax County elementary teachers. The student teachers and senior high teachers completed the Pavan-LeGendre questionnaire while the elementary teachers completed both the Walberg-Thomas and the Pavan-LeGendre measures.

Questionnaire results tentatively established concurrent validity for the Pavan-LeGendre scales. A Pearson Product-Moment Correlation Coefficient obtained between the Pavan-LeGendre and the Walberg-Thomas $r = .65$ was significant at the $p < .01$ level.

In the measurement of the implementation of continuous progress, it was found that elementary schools of Halifax County were more open than the traditional, graded school as imagined by the secondary level school teachers and slightly less open than LeGendre (1975) found the schools in Cape Breton Island to be. With respect to the classroom as researched by Walberg-Thomas (1971), Halifax County elementary schools were less open than the traditional classroom in the United States.

Practices implementation of which is significantly higher or significantly lower than the traditional schools on each of the two models were distinguished. This compilation of distinctive

practices should provide guidance to areas in which further work is necessary.

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Continuous Progress

Out of concern for improving educational qualities and reassessing the dominant graded structure of learning, many innovations have been instituted in the last decade. One such concept has been continuous progress or open education, as "the nongraded school is designed to implement a theory of continuous pupil progress: since the differences among children are great . .. the school structure must facilitate the continuous progress of each pupil (Goodlad & Anderson, 1963, p.52)." Certainly the idea is not new for it can be traced back to Socrates (Brubacher, 1966, p.101).

The literature on open education provides a growing number of studies characterizing continuous progress. Carbone in Miller (1967) found the categories Instructional materials, Grouping practices, Evaluation devices and Human factors to be pertinent (p.50). Bussin and Chittenden (1970) identified ten dimensions as potential valid indices of open education.

Walberg-Thomas (1971) predicated 106 practices for open education upon eight of the ten themes of Bussis and

Chittenden. These 106 characteristics were modified to 90 traits and later refined to 50 properties based upon the themes of Provisioning, Diagnosis, Humaneness, Evaluation Seeking, Self Perception, Assumption and Instruction.

As a sample of more general indicators of an open classroom, Spodek and Manolakes list five characteristics:

1. School activities are goal-oriented rather than ritual-oriented. Goals include developing intellectual, language, and social skills; developing values; developing ways of dealing with affect; and developing personal autonomy.

2. School activities presented are developmentally appropriate for the children in the group.

3. Children in the classroom are involved in the decision making process of the group. Respect for children underlies the decision making process as well as all teacher-child interactions.

4. Learning is viewed as taking place as a result of the child's acting on the environment, abstracting information, and operating on this information in some intellectual manner.

5. Learning is viewed as taking place as a result of dialogue. Probably the best short definition of open education can be derived by paraphrasing Paulo Freire (1970). Freire's view of education sees it as taking place when the teacher engages his students in dialogue in which they redefine their universe (Spodek and Walberg, 1975, pp. 194-5).

A parallel proposal of five qualities by Henderson (1973) culminates in a similar emphasis on the teacher-student dialogue nature of open education:

1. A process rather than a product orientation to learning and instruction.

2. Provision for selection of activities on the part of the children.

3. An attempt to deal with skills and knowledge in an integrated or orchestrated way, in contrast to the traditional compartmentalization of academic "subjects".

4. The random or heterogeneous grouping of children, intended to make it possible for children to learn from one another, in contrast to tracking or other forms of ability grouping.

5. A style of teacher behavior which enables the teacher to respond to the behavioral cues presented by individual children and to use these cues as a basis for building on or extending what a child already knows, and his interests and skills, in contrast to a teacher style in which desired behavior changes are specified in advance by the teacher or the curriculum materials (Spodek and Walberg, 1975, pp.61-2).

From the literature it appears that many of the educators agree that individualization of instruction, coupled with personal freedom, heads the list of criteria of open education.

Individualization to Characterize Open Education

Continuous progress is not a method of teaching, nor a teaching device, nor a simple reorganizational plan. Continuous progress is a non-graded concept which provides for continuous academic progress, at the child's own rate, in which year-end norms are removed. "Essentially, nongrading is a reaction to weaknesses in the graded school (Tewksbury, 1967, p.27)". Continuous progress reflects research in psychology, sociology and development as well as human growth. Thus continuous progress frees the instructor from the customary methods of the graded school based on the Grade Standard Theory "with its practices of non-promotion, common achievement standards for classmates, graded readers and textbooks, graded curriculum, competitive marking, whole class methods of instruction . . .(Read, 1970, p.38)."

Continuous progress is an operational mechanism and a theoretical proposition. The two dimensions of a school it refers to are the philosophy that guides the behavior of the staff toward the pupils and the procedure whereby the life of the pupils and the teachers are regulated. (Anderson, 1967, p. 4).

The emphasis is upon individualizing instruction and

developing each individual to his full potential. As well as the distinctions between himself and others each individual manifests different aspects within his own personality. One of the original postulates of continuous progress theory is individual variability; learners differ from one another (inter-individual) and "each learner differs in his aptitude and achievement from one learning area to another" (Read, p.39) (intra-individual). Since learners vary in the way they acquire knowledge, methods of instruction must be devised to meet the particular needs of each student. Read claims that "individual differences among learners cannot be organized away . . . the teacher must accomodate their differences in the instructional dimension rather than in the organizational dimension of the school (Read, 1970, p.39)."

Vertical and Horizontal Patterns of Continuous Progress

Under continuous progress, schools have been reorganized both vertically and horizontally: vertically into graded and non-graded patterns in which the progress of the children is regulated over a period of years and horizontally into departments, self-contained classrooms, or cooperative teaching arrangements in which the child and staff are contained within a building (Hillson, 1967, pp.7-10). The failure to

recognize the nongraded school as a vertical plan of school organization and not simply a horizontal plan is a frequent deficiency. Educators confuse nongrading with horizontal grouping. Goodlad claimed that "Hillson and his associates stand almost by themselves in their clearcut understanding of nongrading as a vertical school organization (Goodlad & Anderson, 1963, p.217)." Confusion still persists in the minds of many educators today who believe that they have a nongraded school when in actuality they have provided an inter- or intra- class plan of horizontal grouping.

Continuous progress eliminates age and grade factors. One particular case study has revealed that "as soon as we eliminated the age and grade factors, we found we could group our pupils in classes which were much better suited to their learning needs than in the past when we were bound by artificial and meaningless restrictions of grade and age (Glogau, Fessel, 1968, p.30).

One confusion over the pattern of a child's progress in school arises from the notions of "continuous progress" and "continuous promotion". Carbone (in Miller, 1967, p.47) offers a succinct clarification:

The "theory of continuous promotion" a by-product of the so-called progressive movement in American education, encourages automatic promotion of all pupils based on the criterion of chronological age.

The "theory of continuous progress" suggests that the curriculum should be adjusted to the unique learning pattern of each pupil, thus making possible the continuous and independent movement of every youngster in the school program. In effect, this theory rejects the contention that there is any necessary relation between amount of learning and the time it takes any single student to learn any given fact, concept, or skill.

Humanizing Objective of Continuous Progress

The basis for the continuous progress concept is the concern for individual human beings and individual differences; "the concept of 'open education' offers unique opportunities for humanizing and individualizing learning, making it relevant, meaningful and personally satisfying (Nyquist and Hawes, 1972, p.83)." "Asking most schools to become humane is asking them to become different, to change their methods of instructions, to change their reporting instruments, and to change their views about the problems of children (Roberts, 1975, p.253)." In an evaluation of a few of Philadelphia's Alternative Programs, it was revealed that "humanization of education is the vital ingredient underlying the achievement of an alternative program" . . . and the

humanizing environments that these educational options provide often reach beyond the student-staff community to include the parents (Roberts, 1975; pp.84-85)." R. H. Anderson (1970 in "How Organization Can Make the School More Humanistic") calls for an absence of gradedness and the abandonment of the self-contained classroom as initial changes for staff collaboration and heterogenous grouping. "Love, however, is a part of what we are talking about when we discuss 'humanizing the elementary school'. . . we want to bring the affective dimension to the school, to make it a more humane place, a place that takes into account not only minds but the hearts, the emotions, the human needs of those who study and work there (Anderson, p.13)."

Featherstone in Nyquist (1972) claims that the curriculum reforms of the 1960's "ignored the nature of children and their process of learning (p.94)." By way of contrast, individual differences were brought to public view in 1916 by Terman who advocated that each child "progress at the rate which is normal for him, whether that rate be normal or slow (Terman, 1916, p.4)."

Flexibility as a Component of Continuous Progress

"A nongraded program requires flexibility in the grouping

of children for instruction. Grade lines must be forgotten (Smith, 1969, p.31)." Hillson wrote that "Goodlad seems to be looking for a situation in which there is sufficient flexibility and responsiveness to the vast array of individual differences so that no fixed system of grouping, placement, and teaching will exist at all (Hillson's Letter Number 11, 1967)." Housego claims that "the most important prerequisite to successful nongrading . . . is the provision of flexibility (Hillson, 1971, p.69) which can be accomplished by "teaching students processes of inquiry through guided practice in them. They [the pupils] must learn how to learn (Goodlad, 1966, p.9)." Flexibility can be gained by the promotion of discovery learning, team teaching, supplementary materials, as well as flexible grouping (Dufay, 1966). "The most important means of gaining flexibility in a classroom is simply determine to have it (Hillson, 1971, p.7)."

Genesis of Open Education from the Concrete to Conceptual

The basis of the concept of graded education goes back to the European continent (Brubacher, 1966) as consequently does the basis for continuous progress in education. (Weber, 1971), (Featherstone, 1971). America inherited the graded school system, in 1848, with the establishment of the Quincy

Grammar School in Boston, Massachusetts, based on one in existence in Prussia (Brown, 1963, p.28). From the beginning a graded system, in which a child spent nine years in school, was devised by Horace Mann (Rollins, 1968, p.6). It provided for large numbers of children to be taught economically. The role of the school was the indoctrination and acculturation of students (Carini, 1972, p.102). The system facilitated good government and discipline, for all pupils were kept busy and under direct control. One teacher could hear the lessons of an entire class. The pupils were motivated by constant competition among the children in the class.

Growth in population brought the graded system to a zenith with compulsory school laws, increasing educational requirements to gain employment, automation, and its democratic viewpoint which stresses the right of the individual (Brubacher, 1966, passim). This social, economical, as well as political change consequently brought change and innovation in the graded system. The greater role of the school in the social welfare of the child, as well as the influence of certain authors such as John Dewey (Goodlad & Anderson, 1963) and Jean Piaget (Silberman, 1973, pp.182-208), was a factor having an influence upon change.

Educators were paying more attention to humanistic elements in the development and growth of the child (Hertzburg & Stone, 1972, p.71). Greater interest was being taken in how children differ intellectually, physically, emotionally and socially. The influence of the environment upon the child was being studied. Because of all these factors and studies, educators such as Goodlad, Hillson and others were attempting to reconstitute education on the basis of individual differences. Certainly, during the last half of the nineteenth century many educators became critical of the graded system because it was recognized that all children did not attend school regularly, nor have equal mental ability, nor have or gain equal attainments (Brubacher, 1966).

In the graded system, the idea of grouping children into units or divisions by ability or chronological age to facilitate better teaching and learning finally led to an individualistic view of the child. Hillson (1971, p.204) presents an overview of forty grouping plans that have been used in the last century in American schools.

Origin Arriving Out of Practice

The actual origin of open education or continuous progress

is rooted in children's play, insofar as children learn from play, especially "cultural play", and in that learning there is a continuous progress from birth. Through play and the intense interest of children in the world around them, "discoveries" are made -- as Piaget demonstrates in his research of cognitive development. Walberg and Thomas (1974) in "Defining Open Education" state "that open education derives mainly from educational practice and is compatible with aspects of Continental theory." (p.7)

In the 1930's, in America, a new type of educational movement evolved based upon pragmatism, instrumentalism and experimentalism as contained in the philosophy of John Dewey. His extensive writings initiated the progressive movement in elementary education in the United States which was highly successful for a brief period but lapsed after much abuse by practitioners and laymen. Dewey's ideas that children learn by doing real things and by getting involved in authentic experiences have had lasting effects upon education (Blitz, 1973, p.4). His idea of the world outside the classroom as material for learning provides impetus for the open classroom. In the summer of 1976 the Nova Scotia Department of Education offered a course on Outdoor Education at the Nova

Scotia Teacher's College so that practitioners could integrate this type of material into the curriculum. Dewey's idea of the curriculum as a whole entity rather than separate subject areas is a major contribution from his extensive thought on education.

Yet open education was essentially a grassroots change unhampered by overt theorizing.

> Informal primary education in Great Britain after World War II was inspired, nurtured and promulgated directly at the school level. Right up to the late 1960's it developed without benefit of attention from education officials in London; in its first two decades it was almost totally ignored as well by newspaper and television (Atkin in Spodek and Walberg, 1975, p.185).

Thus it was actually in England that education progressed along the lines of Dewey's thought. Spodek and Manolakes find a meshing of the American tradition with the British infant school practice:

> We also found, in talking to persons involved in education in England and in reading their literature, that modern British infant school practice is indebted to American educational thought and practice in no small way -- a point that was made in the NAEYC small conference on open education in 1970 and in the publication derived from that conference (Engstrom, 1970). The American progressive education tradition as well as the child development and nursery school

> traditions all contributed to the movement of English primary schools "toward informality."
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> Nor is open education, by the way, simply a revival of the old progressive education movement. It differs in significant ways, both in its use of curriculum innovations and in its concern with the individual, not necessarily in the context of the group. Open education is an approach to education that we consider more humane and more sensible for children than what is found in traditional schools. But there is no one humanistic model (Spodek and Walberg, 1975, 194).

Open education, arising out of practice, incorporated a number of basic practices of progressive education, encouraging students to freely pursue their own interests rather than to learn through passive absorption. Among the practices worked out by the English system were "the active role of the teacher and the specific materials and activities of a rich classroom learning environment (Nyquist and Hawes, 1972, p.305)." The role of the teacher, which proved so much the bane of American progressive practice, was analyzed by Bussis and Chittenden in their ETS Study Report (1970); from classroom observation they developed a list of ten categories to portray the role of the active teacher in open education. The practice of good teaching in the open mode provides for the freedom and self-direction of the child.

Theoretical Implications Correlated With Practice

On the origin of the concept of open education, two theories exist. "Continuous Progress" according to Hillson (1969) is an inactive term. He claims it is a concept rather than a thing (Letter 12, 1969). From Weber (1971) and Featherstone (1971) we gain the concept that the British Infant School has been adopted and therein lies the origin, while Manolakes (1972) and Weiner (1974) believe the concept to be unique in the United States. They believe that open education reflects the philosophy of Dewey and that its roots are deeply entrenched in the progressive education movement.

Early in the twentieth century, psychologists reigned with their ideas of intelligence quotient. Terman (1916, p.4) advocated that "work be given each child in proportion to his mental ability." Today, not so much emphasis is being placed on intelligence quotient. Learning theory has changed so that at the present time teaching method is based on inquiry and discovery as influenced by Piaget's theory of development and growth, a progression through stages, as well as "mental growth which comes from interaction with the environment (Isaacs, 1965, p.17)." This approach lends itself to continuous progress.

During the thirties, the depression influenced the

educational system; yet in spite of serious economic hardships there arose the child-centered movement, (Silberman, 1973, pp.520-524) which developed into designs such as the Winnetka, Dalton and McDade plans, three strong efforts to really individualize education (Hillson, 1966, Letter Number 2). It was the innovative attempt of these plans which later influenced education in the sixties. The schemes cited here hold special local interest, for in the early 1960's these plans were used by Dr. Morton Shipley at the Nova Scotia Teacher's College as models for education within this province.

The 1960's was a period of breakthrough for continuous progress in education. In 1963, a reassessing of England's elementary school system was begun under the chairmanship of Lady Plowden. The distinction of the English Infant School model was the result of that study. The Plowden Report (Children and Their Primary Schools) undertaken in 1963-1967 by the Central Advisory Council of Education in England serves as a basis for the system (Nyquist and Hawes, 1972, pp.23-45). Four years of research and thought culminated in the aims of primary education based upon ways in which children learn. The report draws much of its rationale from the psychology of

Piaget, (Nyquist and Hawes, 1972, pp.30-36)but merely mentions Dewey.

Under this system, the headmistress is the key figure (Weber, 1971, pp.44-45) not only in making all decisions for the school but in helping the teacher wherever and whenever she can in the classroom. Through her efforts the staff must continue their education; they are not permitted to become passive (Lunn, 1970, Chapter 16).

In the analysis of the Plowden Report, the program is only a secondary consideration. The flexibility of the program provides for the individualism of children and teachers, as well as classes and schools. "This idea of flexibility has found expression in a number of practices, all of them make good use of the interest and curiosity of children (Rathbone, 1971, p.149)." The course of study is also integrated so that the environment provides first hand experience and enrichment in reality. The idea of the integrated day has evolved from the process of the system (Featherstone, 1971, pp.8-16).

In the late 1960's, American educators became sensitive to the innovations of the Infant School in English Education Two outstanding figures -- Dr. Lillian Weber (1971) and Joseph Featherstone (1973) presented the British open system to the American public.

In her treatise, The English Infant School and Informal Education, Dr. Weber gives the theory and practice of education in some English schools. She describes how the political, social and historical influences caused the evolution of the infant education system. Her treatise also outlines the funding, staffing and the physical structure as well as the method used. The environment is at the disposal of the child but the child must understand "the reasonable use of freedom (Weber, 1971, p.87)" under this system.

She describes the open system as a relaxed atmosphere accompanied by freedom of movement (Weber, p.76). There is no predetermined curriculum or achievement standards (Weber, p.250). Lack of competition among the children is noted; each child does his own thing. Reading (Weber, p.126) and writing (Featherstone, 1971, pp.46,47) are geared to the child's interests and the teacher does not impose his purpose upon the child. Admission to class is permitted at any time during the year, much like the nursery schools in our area. Aides and parents are depended upon to give much assistance. Rogers also iterates in his discussion of cooperative teaching that "we do everything we can to involve our children's parents (Rogers, 1970, p.61)." The accent is upon learning and not upon teaching. But the skills are not neglected,

they are taught incidently as they are needed (Weber, 1971, p. 89).

Dr. Weber planned and launched a program for the New York City Schools based upon her study of the British system. The Open Corridor Program (Nyquist and Hawes, 1972, pp. 237-250) which created a community of classrooms and teachers was implemented in the inner-city schools of New York City. The classrooms were areas of study and learning without desks; connecting the classrooms were corridors in which all the children worked at activities related to work in the classroom. Dr. Sol Gordon concluded that it was "the most impressive educational experiences that I have had the opportunity to evaluate (Nyquist and Hawes, 1972, p. 359)."

Dr. Weber's first step was to draft a letter in the form of a booklet to the parents explaining the Open Corridor Program (Nyquist and Hawes, p. 237). Many of the ideas are not new. The idea of assembly in which the children were responsible for the program of song, story or play was a very active part of each day in the Halifax City schools during the 1930's and early 1940's. Two such schools that the writer knows about were the Acadian and the Chebucto Elementary Schools in Halifax. Even at

higher levels of learning, as late as 1963, such assemblies along with the principal's message were in vogue on certain days at the Nova Scotia Teacher's College.

Featherstone stressed freedom (1971, p.96) and authority (Featherstone, p.97) as two main issues in open education. Featherstone claims that if one removes adult authority from a group of children, one does not necessarily give them freedom. He also claims that given freedom, the child will think for himself and be able to express opinions as well as form judgments. Featherstone believes that children are able to learn more actively and independently under an informal set-up (Featherstone, p.96). Freedom as the learning milieu is not a new idea, it is as old as Platonic thought. Featherstone's treatise inspired many American educators to take a long look at their system and to do something constructive about what they saw. He gave "a feel for the classroom, as well as enough detail to suggest ways for a teacher to make informal education work (Mary Jo Bane, 1972, p.274)." It was he who also warned that "the English experience cannot be quickly and easily transplanted to American Schools (1971, p.274)."

In the 1950's with the initiation of the Head Start

program sponsored by the United States federal government, the Educational Development Center, Inc. in Newton, Massachusetts set up an innovative program for disadvantaged children which was discontinued as were others when Head Start children failed to show significant gain once they entered regular school. According to the project director, D. E. Armington, the cause rests more with the inability of schools to meet the needs of children, as well as "a general sickness that afflicts much of American education . . . the dehumanization of the educational process (Nyquist, pp.71,72)."

In 1969 Educational Development Centre set up projects on a large scale to implement open education as a means by which Head Start gains could be advanced into regular school. The "Follow Through" program went into operation involving over one hundred classrooms in various cities of the United States.

Leaders of the effort such as Walberg, Thomas and Evans studied the British education system. They entitled the program "a plan for continuous growth" which was supported by a novel "advisory system" to assist practitioners to facilitate change (Nyquist, pp. 70,71). The advisory team was "patterned somewhat along the lines of the Leicestershire advisory centre (Nyquist, p.71)."

Tallboy (1975) in her Canadian study found that teachers felt the need for some kind of advisory support system. (p.111)

One further step toward continuous progress in education was taken with the publication of Crisis in the Classroom by Charles Silberman who made "a personal 180-degree turn around" from his previous position (Roberts, 1975, prologue xxix). Silberman also went to England to obtain first hand knowledge of their system for a comparison with the American system. His criticism of the traditional system deeply influenced present day thought on informal education.

A certain skeptical stance pervades much of the literature on open education; the proliferation of labels of "Openness" for individual schools and whole systems needs to be subjected to the scrutiny of accepted instrument. Carbone in Miller (1967) cautions against the expectation that administrative procedures can cause substantive changes toward continuous progress; "the new form of school organization did not appear to force appropriate adaptations in the instructional techniques employed by teachers. Thus, it was possible to conclude that changes in organizational structure alone were not enough to make these schools truly nongraded (Miller, 1967, p.51)." Henry Otto suggested as early as 1959 that the real issue is "differentiated education" in programs that

meet individual differences rather than "tinkering with administrative devices . . . such as ungraded schools, special classes and grouping and marking systems (p.387)." Kegan of Hampshire College, Amherst, Massachusetts during his observations of notable open schools in Education, Spring, 1975, noted that the practice of these schools espousing the label "open" was largely at variance with the criteria of open education reported in the literature.

> Currently, "open education" is one of the fashionable terms in education. It is likely that an increasing number of schools will find that they are developing "open" programs. That the actual practice fails to meet some, several, or all, of the criteria for open education should not be surprising to students of educational and organizational change. While debates on proper definitions for open education are liable to have little direct effect on educational practice, focusing on the behaviors implied by open education may (Kegan, p.249).

C H A P T E R II

Implementation of Continuous Progress in Canada

Continuous progress was adopted in the United States from Britain and in turn we in Canada have appropriated it from the United States.

In Canada in 1939, the Hamilton School Board, Ontario, introduced "The Unit Promotion Unit System", a form of continuous progress. But the earliest recognized form of non-gradedness or continuous progress occurred in the 1940's in the Kindersley District of Saskatchewan and by 1964 eighteen out of sixty school districts had utilized a continuous progress program.

The first province in Canada to reorganize its complete school system to a continuous progress plan was Saskatchewan. In October 1963, it set forth a plan for the reorganization of instruction in a bulletin from the Department of Education. The objectives of education were precisely stated and a revised pattern for school organization drawn up. Units of work and levels of progress were clearly stated. Then in 1964, a phamplet was issued titled "Some Questions and Answers", relative to the plan for organization of instruction.

Nine years after the nongraded plan had been instituted in the Maple Creek Schools in Saskatchewan, William Stodalka made a study to determine to what extent continuous progress had been implemented in the schools of Saskatchewan. His study (Stodalka, Calgary, 1973) revealed that very few traits that characterize a nongraded school were evident; the teachers themselves saw the program as graded.

> A study conducted by the Saskatchewan Department of Education approximately five years ago, referred to in Chapter II, suggested that teachers appeared to have accepted the principle of the nongraded school. However, the present study suggests that the majority of the Unit's teachers were reluctant to teach in a nongraded school. Two-thirds of the teachers specifically stated they preferred to teach in a graded school. The remaining one-third were either undecided or would prefer to teach in a nongraded school only if certain prescribed changes were made.
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> While the study made by the Saskatchewan Department of Education also indicated that most schools were at the midway mark in attaining the advantages of the nongraded plan, this was not the situation in the Division II Program operating in the Maple Creek School Unit. Few of the advantages claimed for nongraded schools seemed to have been achieved. As stated earlier, schools and teachers appeared to be content to operate within the boundaries of the graded approach that has prevailed in the schools for many years (Stodalka, pp.75-76).

His first four recommendations target the area of the need for in-service programs for teachers and administrators,

consultative personnel services and para-professional services (Stodalka, p.77).

Evidence of continuous progress is noted in the curriculum Bulletin, (1968) Department of Education of Manitoba, in the article on co-operative teaching in a Saint Boniface Elementary School and also in an article on a "bold experiment in secondary education" as instituted in the Gordon Bell High, Winnipeg.

In the last decade Ontario has introduced many innovations into the schools through the Ontario Institute of Studies in Education.

Traub et al (1972) developed the conception of open education and identified relevant facets of school programs facilitated by reference to several important sources in the literature on open education including Barth (1969), Bussis and Chittenden (1970), Featherstone (1969a, 1969b, 1969c), Kohl (1969) and Westbury (1972). A detailed account of the rationale of open education that was developed and the instrument that was prepared to assess the openness of school progress is found in Traub, Weiss, Fisher and Musella. (1972)

Traub et al constructed an instrument based upon thirty-nine facets of practices for openness. It was entitled "Dimensions of Schooling Questionnaire" which was designed for teacher administration and provided a means for indexing the openness of a classroom or school program. The procedure was similar to Walberg-Thomas Questionnaire (1972) except that in the Walberg-Thomas, teachers were asked to indicate the degree to which they agree with statements reflecting the attitudes and beliefs of those who propound open education, whereas the Traub instrument asked the practitioner to judge the extent to which a program characteristic is true for their school

Musella et al (1972) describe the essence of Open Education in "Open Concept Programs in Open Area Schools." Musella, in collaboration with Traub, helped to develop the program for open education in Ontario.

Also, at the Institute, (O.I.S.E.), Cockburn (1973) compiled an annotated bibliography for openness.

Western Canada seemed to be far ahead of Eastern Canada in instituting programs of nongradedness. In 1965-1967, the Calgary school board undertook a study of education that has

been reported in Direction for Education: Report of the Elementary School Program Commission of the Public School Board, Calgary. This material is contained in two volumes and has proven to be a valuable source for teachers in Alberta interested in continuous progress.

School designs also became a factor in the innovation of continuous progress, acknowledging, of course, that tearing down walls does not make an open classroom. Prior to 1967, the McKee Elementary School, Edmonton, Alberta, was constructed. It was a school of circular design which put every child within one hundred feet of the instructional materials center.

The Edmonton Continuous Progress Plan, a modified plan set out for principals and teachers, was issued in 1964 to the Edmonton Public Schools.

An item on the Open Classroom Concept written by Henry Letkemann containing the description of Juniper Elementary School, Thompson, Manitoba, appeared in the Curriculum Bulletinin 1968. It describes not a hypothetical setup but a genuine operation.

Two working documents were sent out to the educational

system in Quebec in 1967 by the Government of Quebec. One was entitled "Individualizing the Elementary School Program" and the other, "Elementary Guide: Scheduling the Non-Graded Elementary School."

Tallboy (McGill University, Masters thesis, 1975) conducted a statistical study on measuring open education using Traub's Questionnaire, D.I.S.C. IV, and the Walberg-Thomas Observation Scales and Questionnaire to examine the relationship of open architecture to openness of programme. In the introduction of her thesis she states that "there is a shortage of validated procedures for identifying and collecting information about various types of open programming (p.1)." On the same page, she also informs us that "no work has been undertaken as yet in Montreal to identify and examine open education." Her conclusion was that "school architecture did not seem to be a relevant factor in open programming (p.110)."

Brian Burnham (1972) as research officer for the York County Board of Education, Ontario, has compiled an "Anatomy of Open Education: A Barebones Summary of Its Assumptions as Related to Practices in Elementary Education And an Overview

of Its Accomplishments." This work contains five themes with thirty-one assumptions as based upon Barth's (1968) work. In Canadian studies on open education, Burnham (1972) notes only four studies carried out in Ontario for which he claims "there was marginal but not statistically significant differences favoring the open concept school pupils (p.9)."

In 1966, New Brunwsick took a First Look at Elementary School Reorganization by Dr. Agnes Matthews, Consultant of Elementary Education for that province. Dr. Matthews pointed out the reasons, and the necessity as well as the advantages of adopting a continuous progress plan for New Brunswick. It wasm't until 1968 that the New Brunswick Department of Education issued a phamplet on the Organization of Instruction for New Brunswick Public Schools and other related information.

In 1968, the Minister of Education in the province of Nova Scotia announced the Nova Scotia Continuous Progress Plan: the philosophy was sound but to date the plan has not been fully instituted.

The Minister's Promotion Policies statement (Sept.24,1968)

established continuous progress as the promotion policy of Nova Scotia. "Promotion policies and practices should result in continuous progress of all students so as to provide maximum benefit to each in accordance with his aspirations, needs and abilities (Appendix A, p.3)." In "The Senior High School Guidelines for Program Development" (1973), often referred to as a "white paper", The Department of Education, Halifax, Nova Scotia, give criteria for program development:

> In order for the public school program to be developed in terms of the aims set forth in the introductory statement and to accomodate individual differences among pupils, provision should be made for:
>
> 1. courses adapted to the needs, interests and abilities of all the children in the school system;
>
> 2. policies and procedures that encourage continuous learning and continuous progress of all the pupils;
>
> 3. learning materials (developed locally when necessary) suited to the needs, interests and special abilities of each pupil insofar as it is possible to provide such material (The Senior High School Guidelines for Program Development, pp.3-4).

In 1969, the Elementary Curriculum Committee for Halifax County drew up a statement of Continuous Progress in education (See Appendix B).

A weekend course on Implementing Nongrading was designed by Saint Francis Xavier University, Antigonish, in 1969. The outline of the course may be found in Kuzsman's and MacIsaac's Implementing Nongradedness, as well, deliberations of the first Institute on the Nongraded School are collected in An Overview of Nongrading (1970). Registration and success in this course provided a number of points (or part credit) for those registering in the program. During the year, theory was carried into the classroom to be put into practice by those working for the credit. Those teachers implementing theory received assistance from the professors involved in the program.

Many areas of Nova Scotia made an early effort toward implementing a continuous progressive plan. Some schools worked toward nongrading by pioneering pilot projects in Language Arts or reading at first, then branching into other subject areas.

Barney Engel and Martin Cooper (1971) at Dalhousie University reported a study of "Academic Achievement and Nongradedness" based upon Carbone's (1967) work. The study compared pupil achievement in elementary schools in Dartmouth, Nova Scotia. Pupils of School A, rating a high index of 2.81

on nongradedness, achieved significantly higher ($p<0.01$ level) on the reading and language sections of the California Achievement Test than did pupils in School B which rated low 0.68 on nongradedness.

"Mission Possible", a parallel multiple technique approach to redirect emphasis on educational values in Nova Scotia, was undertaken at Saint Mary's University. This study was a joint Master of Education thesis by Pauline A Cummiskey* and Harold Weiland* in 1972. Miss Cummiskey's thesis delineates her innovative programs for the elementary level of education while Mr. Weiland outlines his open program for secondary level French. Miss Cummiskey's effort is indeed an accomplishment which illustrates materials and methods relevant to open education. "Mission Possible" is an attempt by the authors to fulfill a need by demonstrating how some of the ideas from the literature can be applied successfully in an open situation to problem areas. Miss Cummiskey has also been involved in open education programs

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at the Atlantic Institute of Education.

The Lighthouse Program set up at the Atlantic Institute of Education with Denis Cassivi as co-ordinator has been in operation for four years. The program encompassed the Maritime Provinces. Dr. Eleanor Duckworth and Ms. Anne Maxwell worked with teachers in an effort to promote attitudes and foster methods of openness at the Institute in the early 1970's. It is of note that Dr. Duckworth has worked with and translated for the noted Swiss psychologist, Piaget.

The Nova Scotia Teacher's Colledge in the early 1970's implemented a program by which educators could study the British concept of openness in the field. Teachers, enrolling in the program, travel to England for a period of three weeks to gain first-hand knowledge of "the integrated day." Interest in this program grows greater each year.

At Saint Francis University, 1975, Mr. Peter LeGendre surveyed "Continuous Progress Education on Cape Breton Island." His conclusions were that "continuous progress is implemented to a moderate degree in the elementary schools of Cape Breton Island (p.54)."

In many areas, the open concept is only instituted at the primary and elementary levels; then when the child arrives in Junior High, he moves into a traditional classroom, but because the child is adaptable, he is usually able to adjust. There is a need at the secondary level for encouragement to foster openness of education. The Department of Education for Nova Scotia has recommended this step in a white paper -- The Senior High School Guidelines for Program Development (See Appendix C).

A report tabled in 1974 from a Royal Commission (See Appendix D for excerpts related to Continuous Progress and Open Education) set up to study Education, Public Services and Provincial-Municipal Relations under the chairmanship of Justice John Graham, contains many recommendations for the improvement of education in Nova Scotia. Volume three, chapters thirty-six to forty-six, deal principally with education in Nova Scotia. The report states, "there seems to be considerable support throughout Nova Scotia for the concept of continuous progress and individualized instruction (Volume 3, pp.38-7)." Pedagogical arguments, financial advantages and a device for facilitating progress were the issues of many of the briefs presented. Graham recommended

that:

> The Department of Education should re-affirm its commitment to continuous progress in concrete terms. The regulations should forbid the use in reports, organizational and administrative structure, or educational literature and statements of such terms as grade, grading, passing, failing, promotion, and repeating. The Department should develop evaluation and reporting procedures based entirely upon the progress achieved by students toward attainment of the student-related goals of education in relation to well defined standards. The regulations should require all schools within the province to proceed immediately to develop plans for the implementation of continuous progress. The Department should make necessary changes in administrative and other support services, and in particular in arrangements for distribution of texts and other resources, to ensure that organizational and administrative arrangements do not ignore or discourage efforts to convert schools to continuous progress (Volume 3, III 42/7, p.42-24).

C H A P T E R III

Toward a Definition

Continuous progress, open education, or nongradedness are only a few of the labels given today's contemporary education. This thesis freely interchanges the expressions 'open education' and 'continuous progress'. "In terms of the underlying philosophies, this author has found no differences between nongraded and open education (Pavan, 1972, p.68)."

The list of terms educators have applied to this phenomenon - continuous progress in education - are many and varied. From American literature one meets the synonyms open education, the open space school, the free day, nongraded school or nongradedness; from England we have obtained such terms as: British infant school, integrated day, Leicestershire Model, informal, and informal infant school; also Miller (1967) lists "flexible primary unit, ungraded primary, primary progress, primary unit, pupil progress, continuous progress, levels system, primary block, primary cycle (p.158)." John Dopyera (1972) in "What's Open About Open Programs" looks at some 44 potential synonyms for open education. (See Appendix E)

Silberman notes that "Open education . . . means by definition that each kid gets as much structure and as much direction as that kid needs (Roberts, 1975 , prologue xxvii)."

Tweksbury (1967) asks "What is it?" then attempts to define nongrading by making a comparison of the nongraded and graded programs viewing them "as though they were at the opposite ends of the continuum (p.1)."

Chittenden and Bussis claim the term "open education" is acquiring the overtones of a label - implying more specific as well as more amorphous aims than those of the educators who have been closely involved in such efforts (Nyquist, 1972, p.360).

Nongradedness is defined by Glogau and Fessel (1967), a case study of Old Bethpage School, by the description and explanation of practices.

Frank Brown (1963, p.43) declares "a nongraded school is a place which makes arrangements for the individual student to pursue any course in which he is interested and has the ability to achieve, without regard either to grade level or sequence."

While Beggs and Buffie (1967) explain that "a nongraded school is a school which denies the limitations of grade structure and is organized so that the individual student may develop his academic and creative talents as rapidly or as slowly as his ability permits (p.21)." These same authors relate that:

> The nongraded school is an organizational plan. It does not answer all the problems which confront the schools. It is not a method of teaching per se. It is not an administrative or teaching panacea . . . (it is) a framework in which better methods can be used and in which fluidity and flexibility allow for the exploration of various activities which further learning (p.434).

Rathbone (1969) in the preface (xi) specifies that "Open Education refers to an educational phenomenon associated with recent reforms in British primary education."

Nongradedness as defined by Lee Smith (1968) is "A philosophy of education which makes possible the adjusting of teaching and administrative procedures to meet differing social, mental and physical capacities among children. It uses an organizational plan which eliminates grade labels, promotes flexibility grouping and continuous progress and permits the utilization of meaningful instruction (pp.1-2)."

In Letter Number Five, Hillson (1966-67) claims "the

term nongraded is quite recent. It was coined by John I. Goodlad and Robert H. Anderson who chose to entitle their volume The Nongraded Elementary School."

In Letter Number Six, Hillson (1966-67) also states that:

> nongrading is an antiseptic term . . . used to wipe away over one hundred years of graded school education . . . nongrading, furthermore, is a reactive term . . . The nongraded educational practice, by definition, creates a framework in which better methods can be used . . . in which teacher vistas can be expanded . . . in which fluidity and flexibility allow for the exploitation of the various and varying activities which can greatly further learning.

The nongraded school, then is a plan of "continuous progress wherein grades are replaced by an individual's achievement attendant to his ability and capability." "Continuous progress implies the advancement of pupils along a broken front in all significant areas of development" (Goodlad and Anderson, 1963, p.53).

Hillson (1971) also relates that:

> Nongraded education referred more to administrative tinkering and grouping procedures than to the more broadly based attempts to develop programs of value that relate to the individual growth and development of learners. As it is now being

> defined, continuous progress education as a concept aims at developing an approach to provide much more flexibility in the education of the child, while at the same time employing the maximum capabilities of teachers. Continuous progress education is thought to be and, in fact, is much more than organizational redefinition. It represents attempts to create programs that are made up of components that not only create flexibility in the organizational structure of the school but develop flexibility in the curriculum and the child's relation to it as he pursues his educational career (p.34).

Weber (1971) maintains that "Informal Education, as I understand it, refers to the setting, the arrangements, the teacher-child and the child-child relationships that maintain, restimulate, if necessary, and extend what is considered to be the most intense form of learning, the already existing child's way of learning through play and through the experience he seeks out for himself (p.11)."

Open Education write Nyquist (1972) "refers to an approach to teaching that discards the familiar elementary classroom set up and the traditional stylized roles of teacher and pupils for a much freer, more informal, highly individualized child-centered, learning experience (p.83)."

Barth and Rathbone (1969) describe open education as

> a way of thinking about children and learning. It is characterized by openness and trust; by

spatial openness of doors and rooms; by openness of time to release and serve children, not to constrain, prescribe and master them. The curriculum is open to significant choice by adults and children as a function of needs and interests of each child at each moment. Open Education is characterized by an openness of self. Persons are openly sensitive to and supportive of other persons - not closed off by anxiety, threat, custom and role. Administrators are open to initiatives on the part of the teachers; teachers are open to the possibilities inherent in children; children are open to the possibilities inherent in other children, in materials, in themselves.

In short, Open Education implies an environment in which the possibilities for exploration and learning of self and of the world are unobstructed.

Roberts (1975) asserts that

there is no tight, concise definition of open education but it is essentially a child-centered curriculum built upon the belief that: 1) childhood is life not preparation for life; 2) given the chance, children can learn independently or collectively those things that they need and that are important to them; 3) children should be given many options to pursue and study, since they are innately curious; 4) the process skills that a child develops are far more important than the accumulation of specific knowledge; 5) a child will learn more readily if he is involved and having fun with material and knowledge; 6) a child at any age should be allowed, singly or in groups, to inquire into any idea, issue or concern; 7) a child should be given access to the full range of possible inputs - books, junk, tapes, slides, cameras, the environment, teachers and other human beings, etc.; and 8) children should be able to respond using any available output - speech, writing, drama, film, art, music, etc. Above all

> the emphasis is on the child's humanity and the privileges and obligations that this term implies (p.2).

Marshall (1972) sets forth "defining criteria" strengthened by a number of characteristics in Criteria for an Open Classroom. "The term open classroom should be reserved for those situations which meet all the defining criteria (Marshall, 1972, p. 18)." These criteria are divided by Marshall into three categories of essentiality; A) general criteria basic to all classrooms which promote the growth of each individual toward realizing his potential; B) necessary criteria specific to open classrooms; C) characteristics of open classrooms derived from and supportive of the essential criteria.

Criteria for the growth of each individual include the characteristics of the 1) teacher's understanding and acceptance of his/her own worth; 2) the teacher's acceptance and recognition of the intrinsic value of each child; 3) a mutuality of trust and respect; 4) the teacher's goals and philosophy of education based upon a conception of human needs and learning.

Under the category "necessary criteria specific to Open Classrooms", Marshall lists such characteristics as 1) an atmosphere permeated with openness, awareness and respect for individual differences, recognition of feelings and the integration of the affective and cognitive domains of human functioning; 2) the teacher as a facilitator of learning; 3) planned experiences to capitalize on the needs and readiness of each individual to assume responsibility, cooperation and self-evaluation are emphasized; 4) learning occurs because it is personally meaningful to the individual.

The characteristics derived from the essential criteria under the open classrooms include 1) integrated and interdisciplinary learning topics; 2) a rich, varied learning environment; 3) flexibility of time; 4) spatial arrangements of the learning environment. Marshall concludes that the most basic of all the criteria for open classrooms is the attitude of openness. (p.18).

Rogers (1976) gives three ways to judge classroom effectiveness; 1) "the subjective assessment of practitioners . . . 2) consideration of statistical evidence of subject matter competency . . . 3) research of affective changes in students (The Reading Teacher, 1976, p.551)."

According to Goodlad (1963) the problem of evaluation

lies in the research design. He claims that there are two deficiencies in research design that characterize most studies. The first deficiency lies in the failure to recognize the fact that "there is little likelihood that changes in organizational design alone will be directly reflected in changes in the learning output of pupils (p. 214)." Secondly, a deficiency results from "failure to recognize that the nongraded school is a vertical and not a horizontal plan of school organization (p.214)."

Traub (1972) in collaboration with Musella proposed that school programs are open to the extent that they maximize student choice of all dimensions of schooling. (p. 47).

Because open education is difficult to define, there is more literature written describing continuous progress or open education than the evaluation of it, therefore instead of definitions, paradigms have been offered by most educators.

Research in the area of continuous progress has been, to this point in time, very limited. In Research and Evaluation of the Nongraded School, Robert Garvue suggests three different models of school organization that might prove a useful tool for investigating the

relationship between existing practices and the assumptions underlying them, (Beggs and Buffie, 1967, p. 99).

"Evaluation should be a continuous process . . . where possible, the services of an outside agency . . . should be utilized in carrying out the evaluation of the nongraded program (Beggs and Buffie, 1967, p. 74)."

Spodek as reported in Rogers (1976) has commented "we have talked around the concept of open education, and provided some examples, but we have not defined it. Perhaps that is because openness, like freedom, cannot be defined absolutely (p. 549)."

Featherstone (1971) says the definition of open education must be extrapolated from his personal testimony. To define open education, Lilian Katz (1972) states the difficulties encountered in formulating a working definition of the term. She believes that a definition of the term has not been found that answers the question, "How will I know it when I see it? (Hearn,1972, p 2)." From Ms. Katz' work we learn she "is not optimistic about the spread of open informal methods in the United States and would not be surprised if the

concept subsided in Great Britain (Hearn, 1972, p. 13)." "No ideal version of the Open Classroom has been advocated, endorsed or adopted (Hearn, 1972, p. 2)."

Continuous progress is not calculated to make the lot and life of teachers easier. It is not a proposition to coat over with a veneer of modernity and respectability educational practices antithetical to the best interests of learning. (McLoughlin, Hope or Hoax, 1970, p. 96)

Prospectus for the Future

Many industrialists and educators have become disillusioned with the Open Education concept and are demanding a return to basics. Many schools operating under the label "open" are being subjected to renewed criticism. "The problem of our society, it is assumed, is a sickness growing out of permissiveness, soft-headed relativism and misguided individualism. A sponsor of the supposed sickness is assumed to be open education (Van Til William, Brownson William P. and Hann Russell, 1975, Ed. Leadership, p. 12)."

In the article, "Something for Nothing" Jones (1974) avers that "the trend in our schools has been away from

formal, rigid discipline to informality with less control, and few rules and regulations . . . . In some cases the change hasn't been for the good but . . . has led instead to no control, no guidelines and no moral or ethical basis for conduct (Education Canada, Ron E. Jones, 1974, p. 23)." His greatest disappointment lay in the fact that so little is learned by so many at such great expense. Myers (1974) believes that open education has not survived in America because it was based on "the yellow journalism of its early evangelists who created it with as much imagination as the Eastern journalists painted Billy the Kid and Jesse James in the nineteenth century (p. 61)." He believes that society itself has been the stumbling block to open education and that the schools are a mere reflection of society.

In 1972, Myers (1974) predicted that open education would not be widely adopted in the United States. He suggests that the prediction was accurate since "open education now appears all but dead in America (p. 60)."

"Paradoxically, to the extent that open education was defined, or more accurately written about, the definitions were inaccurate and contributed to its demise (Myers, p. 62, Vol. 8(1), 1974)."

"It can reasonably be argued that there is no such thing as a 'philosophy' of open education until after the academicians created one to fit the practice (Paul S. Pilcher, Educational Leadership Vol. 32, Nov. 1972, p. 139)."

Rollins (1968) claims that education will quite possibly not change much. He was looking as far as the year 2,000 A. D. "There is nothing precious or infallible about change . . . what is relevant about change is its degree and kind (p, 172)." On the other hand, he does foresee more leisure time that could be used for learning and the school expanding into the community to a greater degree.

The implementation of continuous progress or open education in the schools of America began in the 1960's at the primary level and by the late sixties and early seventies had spread into the elementary level of education. The junior high level did not readily accept this innovation and the senior high level less so. Although in some areas, continuous progress is practiced to some degree from the preschool level, in Montessori (Roberts,1975, Chap. 6) schools even into the university level.

Viewing the results of this innovation from the current literature and by observation one can readily discern that a definition correlative to practice might well be "continuous promotion" as distinguished by Carbone (vide supra, p. 7). Theoretically the concept of continuous progress is sound; in much practice it appears to be a failure. Crawford and Ragsdale (1970) have proposed an "individualized quasi-instructional system that will put education technology to work in the service of accountability and relevance in education at a time when both are sorely needed (p. 80)."

To sort out this apparent conflict "to borrow an analogy from Noam Chomsky: open education might best be understood in terms of surface structure and deep structure (Spodek in Spodek and Walberg, 1975, p. 9)." Surface structure as found in the classroom practice would be subject to its own norms of criticism. Deep structure, the theory or meaning basing the practice, would have to be correlated with particular instances of open education. A verification of both structures would require classroom observation and knowledge of educational theory. Criticism is often directed towards

practices labelled as "open" when, in fact, there is no evidence that these practices manifest both of these structures of open education.

What is needed to measure the openness of an existing program or to implement an open experiment is an operational definition, one that will provide indicators of practice congruent with the theory of open education. As well as the historical antecedents of the theory, "in a practice - based approach to education, much of the study must consist of observing practice, abstracting assumptions upon which practice seems to be based and verifying these assumptions by submitting them to the judgments of practitioners (Spodek in Spodek and Walberg, 1975, p. 5)."

C H A P T E R I V

Empirical Directions in Measuring Continuous Progress

A. Measuring the Effects of Continuous Progress

The principal focus of research studies have been to determine whether children learn more in a nongraded program than they do in a graded one. Considerable difficulties have been encountered in designing studies that will yield meaningful results (Goodlad, and Anderson, 1968, pp. 214-218).

In any experiment, the controlled variables must be specifically identified. In nongradedness, it is indeed difficult to specify instructional practices necessary to the program, or to be absolutely certain that such instructional practices are actually in use and identifiable. Many programs or plans of nongradedness are merely descriptive. Because variables cannot be carefully controlled, Tewksbury (1967) does not believe it possible to judge the value of nongrading on the basis of research evidence (p. 26).

McLoughlin made a review of research up to 1966, and from this study he concluded that "nongrading appears

to make little difference in the performance of children at any level in any subject area," and, also that "there is no evidence that students from nongraded classes exhibit social or classroom adjustment superior to that of children from graded classes (Anderson, Encyclopedia of Educational Research, Vol 6, p. 586, 1971)." In "Available Research Evidence", Rollins (1968) states that "most research concerning nongraded schools appears to be conflicting and inconclusive . . . controlling experiments are difficult to carry off . . .the teacher and the content are crucial factors in the success of a nongraded school (p. 18)."

Bradley and Wesley (1970) claimed that a master plan was needed as "by 1963 there had been more than 100,000 research studies that contributed to knowledge in education. But by 1970, no one knew the degree to which any single problem had been studied or consistent results found (p. 82)."

"Research should be conducted over a period of four or more years; criterion for a study should specify educational goals "explicitly at the outset, in such language that research procedures, gathering of data,

and the formulation and testing of hypothesis can be done in an orderly way (Buffie & Jenkins, 1971, p. 182)." "Research studies prior to 1968 in which efforts were made to evaluate nongraded programs in elementary schools do not provide much help (Otto, 1969, p.3)."

Much of the research on nongrading has attempted to evaluate pupil performance in the skills subjects -- little evidence has been given in the affective domain from any research. Carbone (1961) tested 122 nongraded pupils and 122 graded children on the Iowa Tests of Basic skills as reported in Miller (1967, p. 170). He found that in six areas of achievement, the graded pupils scored higher at the .01 level of significance (Goodlad and Anderson, 1963, p. 217).

Engel and Cooper (1971) tested reading vocabulary and comprehension, mechanics of English, and spelling skills to compare academic achievement in nongradedness. They found a significant difference in favour of continuous progress in all areas except spelling.

Higgs (1973) surveyed pupils' physical movement, access to supplies and services, and opportunities for self-direction. His instrument called "Teacher-Perceived

Patterns of Control" was administered at the elementary and secondary levels. Cutler (1972) in "A Comparison of Attainment of Selected Physical Educational Objectives in Graded and Nongraded Education" found significant differences in favour of nongraded groups in motor ability, physical fitness, and achievement in motor skills.

Crandall (1973) found little evidence that first grade children learning to read in an open concept class using individual reading do less well than children instructed in basal series in more formal classes.

Curiosity of children, being one of the basic characteristics of learning and a foundation of open education, was investigated for its relation to open education by Corlis (1972) and again by Corlis and Weiss in 1973. The general conclusion was that a moderate amount of program openness may be the optimum environment for initiating curiosity and further learning. The Non-Verbal Curiosity Test was one of the facets of the D.I.S.C. instrument developed by Traub et al in Canada.

Charbonneau (1971) used standardized achievement tests for testing mathematics. She discovered through yearly testing that children taught mathematics by a

laboratory approach were ahead of grade level in all areas.

Carlson (1974) found baseline data by using SRA achievement material to evaluate the Model Schools Project (1970-72). He claimed "evaluation was essential in order to continue the program long enough to determine its success (p.96)."

The effects of open classroom techniques studied by Greener (1972) with primary children found the students involved with open classroom techniques were generally superior in intelligence to the children involved with traditional classroom techniques.

A significantly higher gain in achievement over a two year period for students in open education as against those in traditional education was discovered by Killough (1971) using SRA Achievement tests. Townsend (1971) found on achievement test scores that children in open concept schools showed less growth in achievement than children in contrasting schools.

Open area classrooms were compared with contained classrooms for affective factors by Wren (1972) whose results favored the open area over the self-contained.

She discovered measurable differences in attitude and personality factors of the students.

Coletta (1973) using the Barth scales measured the extent to which the educator in the open and traditional primary classrooms agreed or disagreed about open education. The conclusions were that the scale might be of value in assisting school systems in the selection of teachers for open classrooms.

Beals (1972) studied the emotive perception of elementary students in open areas and traditional settings. His study showed significantly more positive attitudes in children in the open area schools.

Grapko's (1972) survey did not support the belief that students in open space classrooms show marked gains in developing their feelings of self-confidence, work habits, and desire to work independently.

The study by Scheirer (1972) of the effects of open classroom education on children's achievement, self-concepts and attitudes, revealed no significant difference in achievement between children in open education and traditional settings. Both self-concept and attitudes toward school were significantly less

positive in the open school than in the traditional school. Beckley (1972) also compared attitudes toward school and self in open concept and self-contained environments. His study favored the open concept school.

Many studies, (Tewksbury, 1967, Buffie & Jenkins, 1971) for classes, (Otto, 1969; Rollins, 1968) or case studies, (Glogau, 1967; Ontario Teacher's Federation, 1972) describe organizational patterns of schools.

The Casis School Study, Texas, is one of the classical studies in continuous progress. "The Casis School operates according to a plan of continuous grouping. Changes in section or grade placement are made at any time during the year when they would seem to be in the best interests of the child (Otto, 1969, p. 14)." The Casis School nongraded program involved elementary level children. The testing program included the Metropolitan Achievement Test, and the Iowa Every Pupil Test of Basic Skills. The results of the program were analyzed and summarized, and the conclusion drawn was that "this study resulted in a draw (Buffie & Jenkins, 1971, p. 179)."

Ward's experimentation (1969) paralleled the Casis School study. This study involved pupils at the first and second grade levels over a two year period. Four schools were involved in the experiment. "Ward's findings were predominantly favorable to the nongraded program during the first two years of school (Buffie & Jenkins, 1971, p. 175)."

In Glogau's (1967) case study on Old Bethpage School located in Plainview, Long Island in The Nongraded Primary School, many aspects of nongrading are discussed such as grouping children, movement of pupils, levels of instruction, curriculum, implementation of materials and activities, and internal problems. In dealing with the removal of trauma associated with acceleration and retention, a four year primary program was implemented.

Tewksbury (1967) in chapter five presents diagrams to show how children might move through nongraded programs that involve different schemes for assigning children to teachers. Tewksbury cautions that the examples offered are not an exact blueprint, but "variations and combinations of these plans would be desirable (p. 63)."

Rollins' (1968) contribution to the nongrading of schools is comprised of suggestions for organizational

designs. He discusses the advantages and disadvantages of classrooms both non-specialized and specialized at the elementary and secondary levels. Schools traditionally have been designed in terms of self-contained classrooms, and most classes are subject-centered more so at the elementary and secondary levels than at the primary level. "Developing nongraded schools requires considerably more than the mere removal of grade designations. The reorganization of the curriculum in nongraded schools demands content, that in itself, is different. Conventional roles of teachers must be discarded. Administrative procedures must be modified (Rollins, 1968, p. 3)." " . . . developing nongraded schools requires revision and restructuring not only of curriculum and the teacher's role but of many of the day-to-day practices of schools (Rollins, p. 111)."

For open education to flourish, space is a necessary requirement, inasmuch as the activities require more space for movement than in traditional classes. The idea of activity centers is one of the basic tenets of continuous progress. "Because of the emphasis on individualized instruction, schools should contain many more small group and individual counseling spaces (Rollins,

p. 173)."

Philips and Chandler in Otto (1969) espouse the hypothesis that "nongraded organization of classes for instructional purposes results in lower school anxiety among children than the usual graded organization of classes (p. 94)." From this project, it was discovered in general that "girls had higher scores than boys, although sex differences were not statistically significant. Age-grade factors proved generally non-significant in this study (p. 105).

Achievement in Graded and Nongraded classes is usually assessed by an achievement test such as the Metropolitan Achievement Test, using control classes and experimental classes. Because the component of a class does not remain static, gain in achievement for a class usually can be assessed only over a one year span. The Glenn R. Johnson Study (Otto, 1968) of "An Investigation of Classroom Related Activities in a Selected Number of Nongraded Elementary Classrooms" was an extensive analysis of classroom activities in twelve nongraded elementary classrooms. Johnson found considerable variation in the amount of individualized

instruction among the twelve nongraded classrooms. He concluded that "if one wishes to evaluate the effectiveness of nongraded classrooms in individualized instruction the researcher must go beyond labels and what the personnel espouse (Otto, 1968, p. 124)."

Otto (1971) in Bold New Venture, "Research has a Word: Some Generalizations" reviews research undertaken by McLoughlin, Johnson, Ward and the Casis School Studies (Texas). He claims that these studies represent "37 of the 41 reports listed." At that point in time (1971) ". . . only a few of the goals of a nongraded program were considered in evaluation reports (Buffie and Jenkins, 1971, p. 172)." In all of the research undertaken, Otto found no appreciable differences between the graded and nongraded programs: he failed to find any difference in achievement between graded and nongraded classes.

Otto offers six reasons for the diverse findings in the research: 1) the time alloted for an organizational innovation to demonstrate its potential is usually not sufficient before evaluation is taken, 2) another problem is control over variables, 3) to be valid, membership of classes must be identical at each testing period,

4) no description of instructional practices are provided for either the control or experimental classes, 5) in a continuous progress program many of the features of the graded program must be modified, 6) nongraded programs cannot be mandated for, if they are there is little reason for success (Otto, chapter 9). Lillian Weber also believes that "when a system begins to mandate open education then what you will get will be unwilling teachers with dragging feet (Current Research, 1972, p. 118)." Tallboy recommends that "teacher selection might be one factor in enabling teachers to become 'open educators' (p. 11)."

The case studies as reported by the Ontario Teachers' Federation were collected in 1971-72. The overall study looked at a representive sample of schools where continuous progress was in some stage of development as an educational philosophy.

The case studies were based on an interview questionnaire. In all cases, the principal of the school was interviewed at length about the community the school served, and the staff itself; his definitions of continuous progress, school organization, and the role of the staff were noted. In all but one case, several

teachers in the school were interviewed, and in some cases, interviews with students and parents were reported. The case studies of the report demonstrate that each school had certain intrinsic characteristics which differentiated it from the other schools. The variances were obviously to be found in the differences that existed in the community, school staff, and student body influences. For the most part, the schools which were surveyed interpreted continuous progress as an ideal educational philosophy which they were attempting to implement. Some of the schools had tried more than one method. Some were in the preliminary planning stages.

The report did not pretend to comprehensively analyse or explain all the problem areas related to continuous progress. The editor, Marilyn Todd, (Ontario Teacher's publication, 1972, p. 6) suggested that "a case study is a snapshot of reality," and that the data provided in the study would help teachers and students to apply the theory of continuous progress.

Studies in continuous progress in education have in many instances, described programs. Finklestein in Roberts (1975) discusses the Alternative Program movement in public education: The Philadelphia Movement. This

Parkway Program, implemented in 1965, stimulated much interest because it was a "school - without - walls" innovation which sparked educational experimentation in many parts of America. The program was evaluated, and problems and weaknesses were recognized, but there was a general feeling that the program provided certain student groups with an atmosphere conducive to personal growth. Some of the factors that contributed to the positive effects of the alternative programs were 1) the smaller informal settings, 2) the informal and supportive relationships between faculty and students, 3) a general willingness on everyone's part to try new approaches to learning (p.86).

In a comparison of a variety of "open" type schools Kegan (1975) discovered the major discrepancies between "open" criteria and practice to be in not trusting students, and in exerting unnecessary and sometimes covert control. "In none of the four "open" schools did observation support a majority of "open education" criteria . . . It would appear that, at least, on the basis of this sample the alternative of open education is not fully available in schools known and describing themselves open (p. 249)."

B. Empirically Defining Continuous Progress

Literature search reveals a number of significant models of open education. As a general rule, assumptions supporting open educational practices are verified and these assumptions, correlated with observable behaviors, provide the structure for an instrument to be tested for its validity and reliability in measuring open education.

The earliest educators of note who studied nongrading were Goodlad and Anderson (1963); they developed a list of criteria in chapter viii of The Nongraded Elementary School for the "establishment of the nongraded school." They popularized the nongraded concept by "setting forth the groundwork of research and theory supporting their advocacy of the nongraded school (McNally, 1967, p. 42)."

In Miller (1967), Carbone sets forth criteria for evaluating a nongraded program listing six basic areas. Objectives, instructional material, grouping practices, individual instruction and evaluation and human devices are the categories of the forty-three related criteria, but "without the help and commitment of all school personnel it would be difficult if not impossible to implement a nongraded program (p. 58)."

Otto, (1969) studied nongradedness as a vertical feature of elementary school organization. His work was based on eighteen hypotheses, to compare nongradedness with gradedness in an elementary school. "It seems safest to conclude that the comparative data of this study resulted in a draw . . . The authors were disappointed that the school anxiety and achievement data came out as they did with no clear differentiation (Otto, p. 121)."

Daniel Purdom (1967) constructed "A Model of the Nongraded School." This model identifies distinguishing characteristics of nongrading. His set of items provide the basis for an instrument to appraise nongraded schools (p. 44-46). The aim of this early model was "to clarify the appropriate relationships among such aspects as organization, curriculum, and instruction. Wholeness should be shown to exist where some have not yet seen it (Purdom, p. 24)."

In a descriptive and comparative study, Parker (1967) states his purpose "was to determine the status of certain organizational and instructional practices which are related to provide for individual differences as found in the primary segment of six elementary schools; to compare these practices among schools of the sample which

were nominally graded and nongraded . . . (p. 106)."

In determining the status of the instructional practices, Parker writes, "usage of materials in the classroom did not vary appreciably between graded and nongraded teachers, (p. 81)" and "there was no significant difference between graded and nongraded schools regarding the kind of evidence that teachers used in gauging pupil progress for any subject (p. 84)."

In determining the status of organizational practices, Parker claims "nongraded schools were different from graded schools at statistically significant levels in that reading achievement, rather than grade or year was the chief factor considered . . . (p. 91)."

Parker compared the practices among the schools selected then related the findings to conceptual models of graded and nongraded organizations developed from research studies. The instrument that he used included five categories: 1) vertical classificatory procedures, 2) horizontal classificatory procedures, 3) curriculum, 4) promotion and retention practices, 5) evaluation and reporting procedures with twelve items and a collection of practices.

The findings of this study suggest that "individual public primary faculties are limited in the degree to which they can differ in their provisions for individual differences. For despite nominal commitment either to grading or nongrading, the type and extent of provisions for individual differences tended to be similar among all the schools (p. 108)."

Mancuso (1969) in the introduction of his thesis pronounces "a need for determining the basic differences, if any, that exist between the conventional or graded-type school organization and its related climate and the nongraded or continuous-progress type school organization and its related climate (p. 1)." This need arose because no comparative studies, up until 1969, had been made on the precise distinction between graded and nongraded schools in regard to their climate.

A questionnaire, based upon Carbone's (1961) study, for evaluating nongradedness was devised. Mancuso claimed that "before a useful comparison of student behavior in graded and nongraded schools can be made, some distinguishing characteristics must be singled out and an adequate description and organizational definition of graded and nongraded organizations established (p. 2)."

With the foregoing problem in mind, Mancuso devised "The School Characteristics Questionnaire (SCQ), a 49--item instrument, divided into six subsections following Carbone: Objectives, Instructional Materials, Individual Instruction, Grouping Practices, Evaluation Devices, and Human Factors. "This instrument was used to measure the degree of "nongradedness" of schools as perceived by the teachers (p. 21)."

"The establishment and maintenance of a graded school organization appears to depend on the attitudes, behaviors, and interrelationships of the principal and teachers (p.12)." For this part of the experiment, Mancuso used "The Organizational Climate Description Questionnaire (OCDQ), a 64--item instrument developed by Halpin and Croft. The questionnaire is based on an analysis of the "climate" of 71 elementary schools in six different regions of the United States (p. 22)."

Mancuso hypothesized that "teachers in nongraded schools will tend to rate their schools significantly higher on the SCQ nongradedness measure than will teachers in the graded schools (p. 38)." There were no significant differences in the means for the total questionnaire (p.40).

"There was no significant difference between graded and nongraded schools in the global assessment of non-gradedness (p.64)." "Likewise, attempts to find differences between organizational climates of graded and nongraded schools as they exist today did not succeed (p. 64)." However the result of the t-test of differences between mean scores of nongraded schools and graded schools were significant at the $p < .001$ level for Individualized Instruction and Grouping. Mancuso recommended "further study leading to an accurate method of assessment of nongrading and of its relationship to organizational climate (p. 64)."

Another study based on Carbone's work was that of Engel & Cooper (1971) at Dalhousie University in which "Academic Achievement and Nongradedness" was investigated as described earlier in this thesis. (Chapter 2, page 32)

In "Concepts and Definitions of Nongrading," Hillson (1970) lists six objectives as a "framework for developing the change process that moves a school from a conventional form to an innovative form (Kuzsman et al, 1970, p. 149).

William P. McLoughlin (1970) collected one hundred

four items from the literature pertaining to nongradedness to measure the teachers' and principals' knowledge and acceptance of the theoretical foundations of the nongraded school. He believed that the identification of such areas as 1) individual differences, 2) pupil evaluation and progress. 3) curriculum, 4) instruction, and 5) organization for learning might enable educators to institute procedures to rectify the situation and heighten the chances of having a truly graded program.

From her analysis of the literature, Hermine Marshall suggests general criteria in three categories supported by a number of characteristics for open classrooms. These criteria and their characteristics have been outlined in this thesis (Chapter 3, page 43). Marshall claimed that "the term open classroom should be reserved for those situations which meet all the defining criteria (1972, p. 18)." Spodek and Manolakes note that "her criteria of open education seem inadequate since they did not take into account conceptions of learning, knowledge, power or school culture (Spodek and Walberg, 1975, p. 194)."

Barth (1971) "reviewed the literature on open education to identify the assumptions open educators

make about the nature, development, and learning of children (Traub et al, 1972, p. 70)." His twenty-nine assumptions have played a significant role in the study of open education. Coletta (1973), Traub (1972) and Musella (1972) made extensive use of the Barth assumptions.

Bussis and Chittenden (1970) identified ten dimensions of the teacher's role as potentially valid indices of open education. This "resulting 'conceptual framework' included one of the most detailed and penetrating accounts yet written of what the teacher does in open education (Nyquist and Hawes, 1972, p. 117)." Bussis and Chittenden stressed the teacher's interaction with children under five general headings: 1) the diagnosis of learning events; 2) the guidance and extension of learning; 3) honesty of encounters; 4) respect for persons; and 5) warmth. [But] much of what is stressed about the teacher involves behavior occurring outside the context of interaction with children [the concept summarized under three major themes] as: 6) provisioning for learning; 7) reflective evaluation of diagnostic information; and 8) seeking activity to promote continuing personal growth (Nyquist and Hawes, 1972, p. 119)."

Characteristics such as knowledge, beliefs, and attitudes being internal resources of a teacher were subcategorized as: 9) "ideas related to children and the process of learning; and 10) ideas related to the perception of self (Nyquist and Hawes, 1972, p. 119)." These topics . . . describe some ways in which the teacher is an active contributor; but it is the nature of the human relationships . . . which appear to be central in understanding how the adult and the child can work together (Nyquist and Hawes, 1972, p. 135)."

Herbert Walberg and Susan Thomas (1971-1972), researchers for Educational Developmental Center, Massachusetts, and Judith Evans (1971) who conducted an experiment in educational change for EDC assisted by Dr. Walbert and Dr. Thomas, developed a teacher questionnaire along with a classroom observation rating instrument based upon Bussis and Chittenden's ten themes. This teacher questionnaire (see Appendix F) was used for the present study, but its rating schedule was modified by this author to meet recent criticism advanced by Researcher Tallboy (1975). Tallboy's study also extended and validated the use of this questionnaire in the upper elementary level of schooling (p. 61).

Walberg and Thomas (1971) made a content analysis of the literature to find its consistency with respect to Open Education. They drew "up a list of the most frequently cited and important writings related to open education (p. 12)." These writings were grouped under four categories: 1) Writers of Historical Importance, 2) Progressive Educators, 3) Popular Critics, and 4) Affective Orientation (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971). The literature survey yielded a large collection of quotations which formed the basis for defining characteristics of open education.

Under the "Writers of Historical Importance, "the works of Plato, Rousseau and Tolstoy were reviewed. Beginning with the earliest antecedent, "on every theme disclosed in this report, Plato received a negative rating. His assumptions and emphases are the antithesis of those of Open Education (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 14)" while Rousseau's "views are in general agreement with those which constitute the themes of Assumption, Self-Perception, Humaneness and Instruction (Walberg-Thomas, Characteristics of Open Education, a

look at the literature for teachers, 1971, p. 17). It is reported that "Tolstoy's views generally agreed with the characteristics of Open Education on the themes of Assumptions, Self-Perception, and Humaneness . . . (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 19)."

Among the three representatives of the Progressive Educators that were chosen for analysis was John Dewey. His Schools of Tomorrow, published in 1915, contains a rich combination of descriptive practices of public schools, educational theory, and criticism (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 22)."

Walberg and Thomas reviewed the work of Holt (1964, 1967) under the category "Popular Critics" for reflections of open education. They report that Holt "does not make explicit or detailed recommendations for how a school or classroom should be organized to facilitate the real, as distinct from the apparent learning he thinks schools should foster (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 25)."

Walberg and Thomas state that Kohl (1967) in Thirty-six Children "gives attention and emphasis to each of the eight themes defined in this report (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 27)."

A. S. Neill was considered as one representative of "Affective Orientation." Walberg and Thomas claim that "Neill, whose major tenet is adherence to a belief in the child's right to freedom of choice, presents an approach least like that of Open Education. His frame of reference (Assumptions and Self-Perception of the teacher) is, however, very similar (Walberg and Thomas, Characteristics of Open Education, a look at the literature for teachers, 1971, p. 31)."

This analytic survey of the literature was the basis for a list of 106-characteristics which were sent to forty-three well known educators for their expert judgment. As a result of the suggestions and comments of those experts, a revised list containing ninety items was constructed. Evans (1971) reviewed and modified the measures to fifty items for the Observation Rating Scale and the Parallel Teacher Questionnaire. These items were

categorized under eight of the ten themes of Bussis and Chittenden. These eight themes upon which the fifty items were based were 1) Provisioning, 2) Humaneness, 3) Diagnosis, 4) Instruction, 5) Evaluation, 6) Seeking, 7) Self-Perception, and 8) Assumptions (See Appendix G). These themes along with the observation and questionnaire items were submitted to a panel of nationally prominent educators on Open Education. The list is contained in Walberg and Thomas, Characteristics of Open Education: Toward an operational definition, 1971, Appendix B, p.8).

The measures were tested in both the United States and Great Britain in both open and traditional classes of five to seven year old infants. The testing involved sixty classrooms. The questionnaire was rated with a four point scale (strongly disagree, disagree, agree, strongly agree) while the observation scale was rated also on a four point scale (strong frequent evidence, moderate occasional, weak infrequent, no evidence). The experimenter found that open classes differed from traditional on five of the eight categories -- Provisioning, Humaneness, Diagnosis, Instruction and Evaluation. British and United States open Classes were statistically similar, especially on the observation measures. British open and the United

States traditional teachers were similar on the questionnaire scales, Seeking and Assumption, but the two open groups were more similar to each other than to the traditional groups, and were well differentiated from the traditional groups on the observation scales (Evans, 1971). The results on the Walberg-Thomas (1971) teacher questionnaire as used in the British-United States testing has provided this researcher with a baseline for traditional education which allows for meaningful interpretation of results for the testing of this thesis.

The scoring key for both the classroom observation rating scale and the teacher questionnaire has been given item scores from 1 to 4. These instruments have a self-correcting feature against high score bias, but it is notable that eighteen of the fifty questions have a reverse feature in the weighting. This rating scale effectively discriminates open education practices from traditional practices.

"School administrators, teachers, and researchers are encouraged to use the classroom observation rating scales and teacher questionnaires without contacting

Education Development Center (EDC) for permission, although they are asked to send EDC copies of reports based upon the measures . . . (Walbert-Thomas, 1971, p. 13)."

Elofson (1973) who used the Walberg-Thomas scales in her longitudinal study felt that the scales should not have been reduced from 90 characteristics to 50. She found the instrument of value in establishing a basis of sharing, communication, and learning for the teachers involved.

Burnham (1971) in Anatomy of Open Education considered five themes with thirty-one assumptions as related to practices in elementary education. "One must look to the body of assumptions (axioms, hypothesis, beliefs, or theories) which lie behind the activities, or failure to do certain things, if open education is to be understood (p. 1)." In Research on Canadian Studies, he found "there was marginal but not statistically difference favoring the open concept school pupils (p. 9)."

Tuckman et al (1972) conducted a study Project: Open Classroom in New Jersey to assess the extent to which open classrooms differed from control classrooms

with respect to the teaching process. The instrument used in this study was partially based upon the Walberg-Thomas (1972) scales. Data on teacher measures were analysed using the Kruskal-Wallis one way analysis of variance by rank. One conclusion from this study was "that Open Classrooms produce more positive affective effects than do traditional classrooms (p. 18)." "While not affecting achievement to any measurable degree, the Open Classroom treatment has enhanced students' self-image and liking for school, thus indicating one value of a student-centered classroom approach (p. 190)."

Barbara Pavan (1972) devised a technique for ascertaining whether nongradedness existed in a school through a teacher questionnaire composed by herself and personal observation of classrooms. A classroom rating instrument was developed from nongrading assumptions found in the literature; these assumptions were subjected to the criticism of forty-eight writers and practitioners in the field (p. 47).

The Pavan instrument consisted of thirty-six assumptions divided into six categories: 1) goals of schooling, 2) administrative-organizational framework,

3) materials, 4) curriculum, 5) evaluation and reporting, and 6) methods, from which one hundred seventy behavioral implications evolved. Ms. Pavan devised a technique for rating classroom practices and developed an observational system. "Questionnaires may determine if the respondent favors the rhetoric of nongradedness but not if the concepts are being implemented (p. 3)." Pavan, like Carbone, suggested that one must observe in the classroom to determine if nongradedness exists.

Pavan used a case study approach in surveying two public schools (Kennedy and Lincoln) to determine to what extent nongrading had been implemented in those schools. Periods of time were spent in the classroom collecting the descriptive data necessary for her conclusions. Variance in beliefs and practices within and between the schools was discovered (p. 191)." After the study, teachers in both schools expressed a strong need for additional resource people or advisors (p. 185).

A first step in implementing or analyzing progress toward nongradedness would be the study of the educational philosophy of the staff members. This study documented the fact "that over a ten year period Anderson, Goodlad, and many other advocates switched their emphasis from the

organizational-administrative aspects to the philosophical aspects of nongradedness (p. 191-192)."

Her thesis suggests that this first step in implementation could be achieved by using an instrument such as the Pavan list of 36 nongraded assumptions to determine the philosophic commitment of the staff (p. 187).

The Pavan study used a very small empirical sample and provided no strong evidence of reliability or validity for the questionnaire devised.

Traub's (1972) objective was to develop a questionnaire that could be used to assess the extent to which school programs reflect the practice of open education. An instrument was developed for measuring those dimensions of the school program most closely related to the strategy of open education. Traub's instrument is predicated upon several key assumptions adapted from Barth (1969), Kohl, (1969), Bussis and Chittenden (1970), and others.

The instrument, a method for assessing the relative degree of openness of educational programs, called Dimensions of Schooling Questionnaire D.I.S.C. as constructed by Traub et al, underwent several drafts before its final presentation.

From the literature, Traub et al identified twenty-nine facets of school programs and related them to several broad programmatic categories. Questionnaire items were constructed to detect materials and activities, instructional objectives, physical environment, time scheduling, individualization of instruction, composition of classes, role of the teacher, student evaluation, and rule and decision making (Traub, Weiss, Fisher, Musella, 1972).

The final draft of DISC IV is composed of thirty items. All the items are similar in format: the dimension of the school or classroom life that forms the focus of the item is defined briefly and is followed by a set of alternatives along a continuum from most open to least open. The items contain from three to five alternatives. The variation in number of options was dictated by the apparent number of possibilities for any one item.

Scoring is done by a double weighting scheme. One set applies to the options and is termed "options-weights". The second rank weights are associated with the ranks that have been assigned to the options by a respondent.

"The reported results obtained from DISC make no

attempt to involve a comparison of actual classroom practices as reported by teachers' questionnaire (Tallboy, 1975, p. 23)."

Thus, Traub's approach differs from the Walberg-Thomas (1971) procedure, since his scale relies entirely upon teachers as the source of information. Tallboy declares that ". . . DISC appeared to differentiate between teachers more than the Walberg-Thomas. This could be because DISC was more complicated than Walberg-Thomas for the teachers to complete (p. 84)."

Musella (1972) suggests "the Dimensions of Schooling" can be used for "assessing the present state of openness and identifying the intended or ideal state of openness, one that can identify the areas of change needed to increase the openness of program in one's classroom or school (p. 13)." Musella also lists six additional uses for "Dimensions of Schooling" insofar as it may be applied to educational systems. Musella termed Traub's questionnaire a "home style" approach to evaluation, which serves as a basis for support in the ongoing operation of education. Tallboy, in her experimentation, used the Traub instrument and found teachers objected to scaling it because of its length.

Musella (1972) gives three sets of assumptions derived from Barth, Rogers, Tannenbaum & Davis that have implications for open education. The assumptions along with the items for practice are useful in assisting teachers and principals in developing a philosophical basis for open education and identifying those changes necessary for operationalizing these assumptions in everyday classroom practice (pp. 7-8).

A program of research and evaluation was carried out by Patricia Carini, (Hearn, 1972) as it pertained to informal education in the Prospect School in Vermont. Carini used a data analysis process to evaluate "processes as they occurred as a process of development and/or as they are modified at different stages through a learning experience (p. 108)." The scales were used for "observation and research for an analysis of the curriculum as it evolved over the past six years at Prospect School (p. 112) " and for the analysis of materials to facilitate the learning process at different ages as based upon Piaget's model of logical operations.

Carini distinguished record-keeping and documentation from evaluation and research. The latter, she claims "are

properly addressed to the potentialities and parameter of the learning setting per se (p. 101)."

In her study of informal education, Carini found "a high positive correlation between originality and productivity r.=97, and an absence of a strong relationship of these qualities with intelligence (r.=27 using the W.I.S.C.) (Hearn et al, 1972, pp. 101-113). Carini writes "conceptualization and the systematic, logical thinking associated with it is not reflected to date in any of our findings (Hearn et al, 1972, p. 110)."

Stoldalka (1973) investigated the degree of implementation of the nongraded program into the elementary level of Division II in the Maple Creek Schools, Alberta by examination of student records, organizational procedures and practices used by the personnel. He compared his findings against the theoretical nongraded program as set out by the Department of Education in Saskatchewan (1964). This study revealed that very few of the traits that characterize a nongraded school were evident. Stoldalka concluded that the prevailing organization was graded rather than nongraded. He listed fourteen limitations which could be responsible for the evidence.

To determine the extent of implementation, Stoldalka used six basic questions:

> 1) To what degree has provision been made for basic learning differences for students as they move through the vertical organization of the school?
>
> 2) To what degree has provision been made for basic learning differences by having a student progress at varying rates in selected skill subject areas?
>
> 3) To what extent has "grade failure" been eliminated?
>
> 4) To what extent has "grade skipping" been eliminated?
>
> 5) What provision has been made for students possessing above average ability?
>
> 6) Are "social passes" used within the system? (p. 71).

Stoldalka indicates the need for further research in relation to the Department of Education study of nongradedness in 1967, since "There appears to be a contradiction between some of the conclusions reached in the present study and that of the Department (pp. 78-79)."

Felicity Tallboy's (1974) research at McGill University used both the Walberg-Thomas and Dimension of Schooling Measures (Traub, 1974) as a basis. She found the Walberg-Thomas measures to be reliable. A Pearson Product-Moment Correlation Coefficient of r=.83

was obtained between the first and second administration of the questionnaire. For the second administration, a randomly selected sample of 50 questionnaires was used to obtain an internal consistency of .75 computed by Cronback's alpha (Tallboy, p. 71). ". . . Estimates of reliability and validity were reconfirmed for the Walberg-Thomas instrument (p. 109)."

Tallboy found the correlation coefficient between the observers' scores on the Walberg-Thomas Observation Scale and the teachers' scores on the Walberg-Thomas questionnaire was not high ($r = .61$); however, it nevertheless achieved a high level of significance ($p < .001$) (p. 72). As the size of the sample is small, the levels of significance can be given some importance. The results add to the validity of the Walberg-Thomas measures (p. 73) which Tallboy states had been assumed to be valid according to the literature (p. 69).

"The aim of contributing to the reliability of Walberg-Thomas and establishing reliability figures for DISC is also satisfied by the results reported on the test-retest of both questionnaires and on the computed alpha coefficients which were high (p. 73)." Internal

consistency for DISC of .83 and reliability of test-retest r =.78 for DISC was also high. This study also "added to concurrent validity, especially for the DISC questionnaire (between Walberg-Thomas and DISC an r =.51, corrected for attenuation, r =.63) (p. 109)."

Her study also ruled out school and classroom architecture as a factor of openness (p. 115). ". . . neither architecture or grade level were shown to be significant for openness by Walberg-Thomas (p. 84)."

Tallboy's study extended the scales to the upper elementary classrooms. "From the results, the Walberg-Thomas questionnaire would appear to give a measure of classroom openness as satisfactorily in upper elementary grades (cycle 2) as in lower elementary grades (cycle 1) (p. 85)." Tallboy also noted of Kindergarten teachers in all these analyses, that they stood out as a special group, in regard to openness (p. 84).

It is also noted that "on the whole, teachers tended to give themselves a more open rating than observers (p. 87)." Perhaps, in this regard, Walberg-Thomas might be seen as being more sensitive. "The correlations between the observers' rating scale scores and the two questionnaires was reasonable (r =.61 with Walberg-Thomas, and r =.37 with

DISC (p. 109). The Walberg-Thomas achieved a high level of significance, $p < .001$, with DISC having $p < .01$ (p. 72).

The implementation of continuous progress in the elementary schools of Cape Breton Island, Nova Scotia, was the subject of the LeGendre study. "Often the concepts on which the organizational structure of a school is based are not reflected in the actual practices in that school (LeGendre, 1975, p. 1)."

He modeled his questionnaire upon the Pavan (1972) instrument, modifying her model to twenty-eight assumptions, grouped under six categories: 1) goals, 2) administrative organization, 3) teaching materials, 4) curriculum 5) teaching methods, and 6) evaluation and reporting, having eighty-four practices. (Appendix H) His study involved one hundred forty elementary schools. Ninety of the principals responded (p. 24).

Le Gendre believes that "how far a principal and his staff have progressed toward ensuring success to students must be known, to provide proper direction for future educational efforts (p. 3)." This observation is valid according to other sources.

LeGendre suggests that some of the questions on the

Pavan scales were repetitive, and "a few practices were not as easily verified as intended (p. 11)." In my literature search I found neither support nor criticism of the Pavan model.

LeGendre concludes that only two of the assumptions tended to be operative very often, twenty-two were operative often, while four tended to be operative only on occasion.

In his analysis of findings relating to the assumptions LeGendre stated:

> The Category pertaining to evaluation and reporting contains five assumptions. The practices related to the first assumption tended to be operative very often. The practices related to the other four assumptions tended to be operative often. The practices pertaining to evaluation and reporting therefore tended to be the most highly implemented of the six categories.
>
> All practices pertaining to the two assumptions relating to teaching materials, the four assumptions related to curriculum, and the five assumptions related to teaching methods tended to be operative often. Hence, practices pertaining to the assumptions relating to teaching materials, curriculum, and teaching methods tended to be moderately implemented in the elementary schools of Cape Breton.
>
> The practices pertaining to the first and fourth assumptions categorized under goals tended to be operative only on occasion

> while the practices relating to the other assumptions in the goal category tended to be operative at least often. Similarly the practices pertaining to the fourth and fifth assumptions relating to the administrative organization tended to be operative only one occasion while the practices relating to the first three assumptions pertaining to administrative organization tended to be operative often. Hence, practices and assumptions pertaining to goals, and administrative organization tended to be least well implemented in the elementary schools of Cape Breton Island (pp. 53-54).

LeGendre concluded that his study showed that "continuous progress is implemented to a moderate degree in the elementary schools of Cape Breton Island (p. 54)."

In summary a review of literature revealed a limited number of attempts to establish useful instruments for the measurement of continuous progress. Of the models reviewed for statistical instruments in our opinion, the Walberg-Thomas scales provide the most compact and valid form for measuring the heuristic structure of continuous progress. Literature on open education is building like "A Chambered Nautilus" since it is developing by a combination of theory and practice. This review of literature provided the instruments for the measurements of this study.

C H A P T E R V

Design of Study

This study is an attempt to identify and compare the extent to which certain practices pertaining to continuous progress or open education are implemented in a sample of Elementary schools in Halifax County.

First Aim

The first aim is concerned with providing a usable instrument for measuring continuous progress based upon the Pavan-LeGendre questionnaire. The aim consists of three parts: a) to establish concurrent validity for the Pavan-LeGendre scales, b) to determine the indicators of continuous progress, and c) to establish a baseline for the Pavan-LeGendre questionnaire.

First Part of First Aim

To establish concurrent validity for the Pavan-LeGendre scales, they were compared with the Walberg-Thomas measures for which validity has been established (Tallboy, pp 69 and 73). If a teacher gets a high score for openness on one questionnaire, would he tend to get a high score for openness on the other? It must be established whether the two questionnaires are assessing

the same things. A test of concurrent validity was conducted by calculating the correlation between the scores by the same teachers on the two questionnaires. If the correlation is reasonable or high, it would indicate that there is an underlying relationship between the two measures. The Pavan-LeGendre questionnaire as scored by elementary teachers in seven Halifax County schools was correlated with the Walberg-Thomas questionnaire as scored by the elementary teachers to obtain a Pearson Product-Moment coefficient of correlation.

Second Part of First Aim

The next question pertaining to this aim is to determine which practices measured by the Pavan-LeGendre scales are truly characteristic of continuous progress or open education. The Pavan-LeGendre questionnaire was administered to 66 Master Teachers at the secondary level, asking them to determine to what extent the practices of the questionnaire existed in a traditional graded school. This testing provided two new questionnaires listed on pages 116, and 117, which were used in the testing in Halifax County elementary schools. Twenty-one questions that obtained the lowest scores for traditional schools

as seen by the Master Teachers were listed to make a sub-questionnaire. Examination of these questions indicate they are true indicators of open education. This questionnaire was therefore titled "open concept" abbreviated OC. Chart 2, page 116. The twenty-one questions that obtained the highest scores for the traditional school were listed to compile a subquestion-naire. Examination of these questions show that they describe practices of "good teaching" in the traditional setting. The questionnaire was, therefore, titled "good teaching" abbreviated GT. Chart 3, page 117.

The means on the Pavan-LeGendre questionnaire are charted for the LeGendre, Cape Breton testing, for the testing of the Master Teachers (traditional school), and for the seven Halifax County schools tested to indicate the relative position of the schools. Chart 1, page 113.

The means on questionnaire GT are charted for the LeGendre Cape Breton testing, for the Master Teachers (traditional school) testing, and for the seven Halifax County schools, to indicate the position of the schools in relation to the indicators of good teaching. Chart 4, page 119 .

The means on questionnaire OC are charted for LeGendre's Cape Breton testing, for the Master Teachers (traditional school) testing, and for the seven Halifax County schools to indicate the position of the schools in relation to the indicators of open concept teaching. Chart 5, page 120 .

The means of the Halifax County schools on the Pavan-LeGendre questionnaire in comparison to their means on questionnaires OC and GT are shown in Chart 6, page 121 .

Correlations on OC were computed between the Master Teachers (traditional school), the LeGendre Cape Breton testing and the elementary teachers of Halifax County to obtain a Pearson Product-Moment coefficient of correlation.

Similarly, correlations on questionnaire GT were computed between the Master Teacher (traditional school), the LeGendre Cape Breton testing, and the elementary teachers of Halifax County to obtain a Pearson Product-Moment coefficient of correlations.

Third Part of First Aim

The next step in this aim is to find a baseline in order that the results of further testing may be meaningfully interpreted. To do this, some estimate of

the incidence of the practices in the pre-continuous-progress school must be made. The expertise of the Master Teachers responding provided a baseline for the Pavan-LeGendre scales whereby openness could be measured.

Second Aim

The second aim of this study is to measure the implementation of continuous progress or open education in Halifax County schools. By use of the overall mean from the LeGendre, Cape Breton results and the overall mean from the Master Teacher (traditional school) testing, a comparison is made between these and the means of individual elementary schools in Halifax County. This comparison measures the degree of implementation of continuous progress in the elementary schools tested. See Chart 1, page 113 . Further to this aim, elementary schools in Halifax County were administered the Walberg-Thomas questionnaire. The results of this testing were compared with the results of the Walberg and Thomas testing for United States Open, and United States traditional schools. Chart 7, page 125, and 7A, page 126.

Walberg-Thomas, as sent to the elementary teachers, was rated on a 5 point scale. In the first instance, the

scale was scored on a 5 point weighting from 1-5 fully observing the reversed weighting of the negative questions. This was done in order that the results concerning individual practices could be compared with the LeGendre results. In order to compare the results of the Halifax County testing with the results of the Walberg-Thomas United States testing, it was necessary to reduce the weighting from a 5 point scale to a 4 point scale. This was accomplished by using the DiVesta Method (1954). In viewing the results of this precedure, it was believed that perhaps this method had lowered the scores too drastically, so it was then decided to tabulate the results of the testing by only reducing the scores in the 5 rating box to the 4 rating box. The results, however, were not much different from those obtained by the DiVesta method. cf Charts 7 and 8, pages 125 and 127.

Third Aim

The third aim of this study is to identify the aspects of continuous progress or open education implemented in Nova Scotia schools in Halifax County and Cape Breton Island. From Master Teachers (traditional school) testing with the Pavan-LeGendre measures, a baseline for

traditional education is established, from the expert opinion of the Master Teachers. By putting the results of the questions in ascending order on a graph, then charting the mean of each question for both the LeGendre, Cape Breton, and the Halifax County Elementary Teachers results, a comparison of the relative incidence of individual practices is possible. Chart 9, pages 131 , 132 , and 133 . The solid line on the chart represents the Pavan-LeGendre Master Teachers results; the broken line represents the LeGendre Cape Breton results; the dotted line represents the Elementary schools results. Practices that show a great spread on the chart were tested by t-scores to determine if they show a significant difference. The results are found in Charts 10, 11 and 12, pages 134 ,135 , and 136 .

A list of practices obtaining scores which were significantly higher than the traditional baseline as found on the Pavan-LeGendre Halifax County testing, verified by t-tests, is found in Chart 13, page 137 . A list of practices obtaining scores significantly higher than the traditional baseline on the Cape Breton testing, verified by t-tests, is found in Chart 14, page 138 .

These are practices in which Nova Scotia schools are more open than the traditional school as imagined by the Master Teachers.

Similarly, a list of practices obtaining scores which were significantly lower than the traditional baseline as found on the Pavan-LeGendre Halifax County testing, verified by t-tests, is found in Chart 15, page 140 . A list of practices obtaining scores which were significantly lower than the traditional baseline as found on the Cape Breton testing, verified by t-tests, is found in Chart 16, page 141 . These are practices in which Nova Scotia schools are not as open as the traditional school as imagined by the Master Teachers.

From the Walberg-Thomas testing of United States Traditional classrooms, a baseline is similarly established for the Walberg-Thomas questionnaire and charted. On the same chart, the Walberg-Thomas results for open classrooms is recorded in an index of openness. The overall mean on each question for the seven schools in Halifax County is charted. Chart 17, page 142 . The mean of each question as obtained in each of the seven Halifax County schools is separately charted, school by school. See

Appendix K to Appendix Q, page 217 to page 229 . The valleys and peaks on the chart give an indication of what practices are more or less implemented in the schools of Halifax County than they are in the United States classrooms deemed traditional by Walberg and Thomas.

On the Walberg-Thomas results, questions that indicate a spread or a deviation from the traditional baseline were detected by inspection. Due to pressure of time t-scores were not calculated for this part of the testing.

Practices scoring significantly (by inspection) above the baseline on the Walberg-Thomas Halifax County testing were recorded. Chart 18, page 144 . Also questions scoring significantly (by inspection) below the baseline are listed in Chart 19, page 145 .

C H A P T E R V I

Method

The design of the study included the following:

Samples

The population of the pilot study included sixty-six Bachelor of Education students, Class '76, Saint Mary's University, forty-four Master Teachers associated with Saint Mary's University at the Secondary level, and fifty-eight Elementary classroom teachers from randomly selected schools in Halifax County.

Instruments

The two instruments used in the study were the Pavan-LeGendre (1975) scales, and the Walberg-Thomas scales (1971). Tallboy states that the Walberg-Thomas scales were "assumed to be valid according to the literature (p. 69) and her research added to the validity of the measures. (p. 73)

The LeGendre scales were based upon the instrument developed by Barbara Pavan, in her thesis (Harvard, 1972). This instrument included twenty-eight assumptions with eighty-four practices. The instrument had been used in Cape Breton Island, and rated by ninety school principals.

LeGendre concluded that open education existed "to a moderate degree in the elementary schools of Cape Breton Island (LeGendre, 1975, p. 54)." The writer corresponded with Mr. LeGendre asking permission to use his questionnaire as a basis for this thesis. Mr. LeGendre replied by telephone February 18, 1976, and willingly gave permission for use of the scales.

The second measure used was the Walberg-Thomas instrument. The format requires checking a 4-point scale. Eighteen of the fifty categories have a reversed weighted value. Felicity Tallboy (1975) in her research found

> the labelling of categories 'strongly disagree', 'disagree', 'agree','strongly agree', was thought by some teachers to be inaccurate because they had been asked to decide if the statements actually reflected what happened in their classrooms. In order to answer honestly, teachers had to answer 'agree' because that activity took place and not because they agreed in fact with the statement (p. 105).

Therefore, in order to avoid the semantic problem arising from asking whether the teacher agreed in theory and not whether the practice occurs, it was decided to use the observation form of the Walberg-Thomas measures instead of the parallel teacher questionnaire. The format of the questionnaire was also modified to a 5-point scale similar to the Pavan-LeGendre model in order to facilitate

the scoring by the teachers. When those results were scored, in order to use them for comparison with the United States results, it was necessary to convert them to a 4-point scale. This was accomplished by using the DiVesta (1954) formula. An alternate conversion was also explored - simply combining the 5 ratings' with the 4 ratings'.

Tallboy (1975) referring to the Walberg-Thomas scales, states that "the Observation scale seems to have differentiated more clearly between open and traditional groups than the Questionnaire which nevertheless made distinctions (p. 62)."

Educators have been invited to use the Walberg-Thomas measures. "Teachers may wish to measure themselves on our revised list to see how their ideas compare with those of open education (Walberg-Thomas, 1972, p. 93)." In June 1976, while on a business trip to the United States, one of my directors, Professor Bette Hanraham, contacted Ms Thomas obtaining permission for use of the measures in this research.

The instrument was originally devised for the primary sector of education, but is concurrently being used throughout the world to determine the extent to which continuous

progress or open education exists in other areas of education (Walberg-Thomas, 1974).

Procedure

As a pilot test, the LeGendre scale, based upon the Pavan scale was administered to the Education Students at Saint Mary's University in 1976, to determine the extent to which the Education students expected the practices of the questionnaire to exist in a traditionally graded school. This pilot testing included 66 student teachers who had spent teaching practice at the secondary level. When the test was administered, due to an error, the 5-point rating box was missing from the questionnaire for questions 76 to 84 on the LeGendre measures, therefore, the results were correlated with the first 75 question results of the Cape Breton testing. The statistical result was favorable, r =.72.

In the next testing, the Pavan-LeGendre instrument was sent to the Master Teachers to obtain expert advice as to the extent to which professional teachers expected the practices of the questionnaire to exist in a traditionally graded school. This sample of professional educators consisted of 44 Master Teachers, that is, teachers with whom a student teacher had been on teaching practice

during 1975-76. These teachers were at the secondary level in the schools of Dartmouth, Halifax and Halifax County.

One hundred twenty-five questionnaires were sent out with accompanying letters to the principals from Dr. M. MacMillan, then Director of Practice teaching and presently Dean of Education at Saint Mary's University. Appendix I, and a letter from the author of this thesis to each teacher. (Appendix J). Dr. MacMillan's letter explained the purpose of the questionnaire, and asked the cooperation of the principal in making the survey. The questionnaire was enclosed in a stamped envelope addressed to Dr. MacMillan at Saint Mary's University. After it was rated by the teacher, it merely had to be slipped into the mail-box. This author's letter identified myself and the study, and thanked my colleague in advance for his/her cooperation.

Forty-four of the one hundred twenty-five copies were returned. The results of this part of the study were compared with the Cape Breton results.

The next sample was drawn from the elementary school level. Teachers from seven randomly selected Halifax County schools were asked to score the Pavan-LeGendre

instrument, the Walberg-Thomas scales, and a questionnaire asking each teacher to scale his or her school as to the extent of openness or gradedness. This last questionnaire was not further used in this study due to pressure of time. Ninety-seven sets of the three instruments were delivered to the schools through the kind assistance of Mr. Robert Keating. Sixty-nine sets were returned, of which fifty-eight sets were usable. For this part of the survey, the instruments were taken to the schools and collected by Mr. Keating.

The three questionnaires were assembled and stapled in random order before being sent out for scoring. Teachers were asked to rank the options on each item.

C H A P T E R V I I

Analysis of Data and Conclusions

Concurrent Validity of the Pavan-LeGendre Questionnaire as a Measure of Openness

The sixty-six Saint Mary's Student Teachers who participated in the pilot part of the study completed the Pavan-LeGendre questionnaire headed by the request that they evaluate an imagined typical traditional graded school. The results of the study were compared with the LeGendre, Cape Breton results. The Pearson Product-Moment Correlation Coefficient between the scores on these questionnaires was $r = .72$ on 75 questions, significant at the $p < .01$ level. This high correlation means that a definite positive relation exists between the relative likelihood of practices in the traditional school as imagined by the S.M.U. student teachers, and as found in the schools of Cape Breton. It does show the direction of inclination is similar in Cape Breton and the traditional school. Questions that scored high in Cape Breton are likely to score high in any school.

Forty-four secondary level Master Teachers, acting as expert judges, then scored the Pavan-LeGendre questionnaire which was headed by the same request to evaluate an

imagined typical traditional graded school. A Pearson Product-Moment Correlation Coefficient was obtained between this administration and the LeGendre, Cape Breton results. The coefficient of correlation also showed a high, $\underline{r}$ =.73 on 84 questions, significant at the $p < .01$ level, which means that a definite positive relation exists between the relative likelihood of practices in the traditional school as imagined by these experts and as found in the schools of Cape Breton. It does show the direction of inclination is similar in Cape Breton and the traditional school. Questions that scored high in Cape Breton are likely to score high in any school.

Of the sixty-nine Halifax County elementary teachers who were respondents in the second administration, fifty-eight completed the LeGendre scales. A Pearson Product-Moment Correlation Coefficient ($\underline{r}$ =.75) was obtained from the results of this testing and the Master Teacher (traditional school) testing, on 84 questions, significant at the $p < .01$ level.

A Pearson Product-Moment Correlation Coefficient was obtained between the LeGendre, Cape Breton, and the Halifax County elementary testing ($\underline{r}$ =.86), on 84 questions,

significant at the $p < .01$ level. The correlation is even more positive than the correlation with the measure of the traditional school, showing that the schools in Halifax County and Cape Breton are more like each other than they are like the traditional school as imagined by the Master Teachers.

The same fifty-eight elementary teachers completed the Walberg-Thomas measures. These results were correlated with the Pavan-LeGendre questionnaire results. A Pearson Product-Moment Correlation Coefficient yielding $r = .65$ (58 persons) was obtained between the two scales. As the correlation is significant at the $p < .01$ level, the result clearly established a positive relationship between the two questionnaires. Tallboy states "it would appear from the literature that the Walberg-Thomas questionnaire has been assumed to be valid, at least as a beginning, in establishing whether or not open education is occuring or is able to occur in a classroom (p. 70)." The moderate correlation between the results of the Pavan-LeGendre questionnaire and the Walberg-Thomas questionnaire as responded to by the same teachers establishes that the Pavan-LeGendre scale is to some extent a measurement of openness, unless the result is due to some other

variable being measured by both questionnaires which may or may not be related to open education.

Respondents' scores on the Walberg-Thomas and the Pavan-LeGendre questionnaire having correlated well establishes the fact that there is an underlying relationship between the two measures. Given the assumed validity of the Walberg-Thomas measure one may tentatively assume concurrent validity for the Pavan-LeGendre measure.

Defining practices characteristic of Openness

The mean from the Cape Breton testing was 3.34. The mean from the Master Teachers (traditional school) testing was 2.88. The Halifax County schools' means were compared with these two means. See chart 1, page 113. The Halifax County Schools' means are School A= 2.71, School B= 2.97, School C= 3.50, School D= 3.22, School E= 3.70, School F= 3.11, School G= 3.16. The overall mean for the Halifax County Schools was 3.22. One can readily discern the relationship of the schools to the traditional school as imagined by the Master Teachers and to the schools of Cape Breton. From the chart, it can be seen that school A is solidly traditional, scoring below the average imagined traditional school, while schools C and E appear to be the

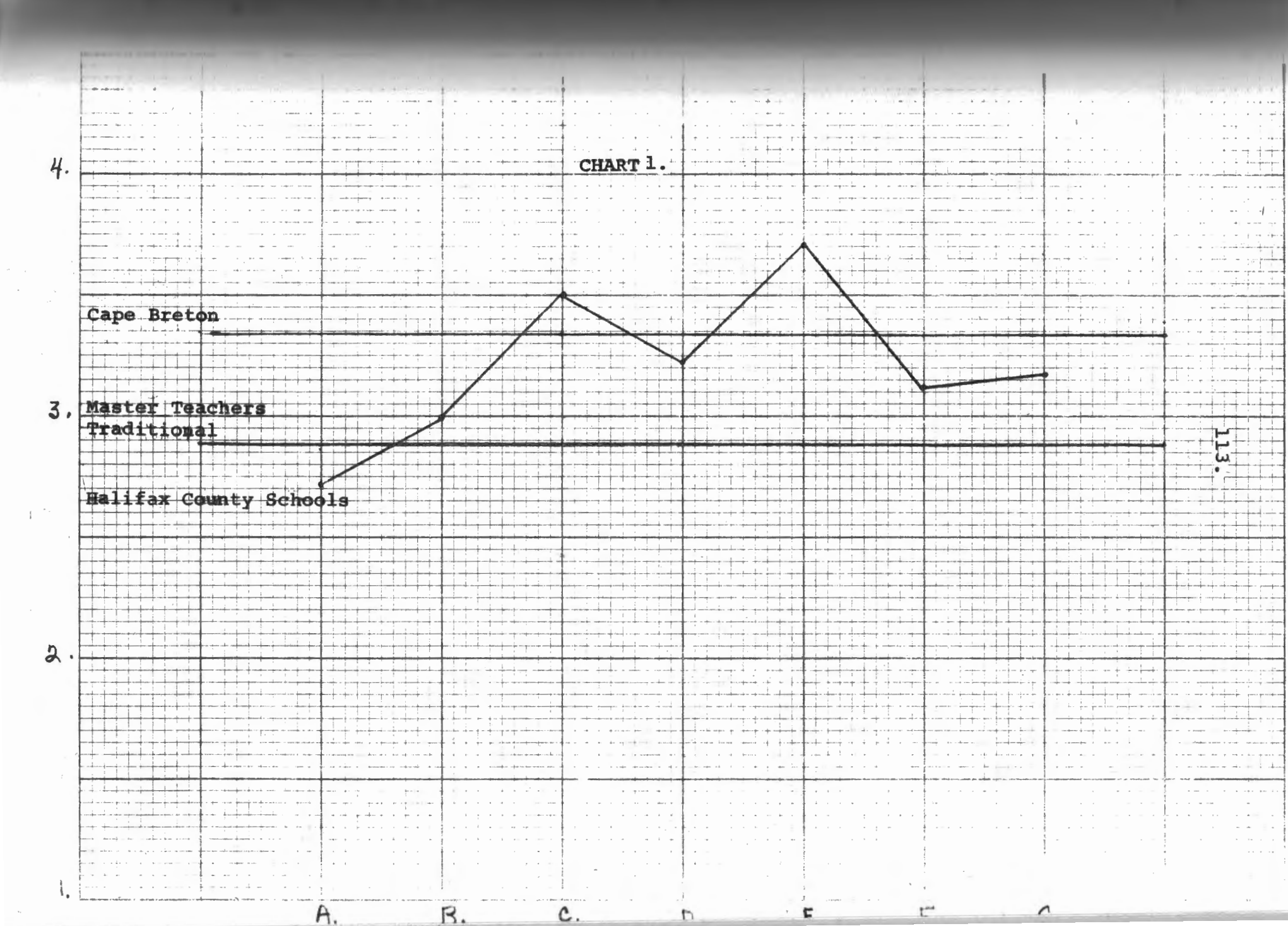


CHART 1.
4.
3.
2.
1.
Cape Breton
Master Teachers
Traditional
Halifax County Schools
A.
B.
C.

CHART 1A

Cape Breton Means 3.34

Traditional Ideal Means 2.88

Elementary Schools	A	B	D	D	E	F	G
Means	2.71	2.97	3.50	3.22	3.70	3.11	3.16

most open, scoring above the average Cape Breton elementary schools as well as above the rest of the Halifax County elementary schools.

For a more refined analysis of the variables, the expertise of the secondary level practitioners provided two new sub-questionnaires. From the result of this testing, questions scored in the top quarter were selected to provide a questionnaire of indicators most likely in a traditional school. Questions scored in the lowest quarter sorted out the aspects least likely in a traditional school. Each list comprised 21 questions. Examination of the 21 lowest scored questions indicated they are true indicators of open education. Therefore, this questionnaire was titled "open concept" abbreviated OC. Chart 2, page 116.

Examination of the 21 highest scoring questions show that they describe practices of "good teaching" in the traditional setting. The questionnaire was, therefore, titled "good teaching" abbreviated GT, Chart 3, page 117.

The same comparison was made on the 'Good Teaching' questionnaire. The mean of GT for LeGendre's Cape Breton testing was 4.12. The mean obtained in the GT Master

CHART 2

Open Concept Subquestionnaire

Practices having the lowest scores on the Pavan-LeGendre Master Teachers Testing

Pupils' suggestions are encouraged and accepted as guides to curriculum design.

Students are able to move from one activity to another without first seeking teacher approval.

Four or more well stocked activity centers are open to each pupil in his "homeroom". (Such activity centers could include: math, reading, writing, science, social studies, crafts, construction, store, etc...)

In addition to intellectual development, the following is systematically recorded in a cumulative record file; emotional development such as, informal notes on how a student perceives and reacts to a learning task on ability to accept praise or criticism, on expressions of hostility, etc.

Pretests precede learning activities to ensure the student needs the learning experience.

Series of items that must be mastered in a required order are avoided.

During a school week, a student, joins a large group of students for demonstrations, television programs, etc.

In addition to intellectual development, the following is systematically recorded in a cumulative record file: physically development such as movement skills, co-ordination, and aesthetic development such as samples of art work and use of "spare" time.

A conference between the student and the teacher is held prior to reporting to parents.

Each pupil keeps a dated sheet of his progress. He studies the folder he keeps, to observe his growth.

During a school week, a student will be in a group based on such a criteria as sex or cross age teaching (usually involves older students teaching younger students).

The student records his own progress in his record book. Words and/or pictures describe the important events of his day.

During a school week, a student pursues an individual interest on a solitary basis.

During a school week , a student forms part of a group of 4 to 8 persons active in manipulation of materials.

Students evolve the rules governing their behavior in school.

During a school week, a student will be in a group based on such a criteria as physical size or chronological age.

During a school week, a student will be in a group based on such criteria as, interest or friendship.

Monthly meetings are held by the faculty to review current student placement.

Curriculum guides specify behavioral objectives rather than subject-matter.

Workbooks are cut up to provide functional skill sheets.

Students in a room can be observed working on many different levels of difficulty.

CHART 3

Good Teaching Subquestionnaire

Practices having the highest scores on the Pavan-LeGendre Master Teachers Testing

Beyond the intellectual challenge of an activity, the teachers also plan to encourage sufficient expression by students

When facts are taught, they are eventually grouped to identify a concept.

Students who want to attempt mastery of materials considered difficult for them, are encouraged to try.

Public comparisons such as room-star charts, reading-levels-completed charts are avoided.

There is available for use a good-size classroom or a good-size school library.

Students unable to master a problem on their own can seek help from the teacher and other students.

Mistakes are expected and used as a positive force in the process of solving problems.

Tests are constructed with emphasis on concept application rather than factual recall.

Emphasis is on how answers are reached, rather than the actual answer being correct.

Equipment, materials, space, encouragement and time are available for students to have physical education classes and a variety of other movement experiences.

Teachers avoid having students working from "cover to cover" in a text or workbook.

Students who are underachieving are especially praised when completing a task well.

Although a spurt or lag in one developmental area may be the cause for a placement review, all developmental aspects must be considered before a placement change is made.

Reports to parents are in terms of accomplishments achieved and areas that need a concentration of effort by the student.

Post tests identify if objectives of previous instruction have been reached.

Aggressive activity such as grabbing, pushing and hitting is discouraged.

Children who have the potential can complete their elementary education in less than seven years.

Pupils' work displays show variety, not conformity.

Math and science learning activity centers encourage children to observe, classify, measure and record data.

Learning activities which call on pupils to converse with their peers, in a non-disruptive manner are permitted.

Pupils are led to express their opinions frankly and openly.

Teacher testing was 3.61. The means of the Halifax County Schools' testing were compared with these two means. See Chart 4, page 119. The Halifax County Schools' means for Good Teaching were School A= 3.40, School B= 3.22, School C= 3.91, School D= 3.61, School E= 4.11, School F= 3.33, School G= 3.66. The overall mean for the Halifax County Schools was 3.60. Chart 4, page 119, shows the relative position of the schools in comparison with the means of the traditional school. This chart shows schools A, B and F falling below the traditional school as imagined ideal by the Master Teachers and school E equal with the Cape Breton mean.

The schools were also compared using the "Open Concept" questionnaire. The mean of Open Concept for Le Gendre, Cape Breton testing was 2.45. The mean obtained for the Open Concept Master Teacher testing was 2.05.

The Halifax County schools' means were compared with these two means. See Chart 5, page 120.

Chart 6, page 121, displays a comparison of the results for Halifax County Schools on questionnaire Good Teaching, and the results on questionnaire Open Concept together with the result on the Pavan-LeGendre questionnaire.

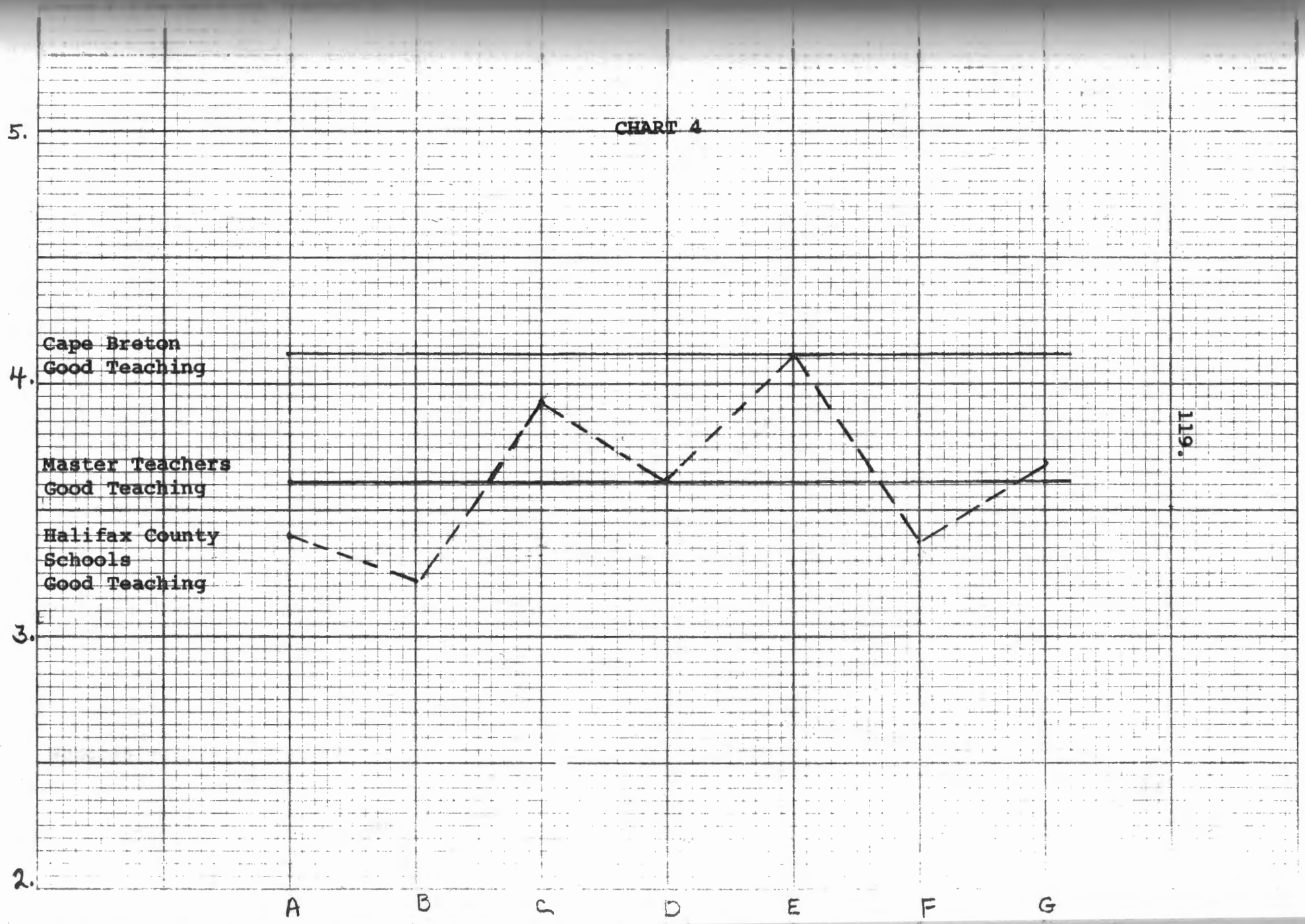
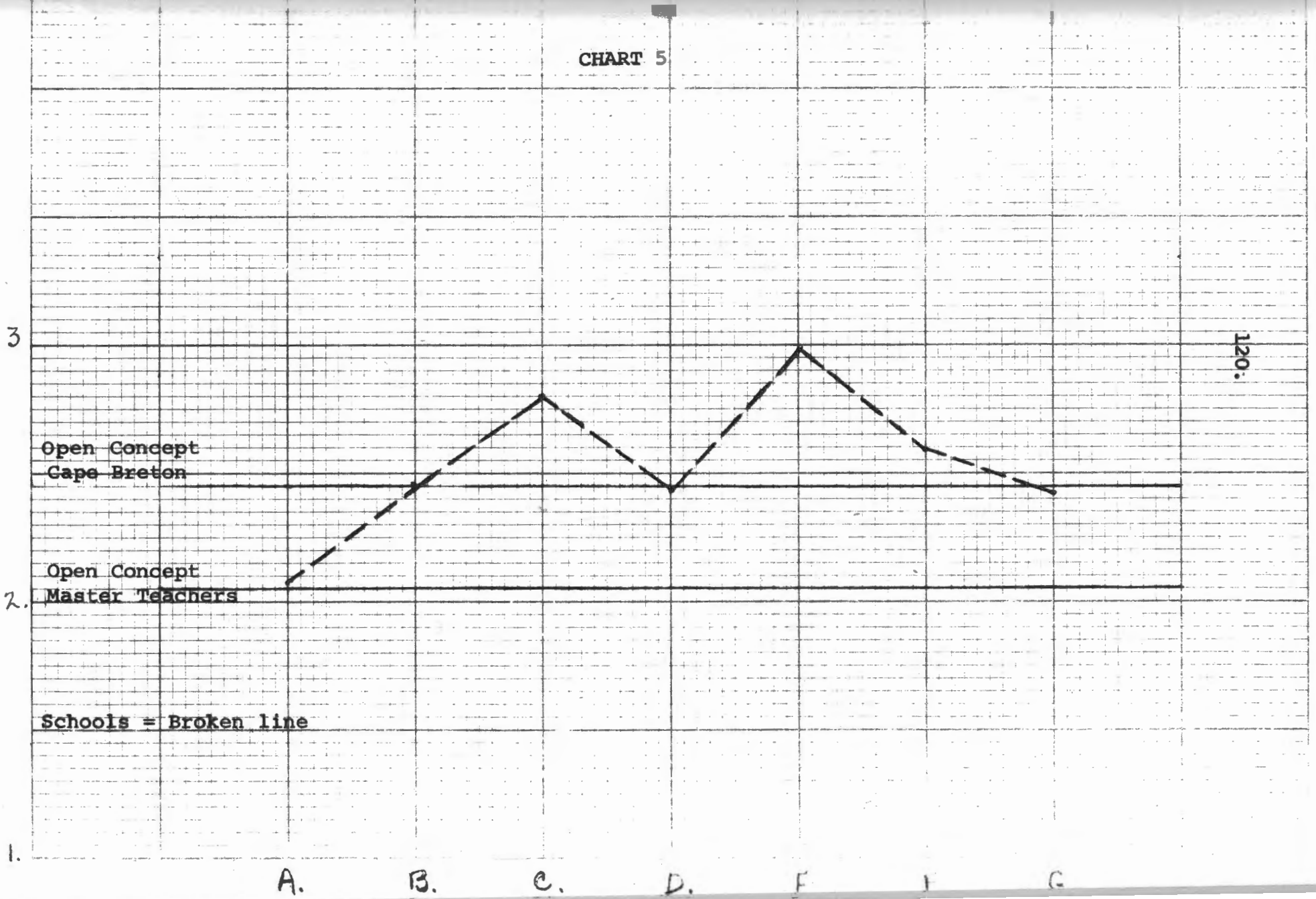


CHART 4
5.
4.
3.
2.
Cape Breton
Good Teaching
Master Teachers
Good Teaching
Halifax County
Schools
Good Teaching
A
B
C
D
E
F
G
119.

CHART 5


3
2.
1.
120.
Open Concept
Cape Breton
Open Concept
Master Teachers
Schools = Broken line
A.
B.
C.
D.
F
G

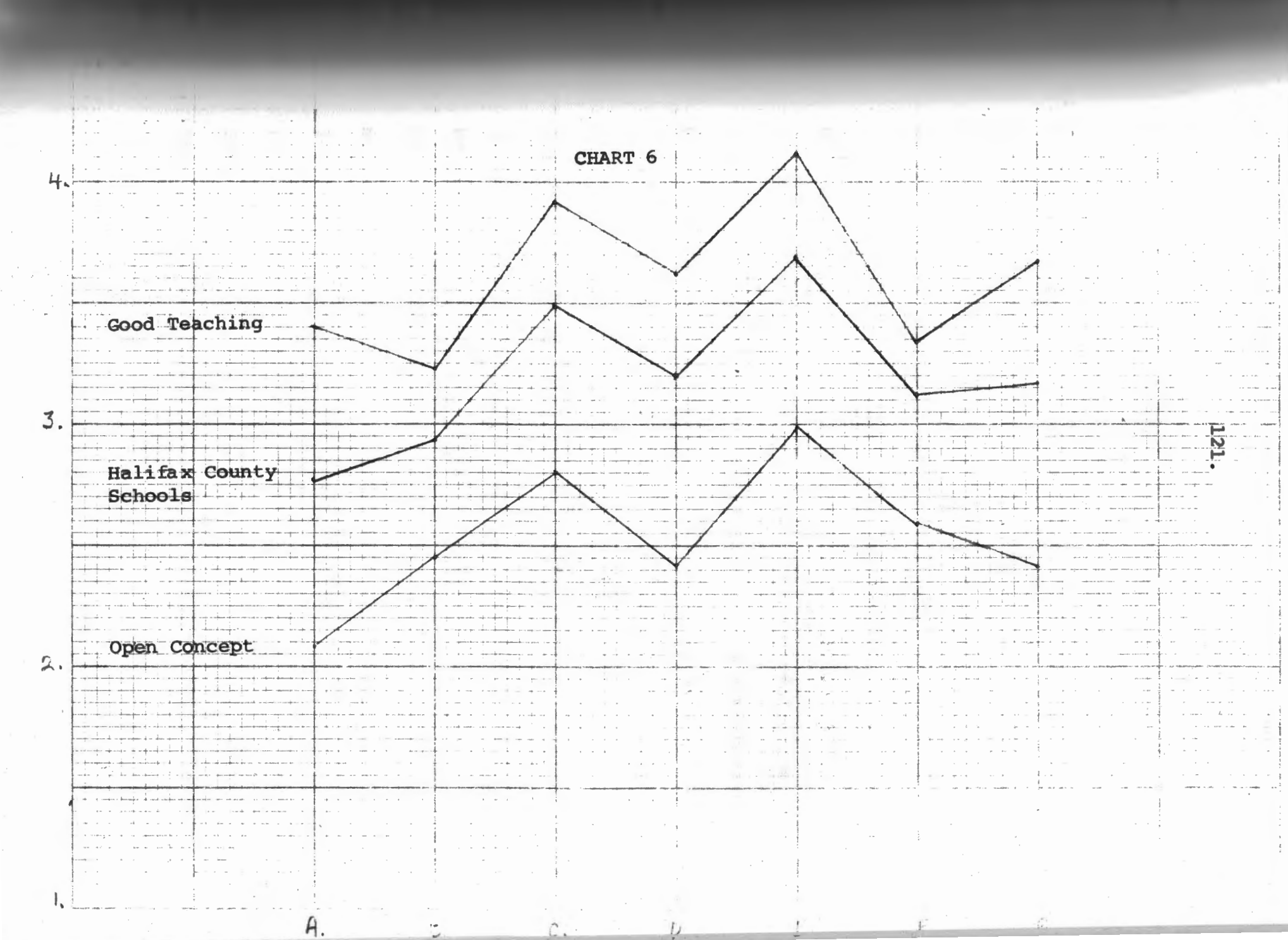


CHART 6
4.
3.
2.
1.
Good Teaching
Halifax County Schools
Open Concept
A.

These results appear consistent. This is borne out by the correlation holding between tests Open Concept and Good Teaching which for the Halifax County testing gave a coefficient of correlation, $r = .65$, $p < .01$. This indicates these separate tests nonetheless tend to measure schools on the same dimension.

Evidence that they can diverge, however, is seen in what happens to the scores for School A. School A scores lowest on the Pavan-LeGendre and on Open Concept. The score for Good Teaching, however, shows an upward reversal which indicates that the indices in Good Teaching can occur to a significant extent without those in Open Concept.

Correlation of Open Concept with Walberg-Thomas for the Halifax County testing yields a coefficient of correlation, $\underline{r} = .49$ (58 persons). Correlation of Good Teaching with Walberg-Thomas for the Halifax County testing yields a coefficient of correlation, $\underline{r} = .53$ (58 persons). Those are moderate correlations, both significant at the $p < .01$ level. Both, however, are lower than the correlation of $\underline{r} = .65$ (58 persons) obtained between Walberg-Thomas and Pavan-LeGendre. This would seem to indicate that both Open Concept and Good Teaching are less valid than the

total Pavan-LeGendre questionnaire for measuring open education. It might equally indicate, however, that Walberg-Thomas, like Pavan-LeGendre contains a mixture of questions measuring "open concept" with others measuring "good teaching".

Providing a Baseline, Aim I, Part 3

The expertise of the Master Teachers provided a baseline for the typical traditional school as imagined by them. The mean was 2.88, SD=.73. See Chart 1, page 113.

Measuring Implementation of Continuous Progress

From the Cape Breton testing, an overall mean of 3.34 was found, and from the Halifax County testing, the mean was obtained for each school. School A=2.71, School B=2.97, School C=3.50, School D=3.22, School E=3.70, School F=3.11, School G=3.16. Overall mean=3.22. Chart 1, page 113 shows the means for the Master Teachers, Cape Breton, and the means of the seven schools. One can readily discern the relationship of the Halifax County schools to the traditional school as imagined by the Master Teachers and the schools of Cape Breton. From the chart, it can be seen that School A is solidly traditional, while Schools E and C appear to be the most open.

The means from the Halifax County schools on the Walberg-Thomas testing are compared with the United States Traditional and the United States Open Education as reported by Judith T. Evans (Characteristics of Open Education, 1971, pp 30-33), Chart 7, page 125. The United States Traditional classroom mean, the United States Open classroom (teacher questionnaire) mean, and the means on the Walberg-Thomas questionnaire for the seven Halifax County schools are listed on Chart 7(a), page 126. The Walberg-Thomas scales, as sent to the Halifax County schools, were rated on a 5-point scale. The weighting being 1-5, the raw scores were tabled and rated on this value. The reversed ratings on the minus questions were observed. Then the results of the Walberg-Thomas were reduced by the DiVesta (1954) method; each rating of 5 was revalued as 4, and one-half of the ratings of 4 were revalued as 3's. The scales were then weighted from 1-4 observing the reversed weighting on the negative questions. It was feared that the result had been reduced too drastically; therefore, it was decided to calculate the means simply by combining the two top ratings. Reversed ratings on the 18 negative questions were observed, Chart 8, page 127. From the chart we see that the relative position

CHART 7

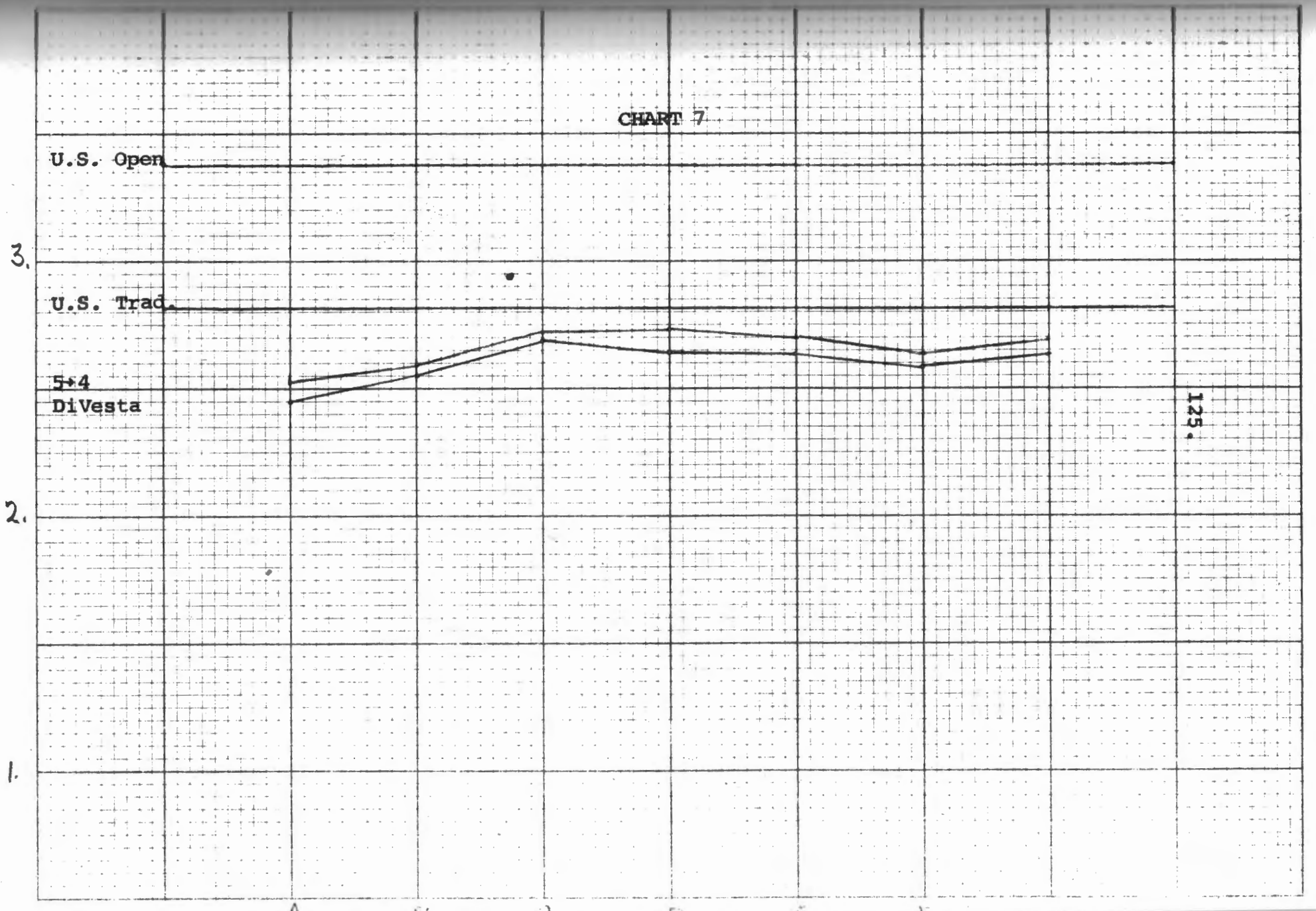


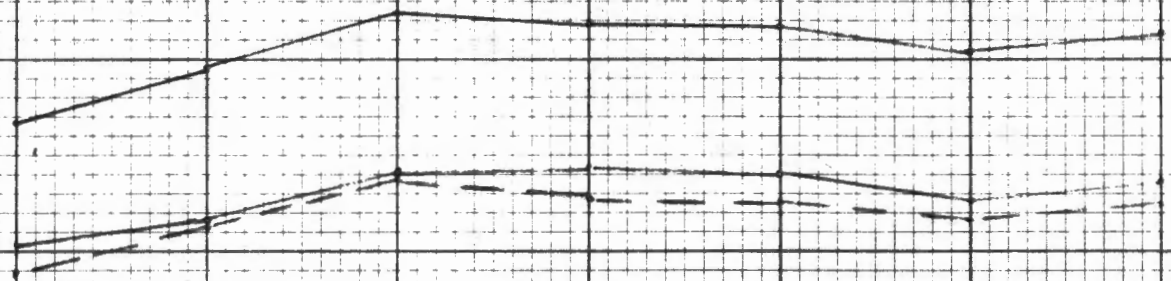
CHART 7(a)

Walberg-Thomas Open Mean 3.38

Walberg-Thomas Traditional Mean 2.81

Schools	A	B	C	D	E	F	G
5→4 point	2.51	2.58	2.71	2.72	2.70	2.64	2.69
DiVesta Conversion	2.45	2.55	2.69	2.64	2.64	2.58	2.63

CHART 8



3.

On 5 pt. scale

5 → 4

DiVesta

2.

1.

127.

CHART 8(a)

Walberg-Thomas Open Mean = 3.38

Walberg-Thomas Traditional Mean = 2.81 Baseline

Elementary Schools

	A	B	C	D	E	F	G
DiVesta Conversion Means	2.45	2.55	2.69	2.64	2.64	2.58	2.63
5→4 points	2.51	2.58	2.71	2.72	2.70	2.64	2.69
On 5 points	2.84	2.98	3.12	3.09	3.09	3.02	3.06

of the schools are not changed by reducing the 5-point weighting to the 4-point weighting rather than using the DiVesta method. No alteration in the relative positions of the schools is made when the scale reduction is carried out by either method. The DiVesta method, however, must be considered to give the more accurate results. cf DiVesta, 1954.

Summarizing the results obtained, we find that the schools of Halifax County fall well above the traditional school as imagined by the secondary school teachers and slightly below the mean LeGendre found for schools in Cape Breton, though two individual schools fall above that mean. But with respect to the traditional classroom in the United States as researched by Walberg and Thomas, Halifax County schools fall well below the mean for the traditional classrooms.

Measuring the implementation of individual practices

From the Master Teachers (traditional school) testing, the scores for the Pavan-LeGendre measures were recorded in ascending order to provide a baseline to which the results of the Halifax County testing could be measured for a more meaningful result. The baseline was charted

and the means of the questions for Halifax County were positioned question by question in order to identify the aspects in which Halifax County schools differ from the imagined traditional school. The Cape Breton means of the questions were also placed on the Chart. Chart 9, pages 131, 132 and 133. Then t-scores were tabulated for each question. Charts 10, 11 and 12, pages, 134, 135 and 136. A significant spread of scores can be noted from the chart but t-scores will verify the level of significance of the spread.

By empirical observation and t-testing, practices obtaining high scores on the Pavan-LeGendre Halifax County testing relative to the scores for the traditional school were found and listed. Chart 13, page 137. By empirical observation and t-testing practices obtaining high scores on the LeGendre Cape Breton testing relative to the scores for the traditional school were found and listed. Chart 14, page 138. These are practices in which Nova Scotia Schools are more open than the traditional school as imagined by the Master Teachers.

The practices obtaining significantly low scores from Pavan-LeGendre Halifax County testing are listed in

CHART 9

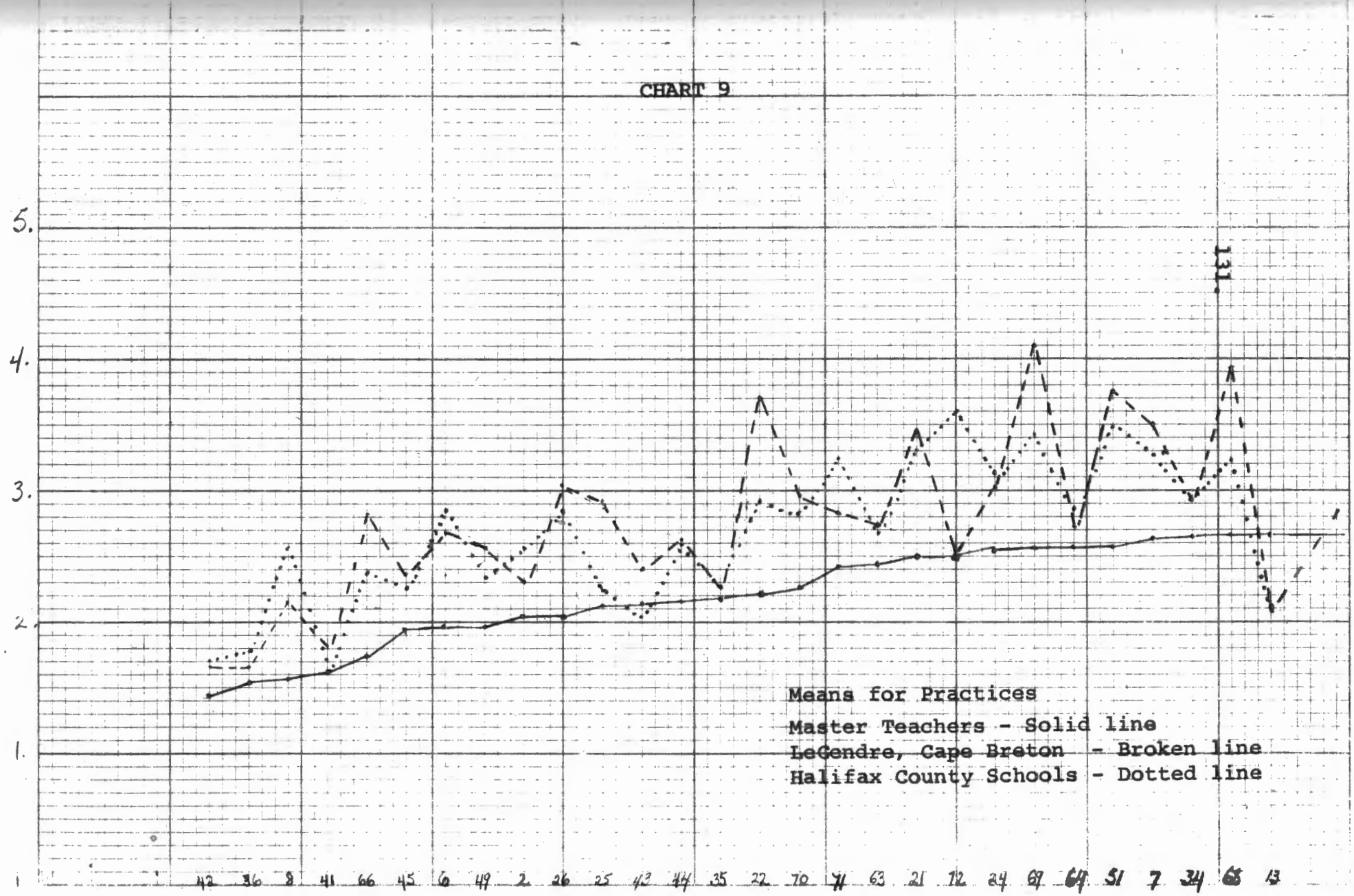

5.
4.
3.
2.
1.
131
Means for Practices
Master Teachers - Solid line
LeGendre, Cape Breton - Broken line
Halifax County Schools - Dotted line
42 36 8 41 66 45 6 49 2 26 25 43 44 35 22 70 11 63 21 12 24 69 64 51 7 34 65 13

CHART 9 (continued)

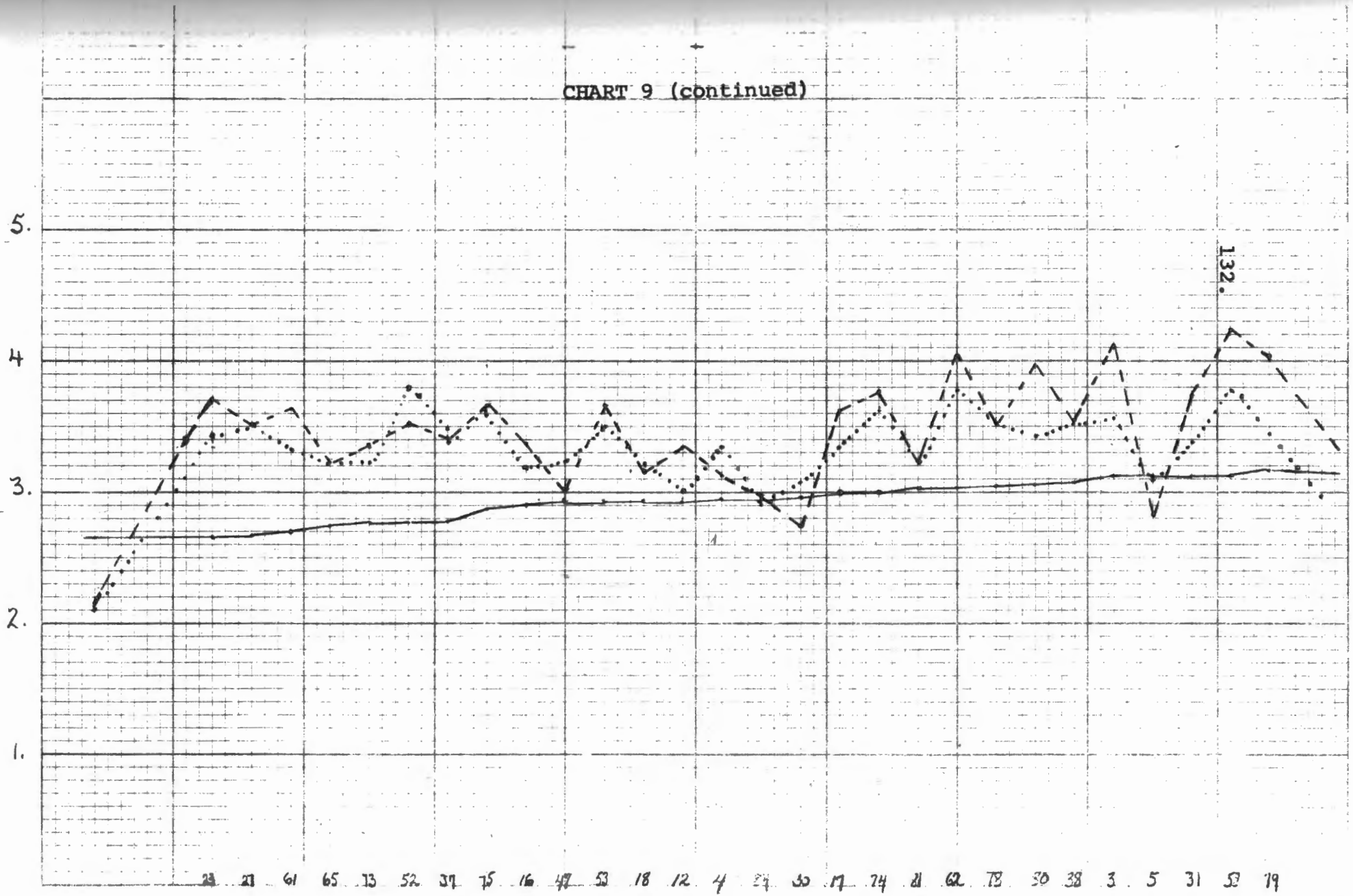


CHART 9, (continued)

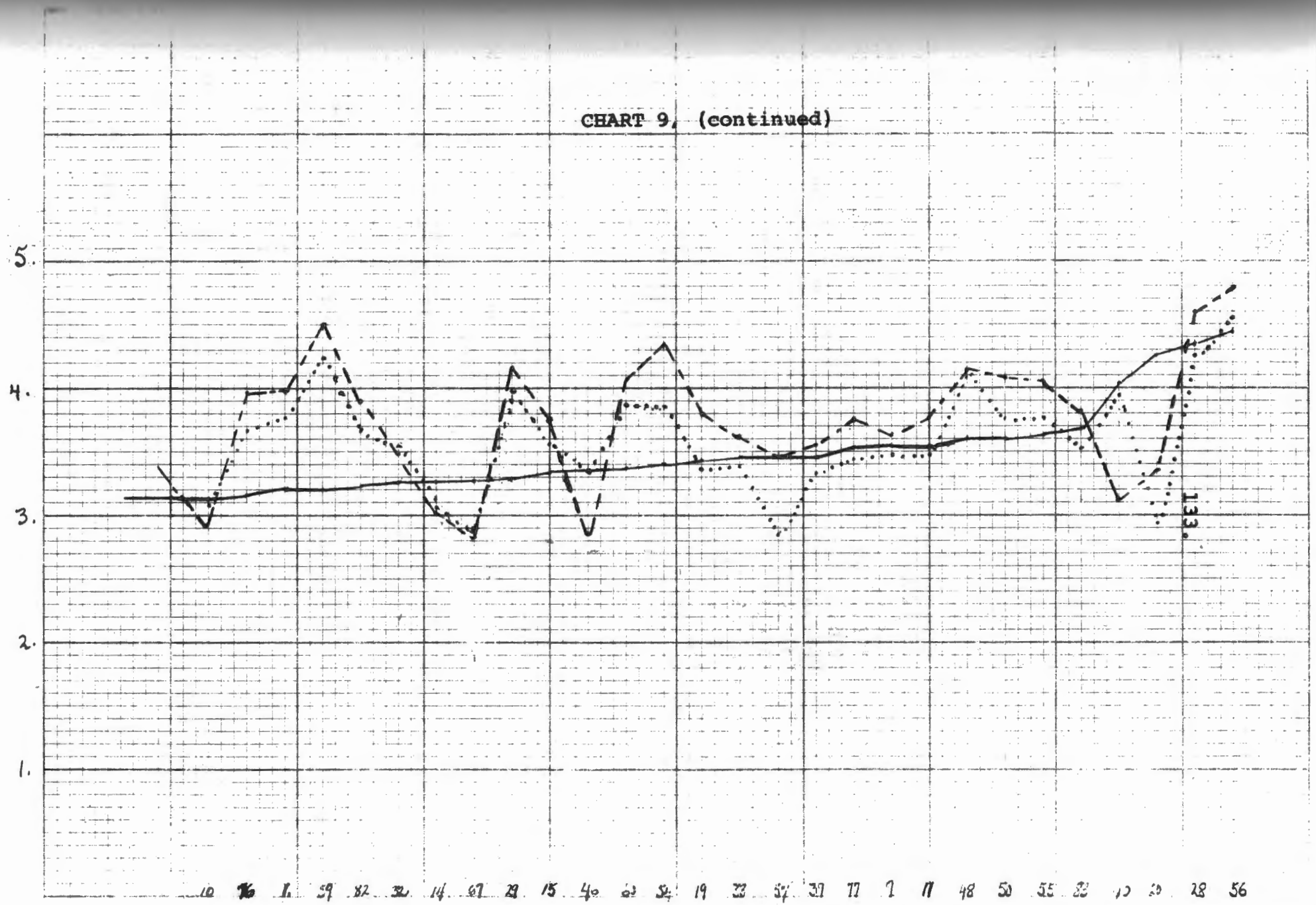


CHART 10

T-scores between Pavan-LeGendre Master Teachers (traditional school) and Halifax County elementary schools testing.

1	3.5040	29	3.5115	57	2.4224
2	2.9115	30	.4766	58	3.3949
3	1.9797	31	1.4203	59	4.6052
4	2.0982	32	1.4894	60	.0563
5	.0469	33	.4263	61	2.8240
6	4.4799	34	1.7260	62	3.8520
7	3.3966	35	.5178	63	1.0874
8	5.3435	36	1.6331	64	1.2696
9	.2920	37	3.1201	65	2.6849
10	.3804	38	2.3965	66	3.3163
11	.2308	39	1.0513	67	1.9306
12	.4146	40	.2700	68	2.5143
13	2.1839	41	.1224	69	4.5334
14	.6611	42	1.7289	70	2.8846
15	1.2994	43	.5738	71	4.2016
16	1.7109	44	2.6473	72	6.4552
17	1.6690	45	1.8012	73	1.9474
18	1.2261	46	.0000	74	3.0454
19	.3136	47	1.7182	75	4.1599
20	4.4776	48	3.0353	76	2.4012
21	3.3239	49	1.4411	77	.5125
22	3.9430	50	.7898	78	2.8469
23	3.7241	51	4.3648	79	2.9197
24	2.4869	52	4.4136	80	1.6584
25	1.3104	53	3.1995	81	.9819
26	3.4150	54	2.3834	82	2.8447
27	4.6670	55	1.2906	83	1.0585
28	.3170	56	.6079	84	.1291

CHART 11

T-scores between LeGendre Cape Breton and Halifax County elementary testing.

1	1.9354	29	2.4529	57	3.2702
2	1.8678	30	2.3093	58	3.2909
3	3.2594	31	2.5835	59	2.0525
4	1.6212	32	.3591	60	1.6464
5	1.9003	33	1.9677	61	7.8605
6	.9566	34	.1444	62	1.9202
7	1.8372	35	.9852	63	.3140
8	2.7079	36	1.0185	64	.8534
9	1.1990	37	.2316	65	.2147
10	1.0369	38	.0000	66	2.4070
11	2.1143	39	1.8031	67	.3203
12	2.7048	40	4.6327	68	4.1766
13	.1461	41	1.8032	69	4.7619
14	.9181	42	.3259	70	.8971
15	1.5765	43	2.1986	71	2.6407
16	1.3636	44	.2033	72	7.7247
17	1.9159	45	.7052	73	1.0217
18	.2439	46	3.4925	74	1.1435
19	2.4008	47	1.4693	75	.2272
20	1.6659	48	.1466	76	2.7597
21	.7534	49	1.4637	77	2.7265
22	5.3534	50	2.0229	78	.1651
23	1.2987	51	2.1571	79	3.4934
24	.3531	52	1.6129	80	3.5536
25	2.9947	53	1.5827	81	.1504
26	1.2440	54	3.0012	82	1.8837
27	.0748	55	.9868	83	2.3558
28	3.2618	56	2.6402	84	.3939

CHART 12

T-scores between LeGendre Cape Breton and Master Teachers (traditional school) testing.

1	4.7447	29	5.5843	57	.0000
2	1.6079	30	1.2312	58	6.2500
3	4.7123	31	3.8148	59	6.5856
4	.9169	32	1.3029	60	4.3942
5	1.5416	33	1.0504	61	2.7536
6	3.6772	34	1.9469	62	5.2851
7	4.7065	35	.4643	63	1.3469
8	3.6926	36	.9933	64	.7398
9	.6234	37	3.7634	65	2.7700
10	1.0742	38	2.5928	66	4.8813
11	1.4771	39	.4201	67	2.2346
12	2.2186	40	3.8852	68	5.6419
13	2.4186	41	1.2755	69	8.1426
14	1.3566	42	1.4150	70	3.7373
15	2.7522	43	1.1786	71	2.2850
16	2.9504	44	2.6609	72	.3217
17	3.5589	45	2.2150	73	2.8879
18	1.1052	46	2.7762	74	3.7281
19	1.4938	47	.7537	75	4.3859
20	2.9353	48	3.1561	76	4.4181
21	4.0349	49	2.7147	77	1.4792
22	8.6705	50	2.2966	78	3.0030
23	5.1481	51	6.5989	79	6.5573
24	2.4483	52	3.4738	80	4.4152
25	3.8113	53	4.9076	81	1.2055
26	4.7277	54	4.1994	82	4.0683
27	4.7701	55	.6384	83	.7361
28	2.2238	56	2.5411	84	.1742

CHART 13

From the Halifax County (Pavan-LeGendre) elementary schools testing, the practices obtaining significantly high scores were the following:

1, 2, 6, 7, 8, 21, 22, 23, 24, 26, 27, 29, 37
44, 48, 51, 52, 53, 58, 59, 61, 62, 65, 66, 68,
69, 70, 71, 72, 74, 75, 76, 78, 79, 82

cf Appendix H page 210 for questionnaire containing these practices.

CHART 14

From the LeGendre Cape Breton testing results, the practices obtaining significantly high scores were the following:

1, 3, 6, 7, 8, 15, 16, 17, 21, 22, 23, 25, 26, 27, 29, 31, 37, 38, 44, 46, 48, 49, 51, 52, 53, 54, 56, 58, 59, 60, 61, 62, 65, 66, 68, 69, 70, 73, 74, 75, 76, 78, 79, 80, 82

cf Appendix H page 210 for questionnaire containing these practices.

Chart 15, page 140. The practices obtaining significantly low scores on the LeGendre Cape Breton testing are found in Chart 16, page 141. These are practices in which Nova Scotia schools are not as open as the traditional school as imagined by the Master Teachers.

In each of the seven Halifax County schools, the mean was found for each practice on the Walberg-Thomas administration and recorded. The overall mean for each question was tabulated. The overall mean from the United States Traditional Classroom for each practice was tabulated in ascending order to give a baseline for a more meaningful interpretation of the results of the Halifax County administration. Chart 17, pages 142 and 143. The solid line on the chart indicates the United States Traditional mean for each practice, the broken line indicates the United States Open overall means for each practice on the teacher questionnaire, and the dotted line represents the Walberg-Thomas Halifax County overall mean of each practice. By inspection, practices were selected that appeared significantly high on Chart 17. These practices are listed on Chart 18, page 144. The practices that appeared significantly low are listed on Chart 19, page 145.

CHART 15

From the Halifax County (Pavan-LeGendre) elementary schools testing, the practices obtaining significantly low scores were the following:

13, 19, 20, 40, 57, 67

cf Appendix H. page 210 for questionnaire containing these practices.

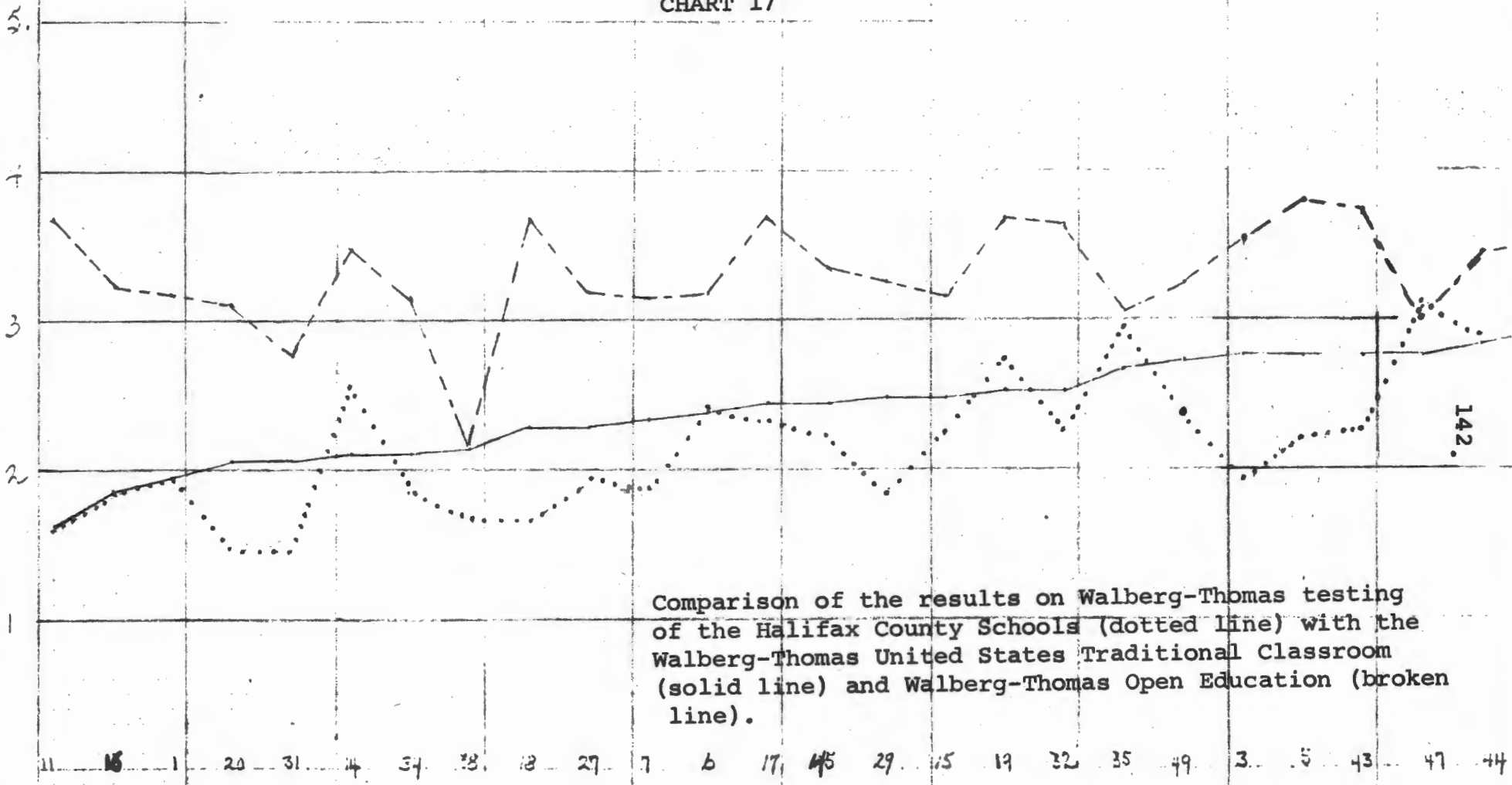
CHART 16

From the LeGendre, Cape Breton administration the practices obtaining significantly low scores were the following:

13, 20, 30, 40, 46

cf Appendix H page 210 for questionnaire containing these practices.

CHART 17



Comparison of the results on Walberg-Thomas testing of the Halifax County Schools (dotted line) with the Walberg-Thomas United States Traditional Classroom (solid line) and Walberg-Thomas Open Education (broken line).

CHART 17 (continued)

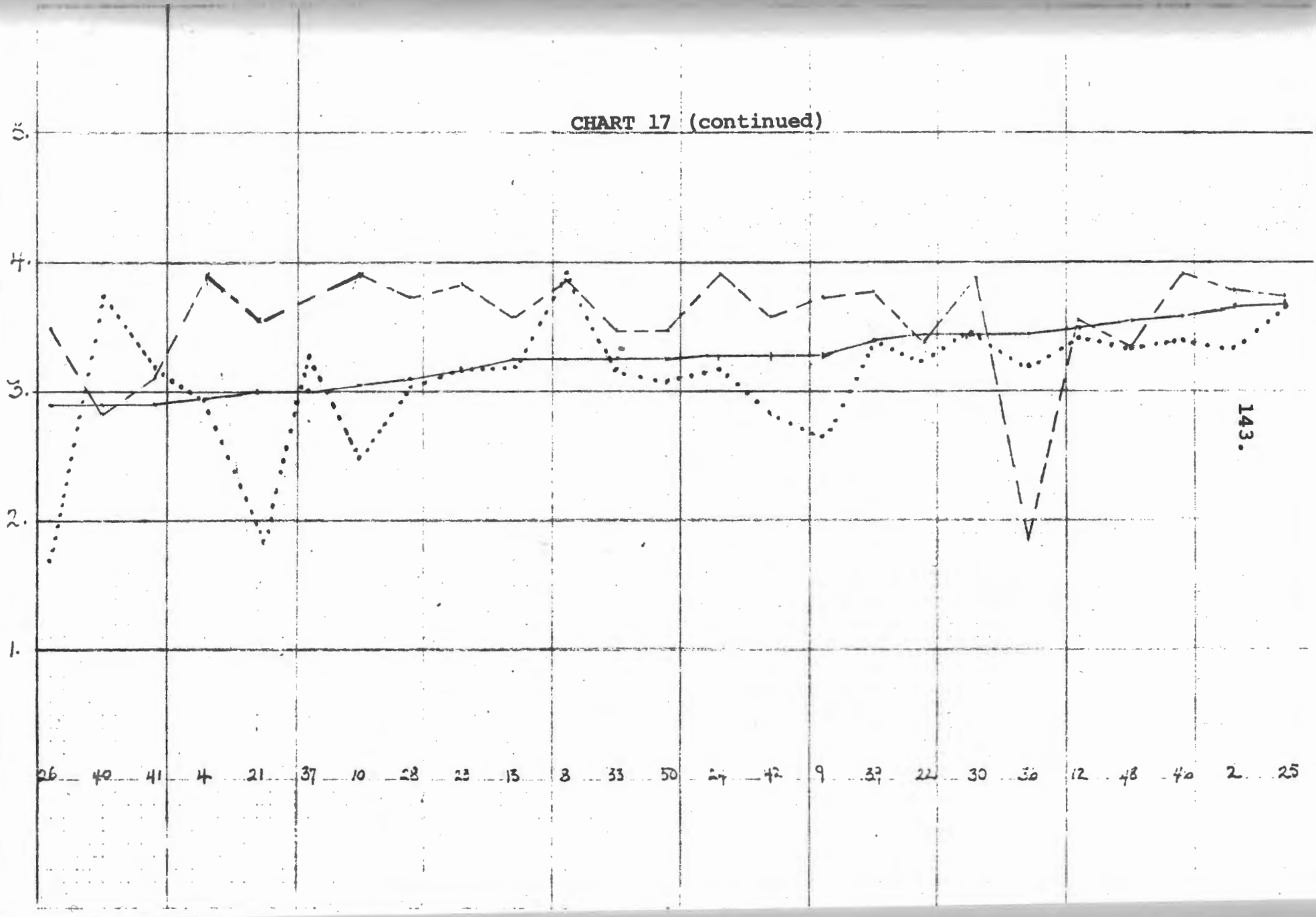


CHART 18

From the Walberg-Thomas Halifax County elementary teachers administration, practices obtaining high scores were the following:

14, 35, 37, 40, 41, 47, 50

cf Appendix F page 205 for questionnaire containing these practices .

CHART 19

From the Walberg-Thomas Halifax County elementary teachers administration, the practices obtaining significantly low scores were the following:

3, 5, 7, 9, 10, 18, 19, 20, 21, 26, 27, 29, 31, 38

cf Appendix F page 205 for questionnaire containing these practices.

There were no t-scores tabulated for this part of the testing.

The mean of each practice of each school was charted with the United States Traditional Teacher questionnaire results, and the United States Open Education teacher questionnaire results for comparison. By viewing each of the seven schools, we observe the position of each in relationship to the openness of the United States educational practices and the United States traditional classroom. Appendices K to Q contain the charts for Schools A to G, page 217 to page 229.

Conclusion

In using the two instruments, Pavan-LeGendre and Walberg-Thomas, we find the averages of the Halifax County seven schools are marginally lower than those scores in Cape Breton. The significant spread of the means of the schools on the LeGendre questionnaire is difficult to interpret since the spread is not so significant as the results on the Walberg-Thomas questionnaire. Both the Pavan-LeGendre Cape Breton and the Walberg-Thomas Halifax County results fall above the traditional as imagined by the Master Teachers, but Halifax County falls below what is considered by Walberg-Thomas to be traditional. This may be attributed to the fact to what is considered open differs in the two countries, or it may be attributed to the fact that traditional as imagined was more traditional than in the schools as it presently exists. What is clear is that Halifax County schools, and by implication, the schools in Cape Breton, are more open than what traditional schools were imagined to be, but less open than what traditional schools are a few miles to the south of us. We find ourselves betwixt and between, therefore we can conclude that, in a very real sense, Halifax County schools

are a sort of traditional school. The variations in the schools, however, indicate the possibility that movements toward openness are not precluded.

Analysis of practices which are higher or lower than the traditional schools on each of the two measures should provide guidance as to those areas in which we in Nova Scotia are "ahead" and those in which further work is necessary.

From the evidence presented, it would appear the schools are not as open as many people believe them to be as seen from the contradiction on the practices. It appears that there is need for some form of "advisory system" similar to that of EDC, (Nyquist and Hawes, 1972, pp. 70, 71) a form of leadership to direct and encourage teachers and principals toward openness.

Financing seems to be one problem in the furtherance of open education. This is a fact as evidenced from the results of practices number twenty, dealing with libraries, and number forty, dealing with physical education, from both the Cape Breton and Halifax County testings. Results also reveal that teachers in Cape Breton and Halifax County are strong on grouping, the horizontal

feature of open education. Provisioning was found to be a real problem in the Nova Scotia schools as both principals in Cape Breton and teachers in Halifax County are aware of this.

The analysis of the Pavan-LeGendre into the two subquestionnaires "open concept" and "good teaching" raises the question whether openness has been narrowly enough defined.

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APPENDIX A

Promotion Policies, 1968

Promotion Policies

(Statement issued by Hon. G. J. Doucet, Minister of Education, September 24, 1968)

A basic principle of the comprehensive system of education is the provision of a range of school programs and courses sufficiently varied to meet the needs of people of all types, all levels of ability and all fields of interest.

If the schools are to provide successful and satisfying education for 90% or more of their students, a number of major changes will be necessary in the attitude and activities of administrators, teachers and students. One vital area in which such change and development must take place is that of teaching methods, techniques and strategy. This area includes the evaluation of student progress and methods of promotion of pupils from stage to stage throughout the school system.

A Promotion Policy Committee, established by the Deputy Minister of Education, has now made its report. After study by the Department of Education, the report was presented to the Nova Scotia Teachers' Union and the Nova Scotia Association of Urban and Municipal School Boards for consideration, and it has now been approved by these organizations.

The Promotion Policy Commitee was formed because of a general concern about the rate and manner of student progress through the grade levels of the education system. The duty of the committee was to investigate present promotion practices and their effect on the progress of pupils in the schools of the province.

In a series of meetings the committee examined records, reports, statistical projections and other data concerning problems related to promotion policies and practices.

In its investigation the committee was struck by the gap between stated policies of local school systems and their practices. Statistics presented to the committee showed a high percentage of pupils repeating grades. This continual failure with the resultant high dropout rates is causing a substantial wastage of human talent.

As a result of its study, the committee concluded that existing promotion policies and practices need thorough re-examination.

In its report the committee unanimously recommended that certain general principles should be regarded as essential to an adequate educational program. These principles rest on the acceptance of the basic premise of the comprehensive school system that

> as a consequence of an early and continuing identification and evaluation of each pupil's needs, capabilities, aspirations and achievements a child should acquire in the elementary schools, in a maximum of eight years, right attitudes, basic skills, and information which will enable him to acquire knowledge at the secondary school level;

and that

> in the secondary schools provision must be made for an orderly progression through programs suited to the individual interests, abilities and needs of pupils.

The principles relating to promotion policy and practice recommended by the committee and now

approved by the Minister of Education are:

1. Changes in the learning opportunities available to children rather than changes in organizational procedures alone are required to improve the present situation. Improvement should involve changes in teacher attitudes, improved instructional methodologies and practices, together with enlightened and flexible administration.

2. Repetition of grades by pupils should be the rare exception rather than accepted practice.

3. Promotion policies and practices should result in continuous progress of all students so as to provide maximum benefit to each in accordance with his aspirations, needs and abilities. While promotion should remain a local responsibility, it must be characterized by maximum flexibility so as to ensure orderly, continuous progress of pupils through suitable programs of studies within the same system or when transferring from one system to another. Unnecessary repeating of (a) grades, (b) courses, (c) materials or portions of work already mastered should be avoided.

4. Promotion policies and practices must rest on

(a) acceptance of students as they are, with all their individual differences;

(b) teaching adapted to these differences rather than designed to remove them.

In the light of these recommendations the Nova Scotia Department of Education asks local boards, administrators and teachers

1. to examine present local promotion practices to discover whether they adhere to the approved principles given above;
2. to establsh a program whereby the local promotion practices will be examined on a continuing basis in order to ensure that they are continually in accord with developing promotional policy.

The educational process should be seen as an integrated whole in which identification of needs and abilities, provision for meeting those needs, and evaluation of each student's achievement, on a continuous basis, are considered indispensable and inseparable parts.

In line with the promotion policy principles set forth, the following guide lines have now been approved:

(1) Beginning in June, 1969, Grade 11 provincial examinations will be made optional at the individual decision of students and parents.

(2) Grade 11 students will receive a record of marks in every course completed. They may receive either a local or a provincial pass certificate upon the satisfactory completion of stipulated requirements.

(3) Pass certificates of Grade 11 and 12 may be obtained by the satisfactory completion of stipulated requirements in any order and at any time.

(4) Courses from the university preparatory, general and business education programs may be combined for pass certificates.

(5) A certificate entitled 'High School Equivalency Certificate' may be issued by the Minister of Education upon the presentation of valid criteria showing that an individual merits it.

APPENDIX B

A Philosophy of Continuous Progress Education by the Elementary Curriculum Committee Halifax County 1969

A PHILOSOPHY OF CONTINUOUS PROGRESS EDUCATION

We teachers and educators believe that all children must be allowed to develop to the fullest possible extent their physical and mental potentials commensurate with his needs and interests. Accepting individual differences of children, it is recognized that all children cannot develop their potential in the same way and in the same time. Development is an individual process and is the product of the learning.

This approach is in line with the Nova Scotia Continuous Progress Plan as announced by the Minister September 1968. Continuous Progress in Education takes into account the abilities and attitudes of each individual, allowing him to proceed at his own rate of continuous learning, without repeating materials or parts of programs already mastered. It allows him to reach his maximum potential in the developmental process of learning at a rate best suited to himself.

Our youth must be educated so that their intellectual development and basic knowledge will allow them to perceive, understand and adjust to a rapidly changing environment. Their social development must be such that they will be able to form valid and reliable interpersonal relationships as members of a group or as individuals. The development of a stable personality founded on a strong self-image is necessary to meet these environmental demands and must be a large part of the educational process. Problem solving activities, where children learn to do by doing, will develop self-reliance, independence, values and attitudes consistent with the Canadian democratic process and culture. At the same time, physical development in co-ordination, strength and manual dexterity developed to its fullest will ensure physical fitness so necessary for the mental fitness needed in the child's total educational pattern. Competent skills in all phases of communication are a must if learning is to take place.

Continuous progress is primarily an organizational method. However, its philosophy exceeds the bounds of grades, courses of study, promotion, failure, etc. This is consistent with the present promotional policy in the Province of Nova Scotia. We recognize and accept the individual differences of children. We must, therefore, plan a program to meet and challenge these differences so that each child may achieve his fullest potential of growth. The philosophy of Continuous Progress is based on the following principles.

(a) Each child is an individual with his own rate and pattern of growth and therefore should develop his skills to the limit of his ability, rather than conform to an average standard.

(b) Because a feeling of success is essential for normal growth, each child should experience success in his progression through school.

(c) Because school programs designed for the masses create frustration in the slower and superior learner, curriculum should be challenging to the individual child's abilities.

(d) Because a pupil's achievement that approximates his ability is satisfactory progress, then repeating material that has already been mastered, through "non-promotion," must be eliminated.

SETTING THE STAGE FOR CONTINUOUS PROGRESS

Following are a few excerpts from an address delivered to the S.R.A. Non Graded Institute at Etobicoke in 1966 by Dr Maurie Hillson, Professor of Education, The State University of New Jersey.

"The realities of the extensive explosion of knowledge are crowding in on the schools. Research discloses that individuals differ profoundly from one another in abilities, capacities and the willingness to be taught. This information imposes the idea that we need different ways of doing things with different kinds of learners.

The current scene concerning elementary school organization is marked by attempts to break with the customary self-contained classroom and graded school concepts. Both the explosions of knowledge and the scientific knowledge about how children learn combine to indicate that in elementary schools what we do indeed need is not one in which a teacher attempts to teach all things to all children in a self-contained classroom.

Three innovative patterns of grouping that seem to be gaining favour over the customary ones are departmentalization, non-graded schools and the use of team teaching. In 1955-56, 66 per cent of all elementary school classrooms were self-contained. Only 20 per cent were somewhat departmentalized and a scant 2 per cent were wholly departmentalized. In the last ten years between 1956 and 1966 the erosion of the self-contained classroom has been steady. It represents, in 1966, only 34 per cent. In 1965-66, 49 per cent of the classrooms were using some departmentalization and those wholly departmentalized represent 4 per cent.

In the period 1956-66 there was a tremendous growth in the non-graded school organization. From 6 per cent in 1955 the non-graded

organization had risen to 26 per cent by 1966. Those schools that are totally non-graded, rather than partially, rose from 1 per cent to 5 per cent in the same period.

Team teaching reflected the sharpest rise in the ten year period. Only 5 per cent used team teaching in 1955-56; 85 per cent did not. But by 1965-66 30 per cent used team teaching and 53 per cent did not.

Where School Organization Is Heading

The trends are clear. Departmentalization, semi-departmentalization, non-graded education, team teaching, and variations of all these, are very much on the current scene in elementary school organization.

The present day innovations aim at the creation of opportunities for education which deal with the realities of individual differences based on the findings from research on how pupils live, learn and grow.

The directions toward change are clearly present on the scene today. Egg-crate schools are being replaced by modular flexible arrangements. Team teaching, although it varies in operation as well as in interpretation, is a part of the every day idiom of the teacher. Grade delineations as a mark of vertical progress are disintegrating. Individualization and individual progress are becoming key themes of all organizational modifications.

The current scene reflects the desire to deal with individual learning abilities of children. It aims at eliminating the concept of pre-packaged material to which the child is fitted. Moreover, it poses the question "What at this moment is this child capable of doing and what do we need to make him more capable?" The resulting patterns of organization are necessarily based on continuous individual progress rather than on grades.

If one were asked to simply describe the school we are moving toward, it might be done by saying that it will be one that uses team teaching and

learning with a whole host of non-graded bases derived from the diagnosis of various learner needs and competencies. It will be a school that puts the child central in the learning action. It will be a school that encompasses the idea of flexibility to the point of encouraging the pupil to proceed at his own rate in each subject.

The school that reflects the organizational innovations of today by necessity will gear its instruction to individual students. This does not mean teaching always at a one-to-one ratio. It means a sophistication in grouping ideas as well as the commitment to individual contract learning on the part of the student under guidance and a programme of teaching students how to be self-learners.

The current trends clearly indicate a school wherein every resource will enhance the desire on the part of the learner to learn. It will be made up of activities that increase the competence of individuals to do much of the learning for themselves.

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Factors Contributing to the Successful Establishment of the Continuous Progress School.

1. The Principal of the pilot school must be the dynamic force in such a program, and must therefore be willing to experiment and give guidance and leadership to teachers and pupils involved; to provide the public relations with the community which will ensure the support and success of the project. He must be thoroughly familiar with the philosophy and aims of Continuous Progress.

2. There must be strong interest on the part of the teacher for non-gradedness.

3. There must be careful study by the staff and principal of other plans in existence. Teachers must do local research, that is, read about and visit centres where non-gradedness is in operation.

4. Much effort must be put forth to explain and promote the plan to parents.

5. Very careful step-by-step planning is necessary.

6. Ungradedness should be attempted as a pilot project in not more than one school per Sub-system and everything possible should be done to make it successful before general adoption.

7. The project should move slowly at first, with not more than two grades being involved in each school undertaking the pilot project.

8. The project must have the approval and support of the Municipal School Board and the local Board of Trustees.

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Problems or Difficulties that will have to be Overcome Before Implementation.

1. Grade level expectation habits of teachers.

2. Reluctance of traditionalists among teachers to try something different.

3. Providing understanding of the project to the parents.

4. Problems of designing an appropriate report card or reporting procedure.

5. Overcoming the grade level expectations of parents.

6. Dealing with the parents whose children need more time in the primary division.

7. Continuous influx of new pupils and parents unfamiliar with the plan.

8. Overcoming doubts and fears of teachers.

9. Problems of grouping and classifying children.

10. Persuading the Municipal School Board and local Boards of Trustees to approve the new plan.

11. Provincial reports requiring grade designations.

Recommendations to School Districts Contemplating the Introduction of Continuous Progress

1. Take time to get full parental understanding and consent.
2. Get the co-operation of all teachers and staff members.
3. Move slowly and evaluate every move.
4. Introduce the plan gradually as conditions permit.
5. Study other non-graded plans in operation and adopt what can be useful.
6. Don't do it simply to be doing something new; it takes desire and hard work.
7. Above all, understand what are you doing and why.
8. Use the conference method or narrative method of reporting pupil progress.
9. Get Municipal School Board and local Board of Trustees support in the early stages.
10. Never use the word experiment.
11. Don't be discouraged by disappointments or setbacks.
12. Have a plan for explaining the system to parents new to the district.

*****

Steps Taken in Halifax County to Date (mid January 1969)

1. Request of Superintendent of Schools, Mr K.W. Perry, for the establishment of an Elementary Curriculum Committee for Halifax County, composed of supervisory staff and six non-teaching principals of elementary schools from each of the six sub-systems, and a representation from the office of the Inspector of Schools.

2. The Elementary Committee, during the school year 1967-68, studied the Continuous Progress Plan and books on the subject were made available to each member. In the Spring of 1968 Mr Gerald Simister, a Master's student at Dalhousie University who was preparing his thesis on the subject, addressed the group.

3. The Committee met again in the fall of 1968 to continue discussions on continuous progress. Dr Agnes Matthews, of the New Brunswick Department of Education, conducted a seminar in December 1968. Also in December 1968, two of the Curriculum Consultants, members of the Committee, were sent with the approval of the Municipal School Board to visit two centres in Ontario to study systems in use there.

4. The Curriculum Consultants, in January 1969, gave a full report of their visit to Ontario. The three Curriculum Consultants were then requested by the Committee and the Superintendent to prepare an outline giving reasons why a change might be desirable, philosophy, aims and procedures to be followed in establishing a pilot project. This report to be submitted in late January to the Curriculum Committee for their consideration.

*****

Reference Books

It is suggested that the following publications be made available to the teachers of schools selected to undertake a pilot project in Continuous Progress.

Non-Graded Elementary School . . . . . Goodlad and Anderson

Change and Innovation in Elementary School Organization . . . . . Dr. Maurie Hillson

A Practical Approach to the Non-Graded School . . . . . Lee Smith

Upgrading the Elementary School . . . . . Dufay

Nongrading in the Elementary School . . . . . John Tewksbury

Team Teaching - A Bold New Venture . . . . . Beggs

How to Organize a Non-Graded School . . . . . Successful School Management Series (Prentice-Hall)

Articles:

A number of articles dealing with Continuous Progress have been printed recently in the following publications:

School Progress
School Administration
Elementary School Journal
Canadian Education Digest

It is suggested that there should be no press releases made by any member of the Committee on plans for implementation until the Committee feels the time is appropriate, that is until procedures as outlined above have been carried out. Information to the press will then be issued jointly by the Superintendent and Inspector of Schools.

APPENDIX C

THE SENIOR HIGH SCHOOL

GUIDELINES

FOR

PROGRAM DEVELOPMENT

Department of Education
Halifax, Nova Scotia
1973

CONTENTS

INTRODUCTORY STATEMENT ON PUBLIC EDUCATION

The goals of any system of public education should reflect the basic goals of the society that the system serves. In a society based on ethical and social concepts that stress the importance of the individual and inter-relationships of individuals, it is unlikely that any brief statement of ultimate goals of education would receive universal acceptance. However, there appear to be some basic assumptions from which generally acceptable aims for public education can be derived.

Social Setting

It is generally accepted that Western democratic society depends for its continuation and strength on the ability of its people to make wise choices among alternative courses of action. To a considerable degree, the major problem for each person in a rapidly changing society is to become the kind of person who knows how to act in the present and the future; in brief, the important things are perceiving, behaving, becoming; not learning what to do solely in terms of the past. One of the major responsibilities of public education in such a setting is to help each person to achieve his maximum personal and social maturity, both for his own benefit and for the contribution he may make to individuals and institutions in the society in which he lives.

Political-Legal Setting

Any society must function under a set of laws related to social, economic and political conditions.

Our Western political democracy guarantees government representative of and responsible to the people; and it provides for an officially recognized opposition. However, while political democracy may be defined as government by the people, in the interest of all the people, with guarantees of civil and religious liberty to every citizen, it is probably accurate to view Western democracy as a step in the right direction rather than an ideal state balancing intelligence with moral judgment, a system of values with dynamic impulse, a sense of individual well-being with a recognition of the rights of others. The fulfilment of such a concept requires freedom of thought and of speech, access to facts presented without censorship, the right to assemble and to worship freely, combined with a sense of the unity and worthiness of all mankind. But the unlimited exercise of liberty can lead to its destruction, so along with each freedom must go commensurate responsibility.

The exercise of any liberty must be subject to the processes of law and of humanitarian self-control -- the paradox of true liberty -- before men can call themselves free. There must be a right direction in its use, it must be primarily in the social interest, it must be morally defensible, and it must not transgress the freedom of others.

The prime measure therefore of any free society is not found in any theory of general social welfare but in the moral integrity of each person. Our society, both ideally and practically, must become more and more the product of the moral integrity of all its members -- a continuing development originating from man's struggle for self-realization through the ages, tempered by a recognition of the rights of all men.

Principles

Among the basic considerations that should be the foundation of any statement of aims for public education are:

1. the importance of the individual -- his dignity, his intrinsic worth and his potential for learning and improving;
2. within the limits of our social and legal systems, which are dynamic and changing, freedom of the individual to live his own life, with due regard for the rights of others;
3. reasonable balance between needs of the individual and provisions to enable the state to meet its responsibilities with respect to the general welfare of the community.

Aims

A major responsibility of the public education system is its responsibility to the individual. It follows then that the system ought to provide an opportunity for each person to develop according to his talents, abilities and needs. At the same time, since the complete development of the individual can best be achieved in a community of other free individuals, education must assist in the development of each person as a good citizen in his relationships with all other people.

This major responsibility cannot be undertaken successfully by public education alone. It must be shared by other public and private institutions and services in the community, with all possible co-ordination of programs and services consistent with the objectives of the organizations concerned.

In this setting, public education in Nova Scotia should help:

1. to develop the capacities of each person to think effectively, communicate thought, discriminate among values, make accurate judgments, and acquire an analytical attitude toward change;
2. to prepare each person to use these abilities to examine critically and objectively the exercise of authority and influence in society through its administrators, laws and practices;
3. to develop a belief in the freedom and dignity of every person, freedom of thought and inquiry, and freedom to participate and express oneself in the day-to-day activities of society;

4. to prepare each person to live with diversity and change so that he may be better equipped to evaluate public issues, draw conclusions and act with discrimination and prudence;

5. to enable each person to acquire the knowledge, skills and attitudes necessary to live and to earn a living;

6. to develop in each person an understanding and appreciation of the aesthetic aspects of life so that he may enjoy and participate in them;

7. to bring about understanding and practices essential to the maintaining of sound physical and mental health;

8. to enable each person to develop a better understanding of himself;

9. to enable each person to appreciate the unity of mankind and to have a feeling of compassion for all humanity irrespective of differences arising from political structure, race or religion.

THE SCHOOL PROGRAM

Development of the Program

In order for the public school program to be developed in terms of the aims set forth in the introductory statement and to accommodate individual differences among pupils, provision should be made for:

1. courses adapted to the needs, interests and abilities of all the children in the school system;

2. policies and procedures that encourage continuous learning and continuous progress of all the pupils;

3. learning materials (developed locally when necessary) suited to the needs, interests and special abilities of each pupil insofar as it is possible to provide such materials.

The elementary school should provide flexible programs, and where necessary special programs, through which all pupils may progress continuously. Very few pupils should be in the elementary program for more than eight years. The majority should be in the program for seven years, a few for eight and a small number for six.

Most pupils should complete junior high school in three years and senior high school in three years. In senior high school some exceptions may occur when pupils change programs or kinds of courses; or when after completing one or two years of senior high school they enrol in a vocational school program.

NOTE

While the preceding pages apply equally to elementary, junior high and senior high school, the remainder of this document applies to the senior high school. Similar papers are being prepared to provide guidelines for continuing development of elementary and junior high school programs. It is intended that the initial drafts of these statements will be revised on the basis of study and recommendation by interested individuals and groups.

SENIOR HIGH SCHOOL

In the three years of senior high school two types of programs can be provided, from which combinations of courses may be used to make up individual pupil programs: High School Completion and Secondary Vocational.

From the total list of courses offered in any school system, the individual schools should try to provide patterns of courses appropriate to the ability and vocational aspirations of each pupil. The counselling and teaching staffs of the school should help each pupil to select appropriate courses to meet the pre-requisites of whatever post-school education, training or employment he is interested in, and help him to develop his potential as an all-round person.

Areas of Study; Development of Courses and Programs

The broad areas of study in the public schools may be identified as communications, social studies, science, arts, applied sciences. However, because of current pre-requisites for post-secondary programs of education and training, and the undesirability of requiring schools to adopt a particular pattern of organization, the Nova Scotia high school courses are listed in the traditional manner; i.e., English, French, geography, history, etc. Within this framework, schools may adapt and develop programs at a rate and in ways that they find suitable. Individual schools and whole school systems may develop integrated programs combining part of the broad areas listed above, if such patterns better meet the needs of particular groups of pupils.

The numbering of courses conforms to recommended nomenclature for information retrieval. An eight-digit system is used. The first two digits indicate the subject; the third digit indicates the type of program; the fourth, fifth and sixth digits identify the content of the course; and the last two digits indicate the year level at which the course is normally offered.

Courses that universities normally accept for matriculation are identified by numbers beginning with 0, other high school courses with numbers beginning with 1, and business education courses with 2. However, since each post-secondary institution has its own entrance requirements, "mixes" of courses for any pupil or group of pupils should be checked

carefully to ensure that they satisfy the requirements of the particular post-secondary education, training or employment that the pupil wishes to pursue.

Special enriched or advanced courses which some schools may offer should be numbered 0, with the designation "special". However, for internal records, a school may wish to designate a course such as PSSC Physics as 3. In any case, specific information about content should be entered in the pupil's record and transcript.

Vocational courses may or may not be numbered, depending on the nature of the course and the need for numbering these courses as they continue to be developed.

In the Program of Studies, which is revised annually, courses are identified by the subject name and three digits of the course number: the third digit, which identifies the type of program, e.g., 0 (university-preparatory) or 1 (other high school courses), and the last two digits, which indicate the year level at which the course is normally taken, e.g., English 011. However a pupil may take any course in any year, provided that the course is offered in the school, that the schools pre-requisites are met, and that it can be fitted into the pupil's timetable.

[On page 6 is a list of the high school completion courses included in the current issue of the Program of Studies.

On page 8 is a list of the vocational courses offered at present in the regional vocational schools.]

HIGH SCHOOL COMPLETION COURSES

Courses	1st year		2nd year		3rd year	
Accounting				211		212
Agriculture	010	110	011	111		
Art*	010	110	011	111	012	112
Biology	010	110			012	
Business and Consumer Education		210				
Chemistry			011	111	012	112
Clerical Practice						212
Earth Science			011	111		
Economics			011	111	012	212
English	010	110	011	111	012	112
						212
French	010	110	011		012	
Geography	010	110	011	111	012	112
Geology					012	
German	010		011		012	
Health & Physical Education	010	110	011	111	012	112
History	010	110	011	111	012	112
Home Economics*	010	110	011	111	012	112
Industrial Arts*	010	110	011	111	012	112
Latin	010		011		012	
Law						212
Mathematics	010	110	011	111	012	112
		210				
Music*	010	110	011	111	012	112
Office Procedures						212
Physical Science						112
Physics			011	111	012	112
Recordkeeping		210				
Secondary Industrial Education	010	110	011	111	012	112
Shorthand				211		
Shorthand and Transcription						212
Typewriting		210		211		

*These courses may be arranged so that a particular phase of each can serve as a full course; e.g., combinations of instrumental music or theory and music appreciation or choral.

This list should not be considered as complete or limiting. For example, within the broad areas of the two official languages, courses or combinations of units may be developed dealing with linguistics, media study, Canadian literature or related areas of special interest. While some aspects of drama are already part of the English and first-language French programs, it is probable that drama or theatre arts may be added to the list as an elective course. Other courses such as Spanish, Russian, oceanography, sociology, data processing, business organization and management may be developed on a provincial basis as electives in the future. Still other courses developed locally and approved by the local authority or the Department of Education may be used as credit courses for high school completion. As such courses are drawn up, they should be numbered consistently with the pattern suggested.

The Program of Studies for each school year contains information about all provincially-developed high school completion courses.

Accounting, Stenography and Clerical Courses

As part of the high school completion program, schools which have the facilities may offer majors and/or one-year intensive programs in accounting, stenography, and clerical areas. Details are carried annually in the Program of Studies.

REGIONAL VOCATIONAL SCHOOL PROGRAMS

Regional vocational school programs are designed to assist young people to enter occupations as productive citizens. The programs provide instruction in a variety of courses in vocational and related trade subjects as well as in the courses of the intermediate and secondary industrial education programs.

A vocational course is specific to an occupation or field of occupations. Each course is organized in terms of what occupational skills the student will be expected to attain and what knowledge he needs to master.

Related trade subjects consist of the fundamentals of communications, mathematics and science as these fundamentals apply to shop practice and the broad needs of an occupation. Identification of the relationships between such knowledge and shop practice is essential.

Intermediate industrial courses are offered to help meet the educational needs of students who may decide to enter a vocational course. Students are introduced to the skills and knowledge of a variety of occupations and related communications skills, mathematics, and science are learned in the context of shop practice. The intermediate industrial program is basically exploratory in its organization and purpose.

Secondary industrial courses are offered in some regional vocational schools in co-operation with local high schools and are accepted by the

high school as credit towards high school completion.

The courses must be of at least 120 hours' duration and should be designed to enable the student to understand some of the practical applications of knowledge and, as well, to explore educational requirements, occupational involvements and potential for the future in a given occupation.

VOCATIONAL COURSES OFFERED IN REGIONAL VOCATIONAL SCHOOLS*

(Each course includes instruction in the related mathematics, science and communication skills)

Architectural Services
Automotive Servicing
Beauty Culture
Bookkeeping
Brick and Tile
Business Education
Cabinet Carpentry
Carpentry
Commercial Accommodation
Commercial Art
Commercial Cooking
Data Processing
Dining Room Service
Distributive Services
Drafting - Architectural
Drafting - Mechanical
Electrical Appliance Repair
Electrical Construction Wiring
Electronics - Navigational Aids
Electronics - Radio and T.V.
Food Service Supervision
Forestry Mechanics
Foundry Moulding
General Mechanics
Heavy Duty Equipment Repair
Industrial Electricity
Industrial Instrumentation
Industrial Mechanics
Industrial Sewing
Machine Shop
Marine Diesel Repair
Marine Fishing
Meat Cutting
Metal Fabrication
Motor Vehicle Repair - Body
Motor Vehicle Repair - Mechanical
Nursing Assistant
Oil Burner Servicing
Photography
Plumbing
Quantity Cooking
Refrigeration & Air Conditioning
Retail Merchandising
Sheet Metal
Shipwright
Small Gas Engines
Stationary Engine Operator
Steamfitting-Pipefitting
Stenography
Stockroom Clerk
Welding
Intermediate Industrial Education
Secondary Industrial Education

An elective program in physical education may be offered where facilities exist.

Pre-requisites for admission to any vocational course and procedures prior to admission vary, depending upon the occupation or occupational area. Information on these matters must be obtained from the principal or counsellor of the regional vocational school in the area.

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*Not all courses are offered in all regional vocational schools.

MISCELLANEOUS CONSIDERATIONS

Modification or Enrichment of Courses

Schools may, indeed should, adapt the content of all courses to provide in a better way for successful and meaningful learning experiences on the part of their pupils.

With interested or talented students, schools may wish to award honours standing for exceptional work. In such cases, it is suggested that a performance level within the eigth and ninth stanines (approximately the highest 11% of the student scores in any given course) as determined by local evaluation be recognized as qualifying for honours.

Some students may elect an advanced-level course if such courses are offered in the high school in which the pupil is enrolled. Two kinds of such courses are possible: those developed by a school in such subjects as English, history, mathematics; and the "packaged" courses such as PSSC Physics, Chem Study Chemistry, and BSCS Biology.

Because only a small number of schools will wish to offer the latter type of course, talented or interested pupils perhaps may best be served by enrichment of the standard O-level or locally-developed courses.

Enrichment should not be confused with "too much, too soon" or by rewards for interest which are simply "more of the same kind of work to do".

Pupil Placement and Programming

Guidelines in the promotion policy approved by the Department of Education include these:

1. Changes in the learning opportunities available to children, rather than simply changes in organizational procedures, are required to improve the learning environment. Improvement should involve, as necessary, changes in teacher attitudes, and improved instructional methods and practices, together with flexible and enlightened administration.

2. Repetition of entire grades or levels by pupils should be the rare exception rather than accepted practice. Any repetition for relearning or reinforcement purposes should occur as a result of consideration at the time that each teaching unit is evaluated.

3. Promotion policies and practices should result in continuous progress through school by all students, so as to provide the greatest possible benefit to each in accordance with his aspirations, needs and abilities. While promotion should remain a local responsibility, it should also be characterized

by maximum flexibility to ensure orderly, continuous progress of pupils through suitable programs of studies within the same system or when transferring from one system to another. Unnecessary repeating of grades, courses, materials or portions of work already mastered should be avoided.

4. Promotion policies and practices must rest on

   (a) acceptance of children as they are, with all their individual differences,

   (b) teaching procedures adapted to these differences rather than designed to eradicate them.

Guidance and Counselling Services

Guidance and counselling services are essential throughout the whole school system. By the time pupils reach senior high school quite complete records should be available on the capabilities, achievement and aptitude of each pupil, along with other relevant and necessary information. Throughout the last two years of junior high school and the beginning of senior high, significant information can be recorded about the future plans of most of the pupils.

In addition to their usual counselling function, counsellors should ensure that pupils have necessary information about program options, course requirements and pre-requisites for various kinds of post-school education, training and occupations. Organized, regular consultation with post-secondary institutions and employers is essential. Then counsellors may ensure that pupils are offered a full range of guidance and counselling services. As more completely co-ordinated services are developed, with broader functions, involving health and social services when necessary, pupils should be better served in respect to the educational, vocational and personal aspects of counselling.

While some sources may suggest a minimum or an optimum pupil-counsellor ratio, it is equally important that classroom teachers become guidance conscious through the development of a team approach headed by the counsellor or counselling staff. If classroom teachers are aware of the requirements of post-secondary educational institutions, they can assist in advising students on course selection, and can provide the guidance staff with a wealth of useful information for more formal counselling situations.

High School Completion

General requirements for completion of the senior high school program are a minimum of 15 courses, with each full-time pupil usually taking no fewer than five courses in each of the three years.

With the increasing flexibility of course placement in these three

years, it is recommended that a minimum of three of the 15 credits should be for third-year or third-level courses. In special circumstances the school may permit pupils to enrol for fewer than five courses a year.

It is also recommended that the maximum number of full-credit courses taken by a pupil in any one year should normally not exceed six. There are some gifted and interested students for whom the maximum may be exceeded, but the interests of the majority of capable students can be met within the recommended maximum by enriched in-depth studies and approved school co-curricular activities.

Each course should involve a minimum of 120 hours per year. The 120 hours should be interpreted as 120 hours of school time. This is not a recommended maximum length; some courses may require more time.

When schools offer half-credit courses, care should be taken that there are related half courses that can reasonably be accommodated insofar as scheduling and credit are concerned.

Of the minimum of 15 credits for high school completion, three must be for courses in English. In addition, in Acadian schools three of the credits must be for courses in French for students whose first language is French.

Of the minimum of 15 credits, no more than six should be for first-year courses (designated as 010, 110, 210); and at least three should be of 012, 112 or 212 level.

It is strongly recommended that some credits in mathematics and social studies be included as part of the minimum total of 15.

In summary:

Suggested minimum per year: five course credits (with possible exceptions as mentioned above).

Suggested maximum per year: six course credits (with the maximum being exceeded by some gifted and interested students).

Three credits required in English.

Three credits required in French for students in Acadian schools whose first language is French, in addition to the three credits in English.

Each course credit involving a minimum of 120 hours.

A minimum of 15 full course credits required for high school completion.

Required and Elective Courses

Regulations 7 and 8 under the Education Act, as amended effective

January, 1973, list the instructional course areas which shall be and those which may be provided under the foundation program by municipal school boards and boards of school commissioners in the schools under their jurisdiction.

Within the total program offered by any school authority in its senior high schools, the only required course for pupils is English, except that French is required for pupils in Acadian areas whose first language is French.

Pre-requisites for Courses and Programs

Certain courses (such as mathematics, physics, Latin, German) normally require the successful completion of the previous year's course before the next year is attempted. However, pre-requisites may sometimes be modified as considered advisable in dealing with problems of individual pupil programming. For example, a decision may be made by the school staff that a pupil who has not successfully completed a course is capable of doing the next year's work or should be given an opportunity to attempt it.

Where provision can be made in the school schedule, pupils for whom it is necessary should be allowed to repeat a first-year course or part of a first-year course while taking second-year courses. The same arrangement should apply to combinations of second- and third-year courses.

Course Selection by Pupils

Within the established policies and procedures of the school, pupils entering senior high school may select from the courses offered by the school a variety of courses to satisfy the requirements for high school completion.

The school staff should assist the pupils to select courses that will help them to prepare for whatever post-secondary programs or activities they wish to pursue. Pupils must be aware of the entrance requirements of colleges and universities; the pre-requisites for nurses' training, nursing education, accounting courses at technical institutes and vocational schools; other organized programs of post-school education and training; and the general requirements of the world of work and of leisure now and in the future.

Beginning as early as possible in the total counselling process, pupils should be helped in making a continuous assessment of their scholastic potential and their actual performance in school. Before selecting courses, pupils should explore the options open to them and the consequences of choosing one course rather than another. In such exploration the best techniques of counselling should be used to ensure that pupils and their parents understand the possible restrictions imposed by each choice.

Whenever possible, school arrangements should permit pupils to transfer from one program to another or from one course to another when this

is in the best interests of the pupil and/or when it is requested by the pupil and his parents. When such transfers occur, every effort should be made to provide necessary supplementary instruction. In some cases pupils must understand that an extra year may be necessary to make up essential work that has been missed.

VARIETY OF POSSIBILITIES

The basic structure and procedures that have been described up to this point are intended to provide a broad setting in which school programs can be developed in local administrative units.

Programs

Because factors such as enrolment, equipment, time tabling may impose limitations on the variety and type of courses which may be offered in any one school, it is not reasonable to expect that all secondary schools will offer all the courses listed in the Program of Studies. Therefore for smaller high schools it is desirable that action be taken to determine what courses can be offered and what internal adjustments in courses can be made to meet the needs of the pupils. For example: grouping of pupils, with a variety of projects and assisted individual study, may be used where there is only one class; independent study with occasional tutorials may provide for pupils wishing to take a course which cannot be included in the timetable because of low enrolment; co-ordinated scheduling among schools where conveyance makes it possible may help to provide broader offerings for pupils; some honours-type courses could be centralized in one school, with pupils being conveyed to or boarded in the area.

With an increasing number of schools becoming involved in modification or enrichment of established courses, or in development of areas such as sociology, political science, oceanography and environmental studies, it is essential that certain procedures be followed so that local authorities and the Department of Education are kept informed. These procedures are outlined in the annual Program of Studies and other Department of Education publications.

Staff

Because the purposes, content, organization, procedures and methods of evaluation may differ substantially among various courses in a subject area, it is essential that the teachers in a particular course understand the total course outline (not just one year of the course), the kinds of pupils who will be taking the course, alternative approaches, and the most effective means of evaluation. To these ends, in-service education is essential in order to provide for continued sound development and to assist new or inexperienced teachers in working more effectively with their pupils. This is mainly a local responsibility, with enlightened supervision forming an essential part of the process.

Facilities

In planning program developments in any school or area, particularly in the introduction of new courses, it is important to ensure that the school has adequate facilities, equipment and supplies to offer the course with some prospect of attaining the desired objectives. If basic support material is lacking, it may be wise to defer implementation until the essential materials can be secured. In some situations regional planning for special courses will provide broader and more comprehensive programs.

EVALUATION

Because of more widespread emphasis in the public schools on individual differences, implementation of continuous progress procedures, more local curriculum adaptation and development, and flexible timetabling, the traditional content-recall type of examination is no longer adequate as a complete evaluative procedure. More comprehensive reporting on total student performance in terms of aims and objectives is essential. Any sound evaluative procedure should give appropriate emphasis to both the cognitive and affective aspects of the learning process.

Whatever evaluation system and method of reporting are used by schools, some post-secondary institutions may request certificates or transcripts that include numerical marks based on a maximum of 100 points. In such situations, schools using a different system of reporting should translate their system to a numerical basis so that the pupil or pupils concerned will not be penalized.

To help schools to develop better means of total evaluation, the professional staff of the Department of Education will on request provide information and advice on the changing nature of evaluation and evaluative instruments, and will assist in development of appropriate procedures.

Because of the rapid accumulation of knowledge and the developing demands of a technological society, the content and organization of public education programs and the materials required will not remain static. "Courses" will continue to change. Consequently, evaluative instruments and procedures will have to remain flexible and be subject to adjustment. Continued attention must be given to this aspect of education.

DEVELOPMENTAL FACTORS AND TRENDS

The fundamental purpose of the Nova Scotia senior high school program is to provide a setting in which all our young people may have an opportunity to acquire an education suited to their individual needs.

No document on such a dynamic process as public education can be

definitive (nor should it attempt to be). Neither can the document in itself guarantee equality of opportunity, because of two major operational characteristics:

First, despite broader, more flexible provincial guidelines and greater local autonomy in curriculum development, some schools and school systems will embark on more program modification and development than will other similar schools and school systems. In both situations the differences in development may be justified. As a result, the nature of program development will vary from school to school.

Second, despite the broader scope for activity provincially and locally, there may be real limitations that will affect development at any time. These factors include size of school or school system, staff and teaching load, facilities.

Of great import to school programs are trends or developments such as the provision of open areas in schools, the concept of the "free" and "open" school, team teaching, differentiated staffing, subject promotion, etc. The adoption of any of these plans or procedures is basically the responsibility of the local school authority.

It is essential that careful planning precede any major innovations. The planning should include an element of flexibility so that if new arrangements do not prove to be successful, they can be modified or discarded with as little dislocation as possible in the school program. Novelty for novelty's sake is not a sound criterion for educational change. Department of Education staff members will provide consultative advice or information on request to assist in program planning insofar as staff and resources are available.

The Program of Studies and Department of Education guidelines will continue to set forth a basic foundation program which can be offered in any school system. School authorities that wish to do so will still be able to use this basic program. Others may go much beyond the basic concept and still remain within the policy and procedural guidelines of the local authority and the regulations under the Education Act.

In the final analysis, the major criteria for sound program development in any school system are not size and wealth but rather the imagination, industry, initiative and expertise of the professional and administrative staff, supported by the local school authority.

APPENDIX D

Excerpts from the Graham Report. Nova Scotia Royal Commission on Education

f. Continuous Progress and Individualized Instruction

There seems to be considerable support throughout Nova Scotia for the concepts of continuous progress and individualized instruction. Reasons for this support, however, were many, varied, and sometimes confused. Some briefs seemed to view continuous progress as a means of alleviating the pain and suffering of the slow learner, while others apparently viewed it as a device for facilitating progress of able students through the schools. Some spoke of continuous progress and individualized instruction as though they were synonymous, while others saw them as distinct and separate one from the other. Many briefs advanced pedagogical arguments, such as that success and not failure stimulates learning and that each individual is unique and requires a unique educational programme, while a few stressed the financial advantages of decreasing the incidence of retardation. There was nearly unanimous condemnation of alleged administrative ineptitude as a barrier to implementation of true programmes of continuous progress and individualization. Examples often cited were the failure to provide sufficient and appropriate textbooks and other learning materials, and the rigidity of the junior high school system.

Teachers, in particular, warned that continuous progress and individualized instruction could never be successful without provision for smaller classes, more abundant learning resources, more specialist teachers, more intelligent administration, and greater public understanding and support. Many citizens, and some teachers, doubted if these programmes could be effectively introduced without massive retraining of the teaching force. Most agreed that there is more talk than action about continuous progress and individualized instruction and that much of what passes for continuous

progress in Nova Scotia could more accurately be described as the substitution of a multiplicity of tests for a few examinations. One senior educational official commented privately that continuous progress in many schools means that the teachers progress continuously through the textbooks, while little attention is paid to whether the students progress at all.

g. Libraries

Whenever continuous progress and individualized instruction were mentioned, a call for improved libraries soon followed. Indeed, few improvements were mentioned as often, especially by teachers, as the sine qua non of educational advance. Libraries were often referred to as learning resource centres, apparently to emphasize the belief that libraries should include films, tapes, records, audio-visual equipment, and a variety of materials for display and study. Mention was occasionally made of electronic systems for storage and retrieval of information.

Again, there was no unanimity as to what all this means. There were proposals for the establishment of adequate libraries in every school, others for the provision of regional centres, perhaps based upon the high schools, and still others for mobile services. There was great interest in the coordination and integration of all library services--school, public, and university--and some support for the inclusion of libraries in public service centres based upon schools. Professional librarians seemed to doubt the advisability of housing public library services in school buildings, but they strongly supported coordinated and integrated services. It was interesting to observe that professional librarians, whether associated with public or school libraries, stressed that school library services

It has become increasingly clear that the schools must develop a flexible, adaptable programme through which students can proceed steadily, each at the rate appropriate to him or her, without being required either to return to the beginning or to plunge forward at a predetermined rate without having mastered or understood what he or she is doing. It has also become increasingly apparent that if the schools are to attempt seriously to provide the most efficient and most effective education possible for each student they must get out of the classification and labelling business.

We believe that continuous progress or nongradedness is an essential reform if an opportunity for efficient participation in education is to be provided to all students. The struggle for acceptance of this doctrine in theory is already won. The Nova Scotia Department of Education has committed itself to this reform, and most school boards in the province have made at least some effort to introduce the concept of continuous progress into their schools. The problem is now the more practical one of how to translate theory into practice. In spite of many honest efforts, it is questionable how much real change has taken place. One senior official of the Department of Education put the matter succinctly: "In some schools, continuous progress means that the teachers progress continuously through the books."

Much of the difficulty arises from confusion as to the precise meaning of continuous progress and as to how to fit it into a school system in which practice, custom, expectations, and the very school buildings

reflect a longstanding, unquestioned acceptance of the graded system. Some people have understood the quarrel to be not with the underlying philosophy of the graded system, but with the length of the grades. They have therefore concluded that the demand for reform would be satisfied if the prescribed programme were subdivided into smaller units, and if students, in effect, were graded several times a year rather than once. Others have concluded that the problem is simply one of terminology and that therefore continuous progress can be introduced simply by substituting some other word, such as level or year, for the offensive term "grade" and proceeding otherwise very much as in the past.

Possibly the most serious misconception has been that the attack upon the graded system has arisen simply from an objection to making it difficult for students to proceed through school. In this view, continuous progress means the abandonment of all standards of achievement. To those of this persuasion, continuous progress involves no significant change either in philosophy or in method but merely implies a general conspiracy that everyone shall grade at the end of every year, regardless of whether he or she has learned anything.

We suggest that the last-mentioned view is the most serious misconception because it defeats and distorts the primary purpose of continuous progress, which is that students will no longer move from point to point or from level to level in accordance with a predetermined time-table without having thoroughly learned what they had set out to learn, but will rather advance to the next stage of their work when they have well and thoroughly completed what comes before, regardless of the day of the week or the month of the year and regardless of whether other students who began at the same time are moving more rapidly or more slowly than they. Simply to pass everybody at the end

of every year would be to achieve continuous motion but not continuous educational progress; while such a practice would perhaps do less damage to those who, under the graded system, are forced to repeat their year's work, it would leave the great majority caught up in the same inefficient and ineffective practice as in the past.

Another curious interpretation has resulted from the confusion between continuous progress and the abolition of examinations. Not surprisingly, the reliance upon examinations to determine whether students pass or fail results in considerable stress among students, which would not necessarily be undesirable, if it were to some good purpose, as well as in the distortion of the entire functions of teaching and learning into a continuous struggle to pass tests. The undesirable effects of the use of examinations to determine progress through school under the graded system, coupled with the equally obvious unfairness and inaccuracy of the selection process, have led to frequent criticism directed at the use of examinations in schools. Even during the heyday of the graded system, there was constant criticism of examinations, and attempts were often made to find other means of evaluating school progress.

While we do not wish to champion the use of examinations, we believe that those who, over the years, have identified examinations as the chief reason for dissatisfaction with the performance of schools have frequently failed to distinguish between a technique and a function. There is nothing inherently wrong with examinations. They can and do serve some very useful purposes, not only in education but in business, industry, and government service.

The terrible and indefensible effects of examinations upon schools and their students were the result, not of something intrinsically wicked in examinations, but of the use to which they were put and the philosophy of those who used them.

In schools, examinations were administered to the entire student body at a set time, without reference to the students' readiness or state of preparation. Final and irrevocable decisions were made on the basis of the results. Sitting for any given examination would be students who, as they and their teachers well knew, could not possibly hope to do well, others who would simply be demonstrating a mastery they had already demonstrated convincingly and often, and many others whose tenuous grasp of the skills and material being examined was such that their success or failure was largely a matter of chance. Yet, in any meaningful sense, only two possible judgements could result: either the student passed, or he or she failed. This use of examinations to serve the mindless purposes of the graded system was indeed folly. The substitution of some other technique of evaluation to serve the same purpose would improve matters little. Nor does this misuse of tests and examinations detract from their value, when properly designed, as diagnostic tools or as means of determining mastery, provided they are attempted when there is reason to suppose the student is prepared to demonstrate such mastery.

It has become customary over the years in most schools to use the word "examination" to describe tests assessing the student's grasp

of large portions of the prescribed course, and in particular tests of mastery of the year's programme, while using the word "test" to describe similar means used to assess mastery of units of work completed over shorter periods of time. The distinction is, of course, an arbitrary one. It serves a useful purpose within a given school but in no way alters the essential similarity of the two. Nevertheless, many schools have proudly announced that they have abolished examinations and have substituted for them series of tests: the results of these tests are averaged, or combined according to some other formula, and are used for precisely the same purpose that was originally served by the much abused and rejected examination. The effect of this reform, as most students soon perceived, is not to abolish examinations but to increase their number, thereby keeping students in a constant state of tension and accentuating the impression that schools exist not to educate, but to prepare their students for a continuing series of judgements.

Continuous progress cannot be introduced by changing nomenclature, by establishing thirty-six or forty-eight grades in place of thirteen, or by abolishing examinations. On the other hand, continuous progress could be possible, using any nomenclature or any system of dividing a school programme into units, and using tests and examinations, provided they are used intelligently for a valid purpose. Continuous progress implies a change in attitude and in organization--primarily a change in attitude. Changes in nomenclature and technique, although they may have merits of their own, will not, by themselves, make continuous progress possible. What is required is really

quite simple, although difficult to achieve--a change in attitude on the part of the schools so that they concern themselves only with effective and efficient education of their students, and not with a system of classification.

Certainly attitudes cannot be changed by legislation or directive alone. Accordingly we recommend that:

III/42/7 The Department of Education should re-affirm its commitment to continuous progress in concrete terms. The regulations should forbid the use in reports, organizational and administrative structures, or educational literature and statements of such terms as grade, grading, passing, failing, promotion, and repeating. The Department should develop evaluation and reporting procedures based entirely upon the progress achieved by students toward attainment of the student-related goals of education in relation to well defined standards. The regulations should require all schools within the province to proceed immediately to develop plans for the implementation of continuous progress. The Department should make necessary changes in administrative and other support services, and in particular in arrangements for distribution of texts and other resources, to ensure that organizational and administrative arrangements do not ignore or discourage efforts to convert schools to continuous progress.

III/42/8 A major and universal programme of in-service training for teachers should be initiated to make certain that all teachers, and in particular all principal teachers and others responsible for leading and advising teachers, understand the concept of continuous progress and the changes in attitude and practice necessary to bring it about. Similar programmes should be included in pre-service teacher training.

If teachers are to introduce continuous progress--and no one else can--they must be given clearer and firmer guidance, training, and support.

III/42/9 A parallel programme should be developed and implemented to acquaint parents and the public generally with what is meant by continuous progress and what it entails in terms of change within the schools.

Parents, like teachers, have had experience only with the graded system. Although many submissions made to us are clear indications that there is widespread public support for the principle of continuous progress, there is also abundant evidence that parents generally do not entirely understand the concept. Many are uneasy or even greatly upset by reports of school progress expressed in any terms other than those of grades successfully completed. Many fear that continuous progress will mean that their children can and probably will pass through school without learning anything at all. It is a truism in education that no educational change is likely to succeed without public support. A major effort must be made to gain that support for the concept of continuous progress.

b. Personalized, Individualized, and Other Modes of Instruction

Discussion of continuous progress leads naturally to the subject of individualized instruction. In some briefs presented to us, it was evident that, to many people, continuous progress and individualization of instruction are one and the same thing. To a certain extent, this point of view is valid. Continuous progress implies that each student will proceed through the educational programme at a rate appropriate to him or her, and to this extent it also clearly implies that each individual will be considered as an entity in himself or herself rather than simply as a portion of a class or a grade.

On the other hand, individualized instruction is the term frequently

APPENDIX E

Synonyms for Continuous Progress

by

John Dopyera in Current Research and Perspectives in Open Education
1972

If one is to determine the extent to which one program is alike or different from the other, or to determine consequences of programs for children, specificity becomes essential. Referential specificity is often something a researcher must impose upon a phenomenon to be examined. This is especially true when studying programs, because program planners and implementers often use labels in a very non-precise way. Many programs which are, in fact, different are called by the same name, or described in the same way. Also, many programs which are referentially the same are often described in different terms.

One is usually in a position of inferring what a program is from the label, rather than knowing what a program is by some objective description. In this regard, let's look at some of the potential synonyms for open education: British Infant School, individualized instruction, informal education, Bank Street Model, child development model, EDC model, responsive day care, responsive environment, continuous progress, family plan, integrated day, schools without walls, free school, Summerhill school, architecturally open schools, British primary school, open plan school, Leicestershire plan, integrated curriculum, non-graded schools, ungraded system, progressive education, affective education, Parkway program, life-adjustment education, open learning environments, vertical grouping, humanistic education, North Dakota plan, infant school, Nuffield math, activity centers, informal teaching, learning centers, flexible model, street academies, responsive instruction, unobtrusive teaching, flexible curriculum, interrelated studies, Piaget-based curriculum, experiential approach and unscheduled or unstructured day.

Each person could double this list off the top of his head. Each of these terms is assumed to have some relationship to some version of the concept of openness. But, in any given program, which version of openness is it, and what is it the children are encountering?

Regarding any particular program, or program type, how do you know without visiting, or even after visiting, how open it was; how it compared with any other open school; or for that matter, how it compared with any other quasi-open or convential school?

As many of you know, some open education terms are used interchangeably, some are not used at all regarding a program which may actually be the same in most respects as another program which has a similar label. And, often, these terms are used to designate programs which in virtually no way resemble programs otherwise described as open.

APPENDIX F

Walberg-Thomas Questionnaire

QUESTIONNAIRE

often	often	occasion-ally	never	To what extent do the following practices occur in your whole school? Consider the whole school, not only one classroom or teacher when completing the questionnaire.
				Texts and materials are supplied in class sets so that all children may have their own.
				Each child has a space for his personal storage and the major part of the classroom is organized for common use.
				Materials are kept out of the way until they are distributed or used under the teacher's direction.
				Many different activities go on simultaneously.
				Children are expected to do their own work without getting help from other children.
				Manipulative materials are supplied in great diversity and range, with little replication.
				Day is divided into large blocks of time within which children, with the teacher's help, determine their own routine.
				Children work individually and in small groups at various activities.
				Books are supplied in diversity and profusion (including reference, children's literature).
				Children are not supposed to move about the room without asking permission.

very often	often	occasion-ally	never	
				Desks are arranged so that every child can see the blackboard or teacher from his desk.
				The environment includes materials developed by the teacher.
				Common environmental materials are provided.
				Children may voluntarily make use of other areas of the building and school yard as part of their school time.
				The program includes use of the neighborhood.
				Children use "books" written by their classmates as part of their reading and reference materials.
				Teacher prefers that children not talk when they are supposed to be working.
				Children voluntarily group and regroup themselves.
				The environment includes materials developed or supplied by children.
				Teacher plans and schedules the children's activities through the day.
				Teacher makes sure children use materials only as instructed.
				Teacher groups children for lessons directed at specific needs.
				Children work directly with manipulative materials.
				Materials are readily accessible to children.

often	often	occasion-ally	never	
				Teacher promotes a purposeful atmosphere by expecting and enabling children to use time productively and to value their work and learning.
				Teacher uses test results to group children for reading and/or math.
				Children expect the teacher to correct all their work.
				Teacher bases her instruction on each individual child and his interaction with materials and equipment.
				Teacher gives children tests to find out what they know
				The emotional climate is warm and accepting.
				The work children do is divided into subject matter areas.
				The teacher's lessons and assignments are given to the class as a whole.
				To obtain diagnostic information, the teacher closely observes the specific work or concern of a child and asks immediate, experience-based questions.
				Teacher bases her instruction on curriculum guides or textbooks for the grade level she teaches.
				Teacher keeps notes and writes individual histories of each child's intellectual, emotional, physical development.
				Teacher has children for a period of just one year.
				The class operates within clear guidelines made explicit.

very often	often	occasionally	never	
				Teacher takes care of dealing with conflicts and disruptive behaviour without involving the group.
				Children's activities, products, and ideas are reflected abundantly about the classroom.
				The teacher is in charge.
				Before suggesting any extension or redirection of activity, teacher gives diagnostic attention to the particular child and his particular activity.
				The children spontaneously look at and discuss each other's work.
				Teacher uses tests to evaluate children and rate them in comparison to their peers.
				Teacher uses the assistance of someone in a supportive advisory capacity.
				Teacher tries to keep all children within her sight so that she can make sure they are doing what they are supposed to do.
				Teacher has helpful colleagues with whom she discusses teaching.
				Teacher keeps a collection of each child's work for use in evaluating his development.
				Teacher views evaluation as information to guide her instruction and provisioning for the classroom.
				Academic achievement is the teacher's top priority for the children.
				Children are deeply involved in what they are doing.

THEMES IN OPEN EDUCATION

Provisioning for Learning. The teacher provides a rich and responsive physical and emotional environment.

Diagnosis of Learning Events. The teacher views the work children do in school as opportunities for her to assess what the children are learning, as much as opportunities for children to learn.

Instruction - Guidance and Extension of Learning. The teacher acts primarily as a resource person who, in a variety of ways, encourages and influences the direction and growth of learning.

Humaneness - Respect and Openness and Warmth. The teacher promotes an atmosphere of warmth, openness, and respect for one another.

Reflective Evaluation of Diagnostic Information. The teacher subjects her diagnostic observations to reflective evaluation in order to structure the learning environment adequately.

Seeking Opportunity to Promote Growth. The teacher seeks activities outside the classroom to promote personal and professional growth.

Assumptions - Ideas about Children and the Process of Learning. The teacher's assumptions about children, the process of learning, and the goals of education are generally humanistic and wholistic. Teachers are aware of and respect the child's individuality and his capacity to direct his own learning.

Self-Perception. The teacher is a secure person and a continuing learner.

APPENDIX H

The Pavan-LeGendre Questionnaire
as sent to the Elementary teachers.

The Pavan-LeGendre Questionnaire
as sent to the master teachers was
captioned by the following ----

TO WHAT EXTENT WOULD YOU EXPECT EACH OF THESE PRACTICALS TO EXIST IN A TYPICAL TRADITIONAL GRADED SCHOOL?

CONSIDER THE WHOLE SCHOOL, not only one classroom or teacher when completing the questionnaire.

QUESTIONNAIRE

To what extent do the following practices occur in your whole school?

Consider the whole school, not only one classroom or teacher when completing the questionnaire.

very often	often	occasionally	never	
				Each child is placed appropriately in the school programme according to his achievement, interests and ability.
				Pupils' suggestions are encouraged and accepted as guides to curriculum design.
				Planning for a field trip is regarded to be as important a learning situation as the field trip itself.
				Tests contain some new problems that the child may solve by a reorganization of his present knowledge.
				Equipment, materials, space, encouragement and time are available for students to have art, music, and drama experiences, both formal and informal.
				Students are able to move from one activity to another without first seeking teacher approval.
				Good use is put to scrounged items, and supposed "junk".
				Four or more well stocked activity centers are open to each pupil in his "homeroom". (Such activity centers could include; math, reading, writing, science, social studies, crafts, construction, store, painting, sand and water, etc...)

very often	often	occasionally	never	
				Beyond the intellectual challenge of an activity, the teachers also plan to encourage sufficient expression by students.
				Equipment, materials, space, encouragement and time are available for students to have an opportunity to do simple research using the facilities of the school.
				When facts are taught, they are eventually grouped to identify a concept.
				Curriculum guides increase the number of learning opportunities available, rather than promote identical experiences for many students.
				Unscheduled time blocks each day are available so pupils can determine usage of time.
				Teachers may take an active and equal part when they join a working group of students.
				Students who want to attempt mastery of materials considered difficult for them, are encouraged to try.
				Pupils show interest in activities of others, without the need to imitate.
				The teachers understand and employ appropriate behavior modification techniques.
				Individualized learning kits and learning activity packages, both commercially and locally prepared are available within the school for use.
				Public comparisons such as room-star charts, reading-levels-completed charts are avoided.
				There is available for use a good-size classroom or a good-size school library.
				In addition to intellectual development, the following is systematically recorded in a cumulative record file; emotional development such as, informal notes on how a student perceives and reacts to a learning task, on ability to accept praise or criticism, on expressions of hostility, etc...
				Pre-tests precede learning activities to ensure the student needs the learning experience.
				The student and the teacher's evaluation of a student's progress are communicated to the parent through a conference.
				Series of items that must be mastered in a required order are avoided.
				During a school week, a student, joins a large group of students for demonstrations, television programs, etc.
				In addition to intellectual development, the following is systematically recorded in a cumulative record file; physical development such as movement skills, co-ordination, and aesthetic development such as samples of art work and use of "spare"time.
				Commercially prepared and "home-made" educational games are available
				Students unable to master a problem on their own can seek help from the teacher and other students.

3.

very often	often	occasionally	never	
				Mistakes are expected and used as a positive force in the process of solving problems.
				Some students in each class appear to be playing.
				The cycle of diagnosis, prescription and evaluation is employed by the teacher.
				Kinesthetic, visual and auditory approaches are used when appropriate.
				Tests are constructed with emphasis on concept application rather than factual recall.
				Groups are labelled, on the basis of the specific objective to be reached.
				A conference between the student and the teacher is held prior to reporting to parents.
				Each pupil keeps a dated sheet of his own progress. He studies the folder he keeps, to observe his growth.
				Beyond the intellectual challenge of an activity, the teachers also plan to foster beauty and creativity.
				The teachers understand the levels of thinking involved in the cognitive domain and challenge each student at the appropriate level.
				Emphasis is on how answers are reached, rather than the actual answer being correct.
				Equipment, materials, space, encouragement and time are available for students to have physical education classes and a variety of other movement experiences.
				During a school week, a student will be in a group based on such a criteria as sex or cross age teaching (usually involves older students teaching younger students).
				The student records his own progress in his record book. Words and/or pictures describes the important events of his day.
				During a school week, a student pursues an individual interest on a solitary basis.
				During a school week, a student forms part of a group of 4 to 8 persons active in manipulation of materials.
				Students evolve the rules governing their behavior in school.
				Teachers avoid having students working from "cover to cover" in a text or work book.
				When using manipulative materials, students' language indicates they are inferring, and formulating some hypotheses.
				Students who are underachieving are especially praised when completing a task well.
				During a school week, a student will be in a group based on such a criteria as, physical size or chronological age.
				Although a spurt or lag in one developmental area may be the cause for a placement review, all developmental aspects must be considered before a placement change is made.
				Beyond the intellectual challenge of an activity, the teachers also plant to include enough physical activity for comfort and motor

very often	often	occa-sionally	never	
				In addition to intellectual development, the following is systematically recorded in a cumulative record file; social development such as, comments on ability to relate to peers and adults, reports from social workers, observations of a student's participation in groups of various sizes, etc..
				Teachers encourage pupils who are interested to dramatize stories.
				Reports to parents are in terms of accomplishments achieved and areas that need a concentration of effort by the student.
				Post-tests identify if objectives of previous instruction have been reached.
				Aggressive activity such as grabbing, pushing and hitting are discouraged.
				Children who have the potential can complete their elementary education in less than seven years.
				Pupils' work is displayed and consists of dissimilar items put up for the purpose of sharing work, not for the purpose of comparison.
				Placement decisions are made by all teachers who have direct contact with the pupil.
				Pupils' work displays show variety, not conformity.
				Books are available in each room, for each discipline, to accommodate a spread of reading achievement in the disciplines.
				The homeroom teacher systematically observes each student to determine his needs.
				During a school week, a student will be in a group based on such a criteria as, interest or friendship.
				Teachers encourage students to set their own goals for their work.
				Evaluative data is used as feedback in recycling students through unmastered learning activities.
				Monthly meetings are held by the faculty to review current student placement.
				Math and science learning activity centers encourage children to observe classify, measure and record data.
				Appropriate anecdotal records which profile the achievement level are kept on each student.
				Teachers' records for individual pupils are qualitative in that the teacher attempts to pinpoint the exact nature of the student's learning accomplishment.
				Curriculum guides specify behavioral objectives rather than subject-matter content.
				Workbooks are cut up to provide functional skill sheets.
				Students in a room can be observed working on many different levels of difficulty.
				High-interest, low vocabulary and oversize print materials are available when needed.
				Pupils for whom it is advantageous can change groups during the school year.
				Groups are formed to enable members to reach a specific objective.

very often	often	occasionally	never	
				Reporting is used to indicate the achievement of a student and to align the necessary co-operative efforts to minimize under-achievement.
				Learning activities which call on pupils to converse with their peers, in a non-disruptive manner are permitted.
				Learning experiences assigned to the students encourage and allow variability.
				Students and teachers appear intensely involved with their work.
				The terms slow, average, fast or similar labels are avoided.
				Opportunities exist for students to pursue their own interests in a meaningful way.
				A student may begin another activity even though others of his group are not finished a task.
				Pupils are led to express their opinions frankly and openly.
				There is flexible furniture which can be deployed for a variety of informal groups.

APPENDIX I

Letter from Dr. M. MacMillan

Saint Mary's University
HALIFAX - CANADA

FACULTY OF EDUCATION

May 26, 1976

Dear Colleague:

Would you kindly fill out the enclosed questionnaire? The data from this form is being used by one of our master students, Mrs. Helen Conrad, to complete her thesis.

There will be no need to identify respondents since the data collected is being directed towards a statistical study.

Your assistance is greatly appreciated!

Yours sincerely,

Mike MacMillan

Dr. Mike MacMillan

MM:amr

APPENDIX J

Letter to the Teachers

6428 Liverpool Street
Halifax, Nova Scotia

Dear Colleague:

I am presently completing a Master's Thesis at Saint Mary's University. This study examines the image of graded schooling held by practicing educators in Nova Scotia.

As practicing educators, your expert judgement is invaluable and forms a necessary part of my present study. Therefore, might I ask you to complete the enclosed questionnaire?

The information gained from this questionnaire will be confidential. There is no need to identify your school as the data are to be used in a statistical study. Kindly return the questionnaire in the envelope provided. It will be greatly appreciated if it is completed and mailed at the earliest date possible.

My sincere thanks for assisting me in this study.

Yours sincerely,

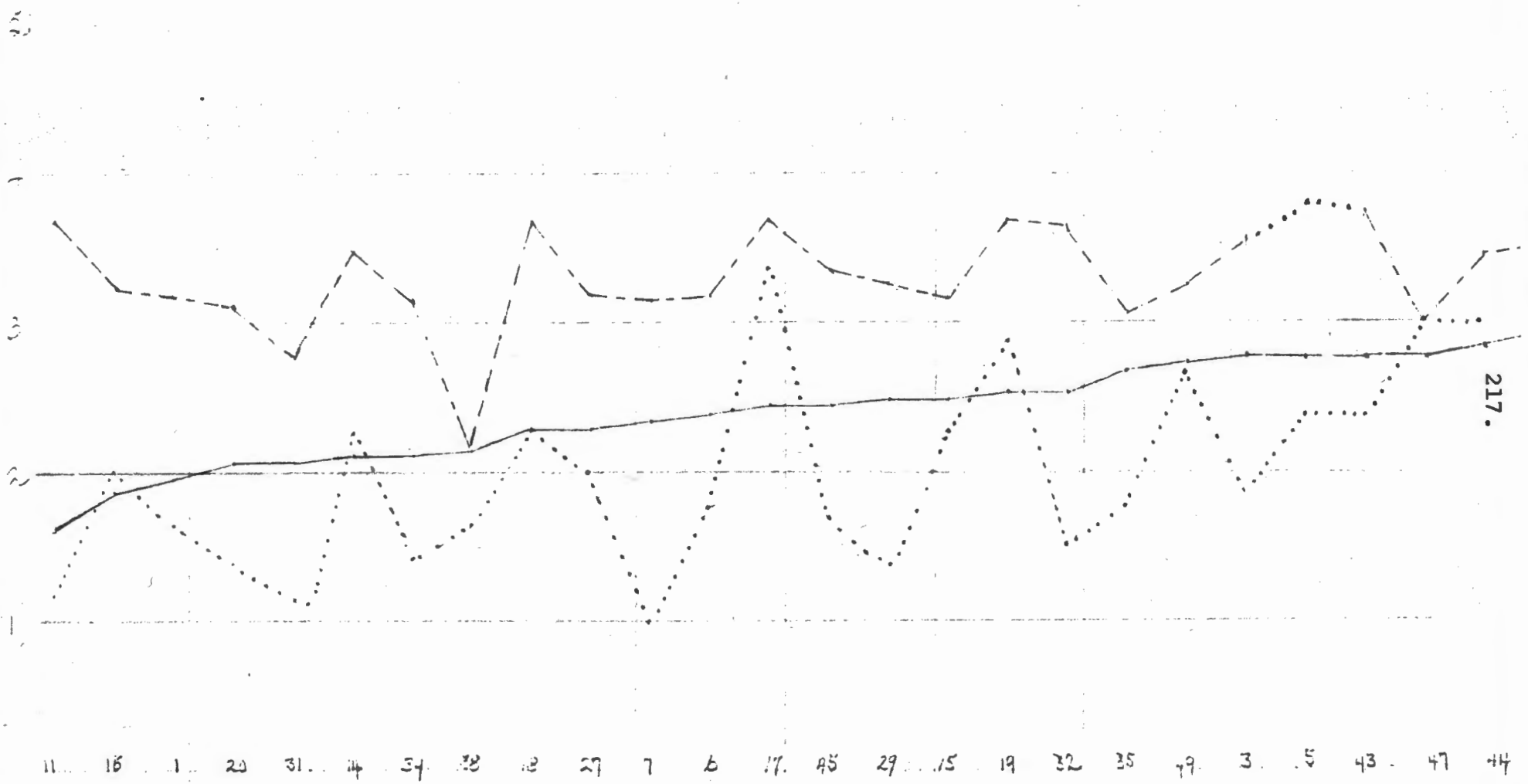
Mrs Helen A. Conrad

Helen A. Conrad

APPENDIX K

School A

Walberg-Thomas Testing Means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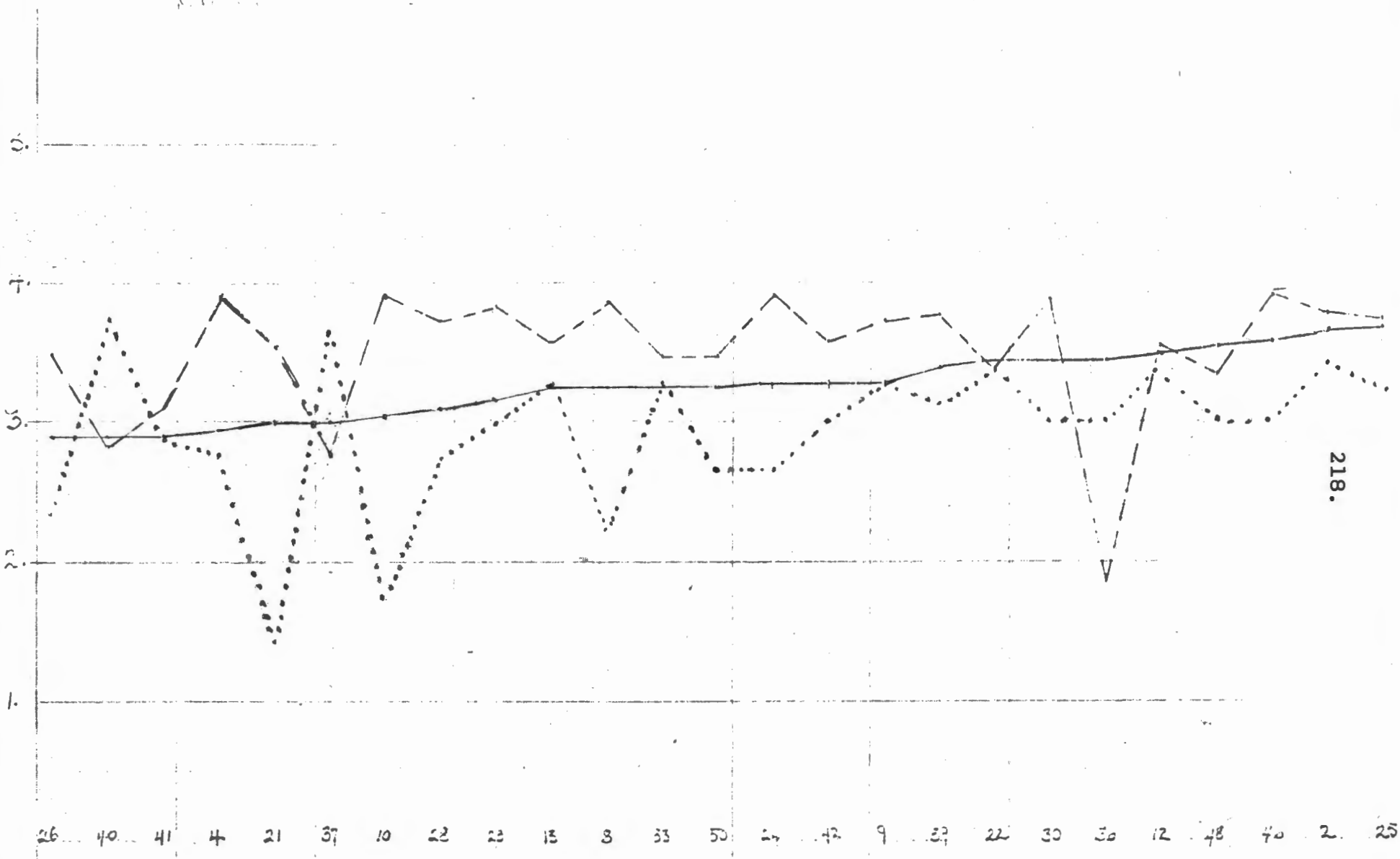
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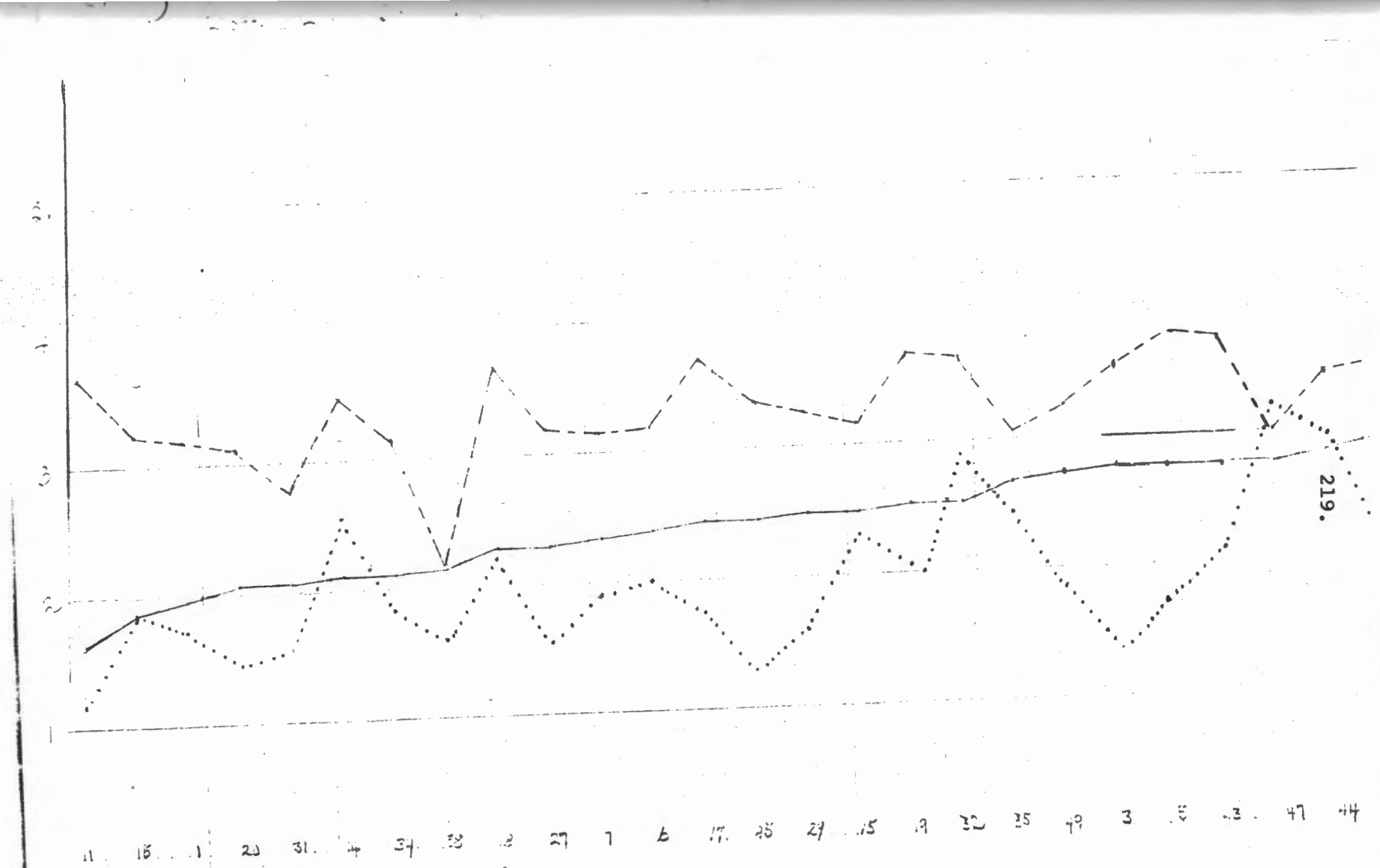
APPENDIX L

School B

Walberg-Thomas Testing Means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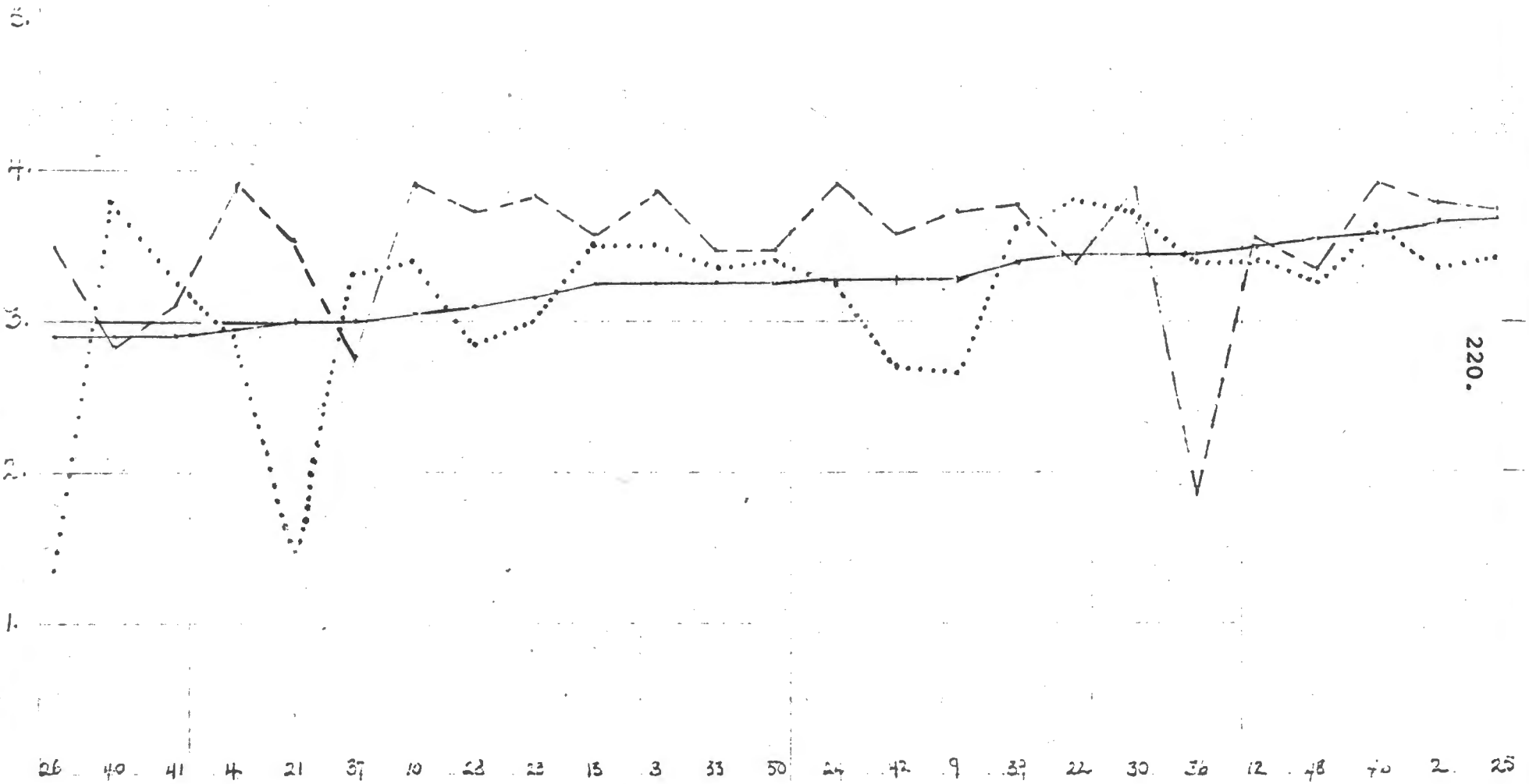
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APPENDIX M

School C

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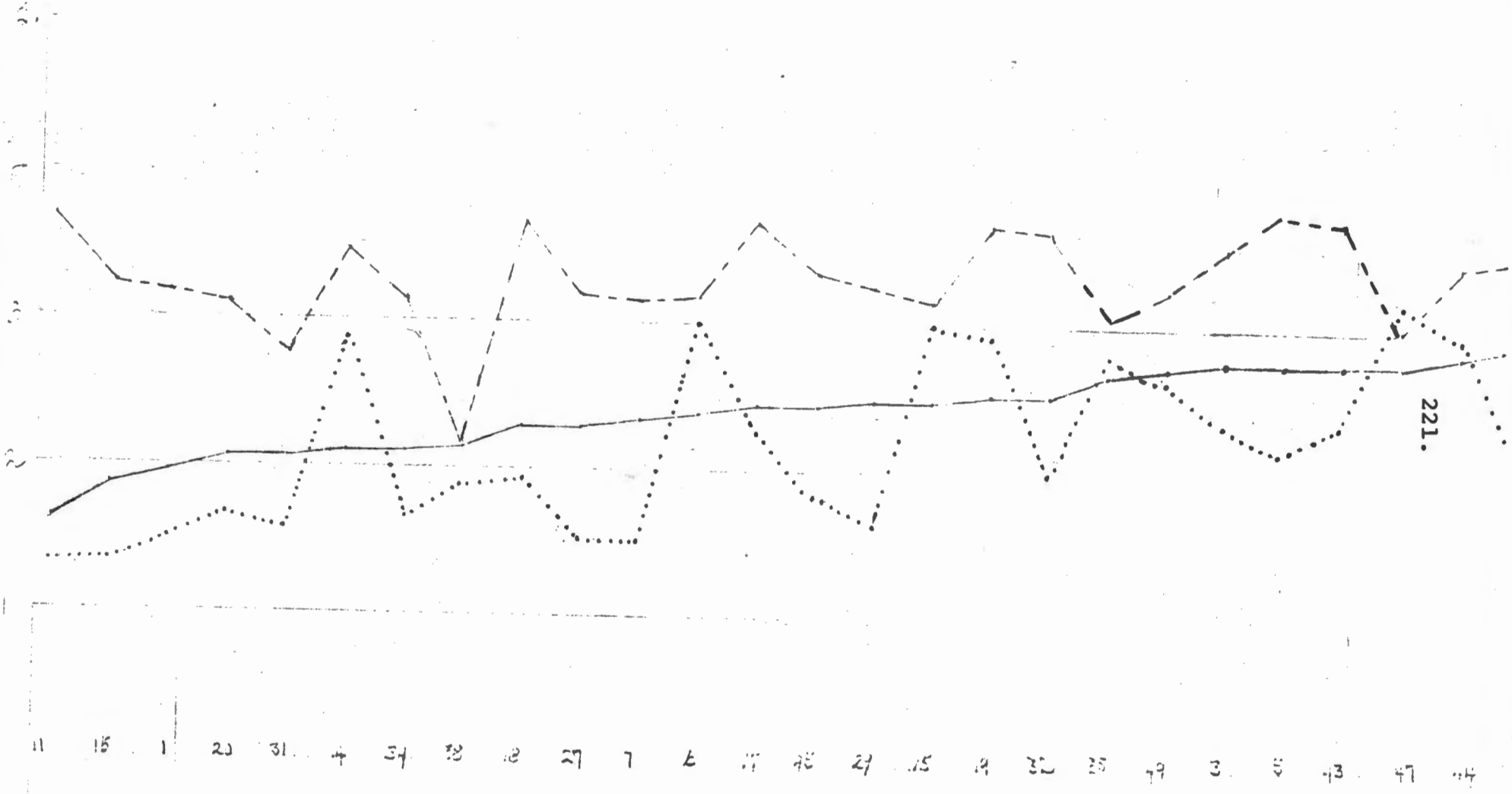
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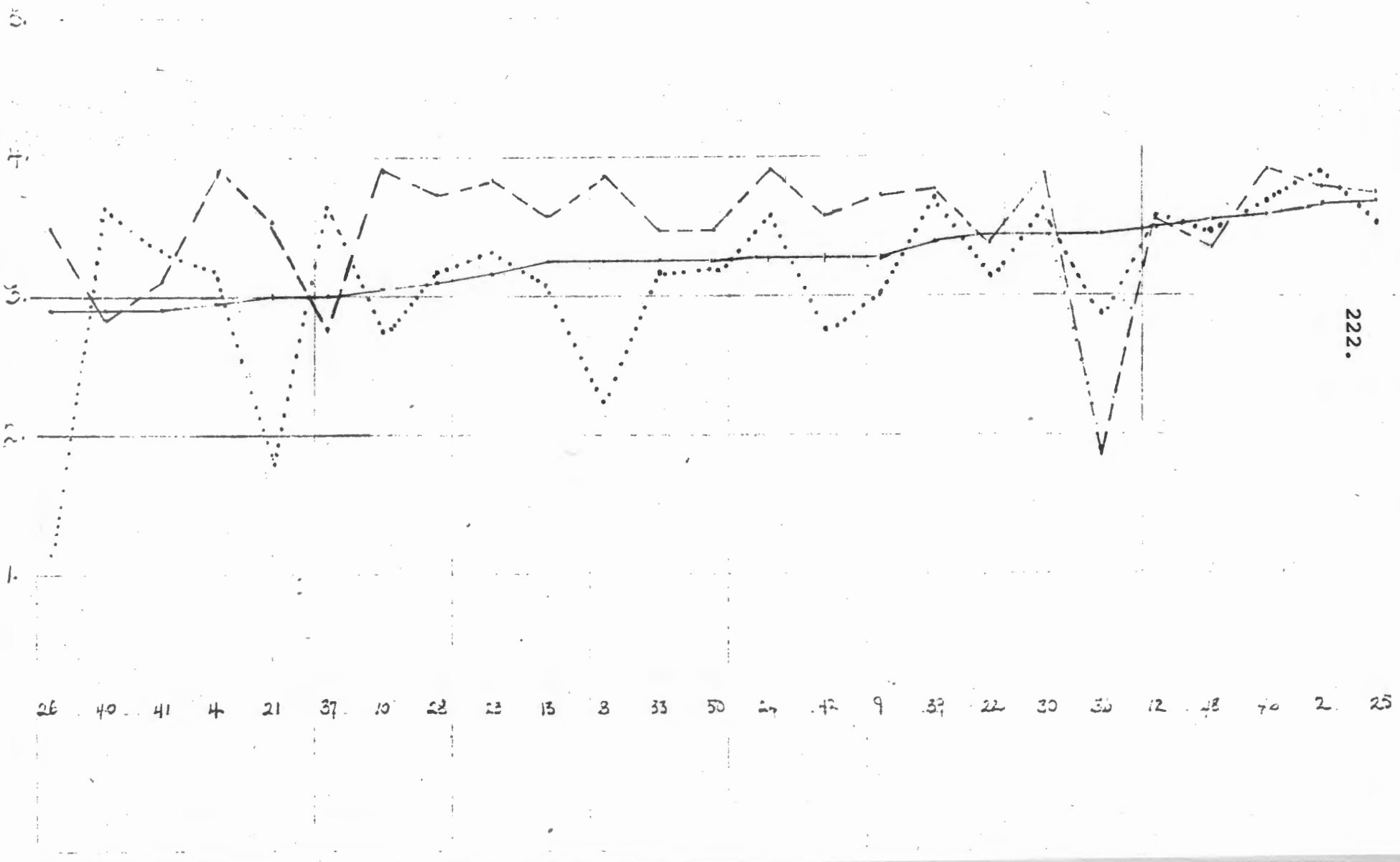
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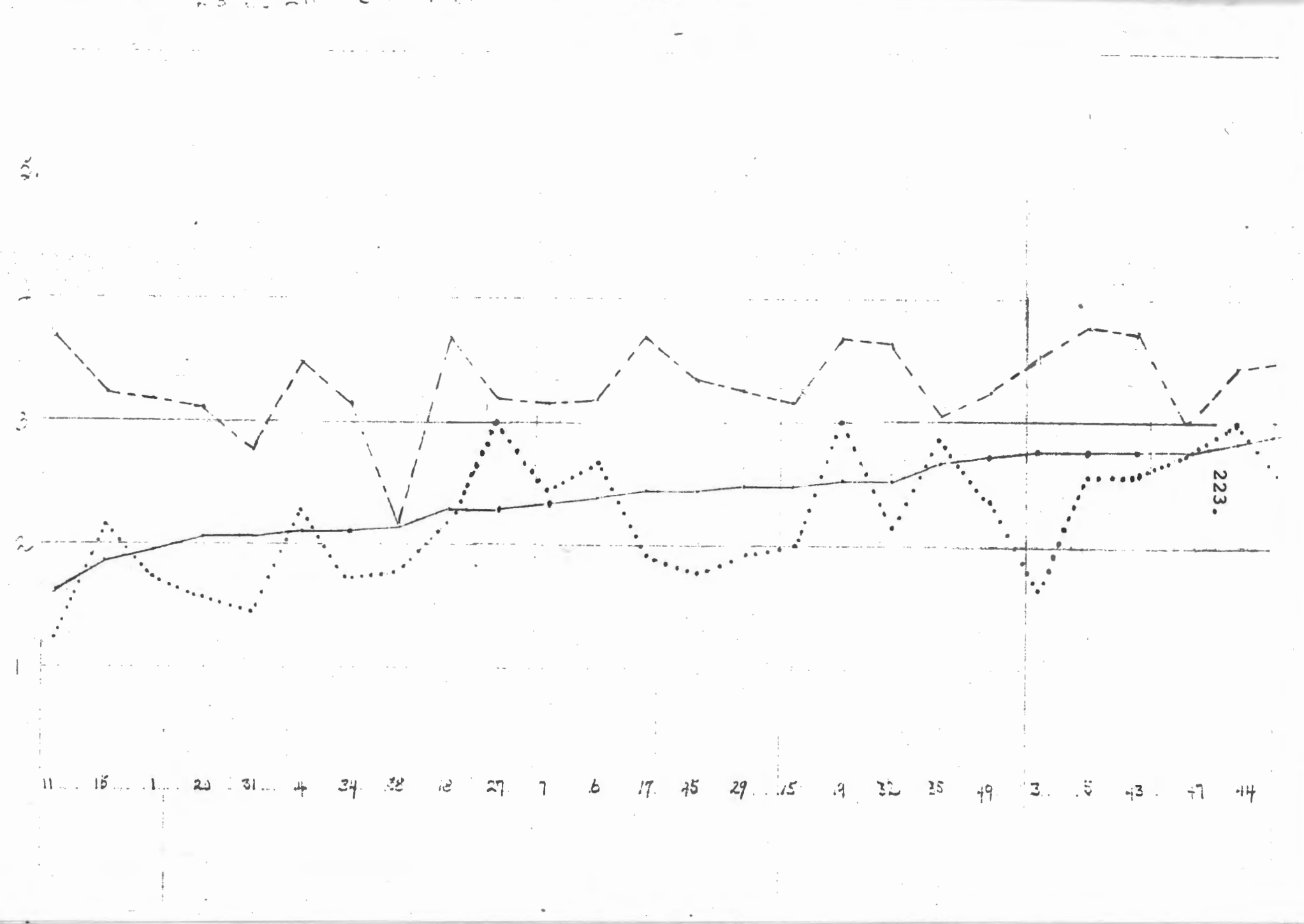
APPENDIX N

School D

Walberg-Thomas Testing Means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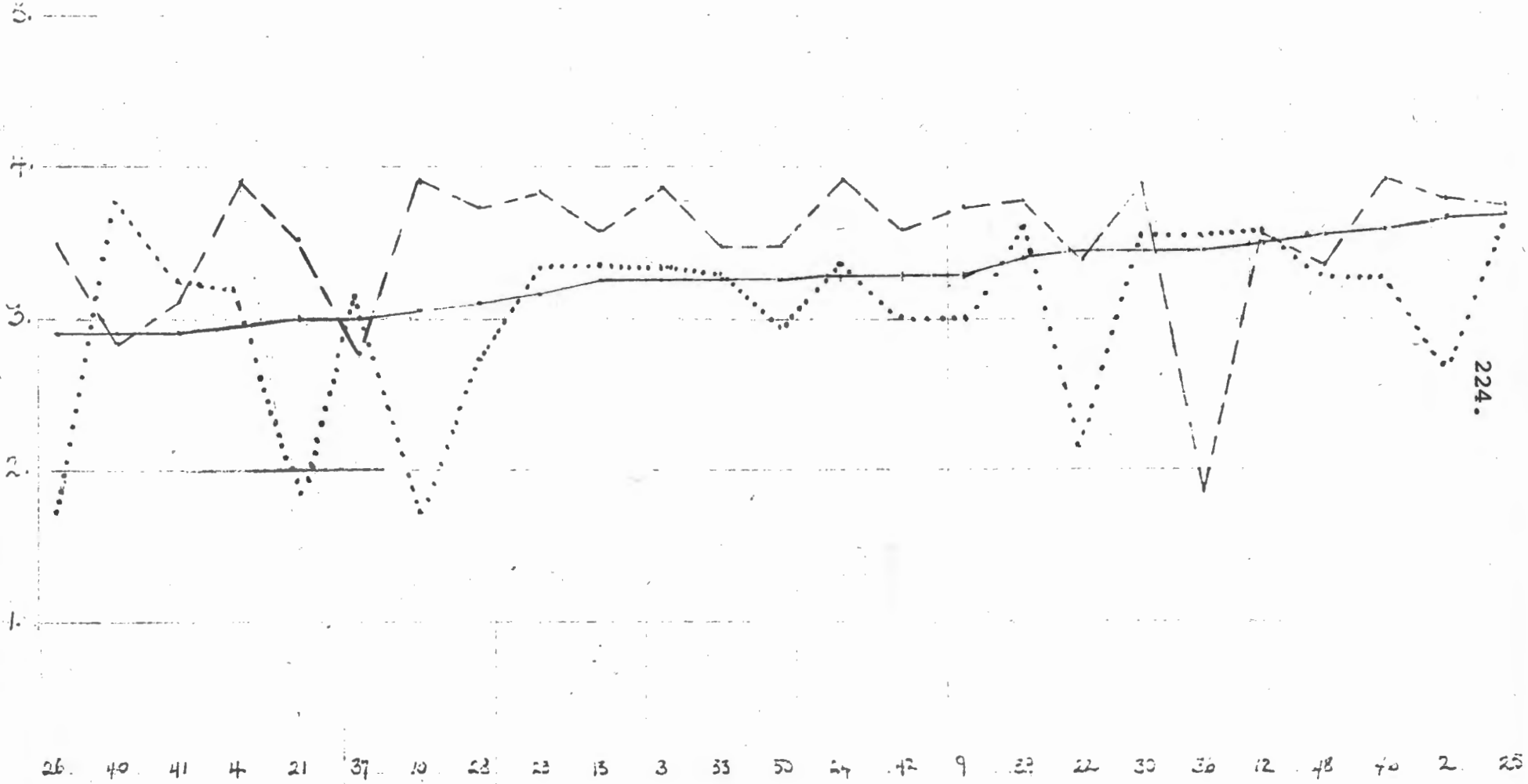
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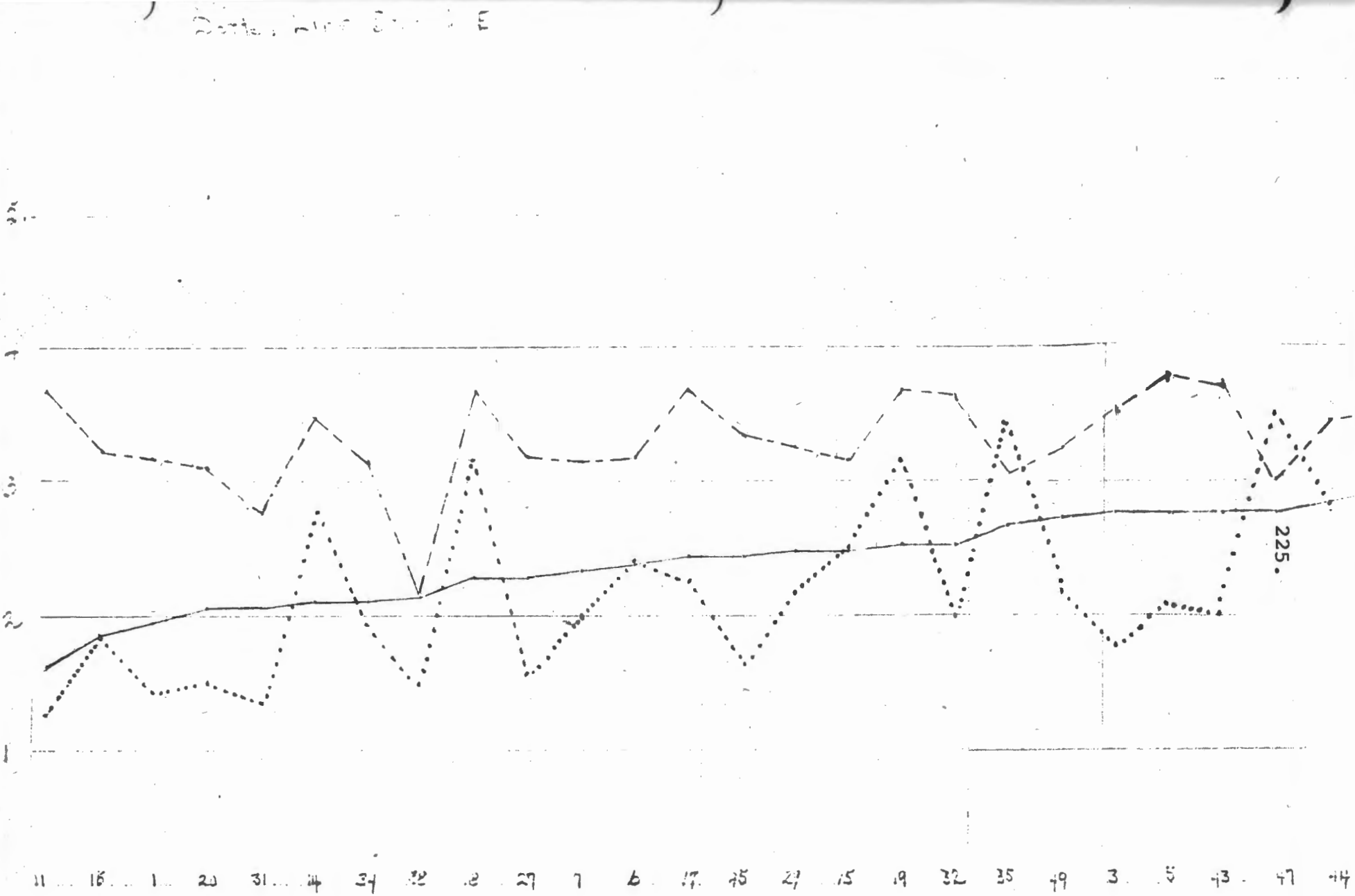
APPENDIX O

School E

Walberg-Thomas Testing Means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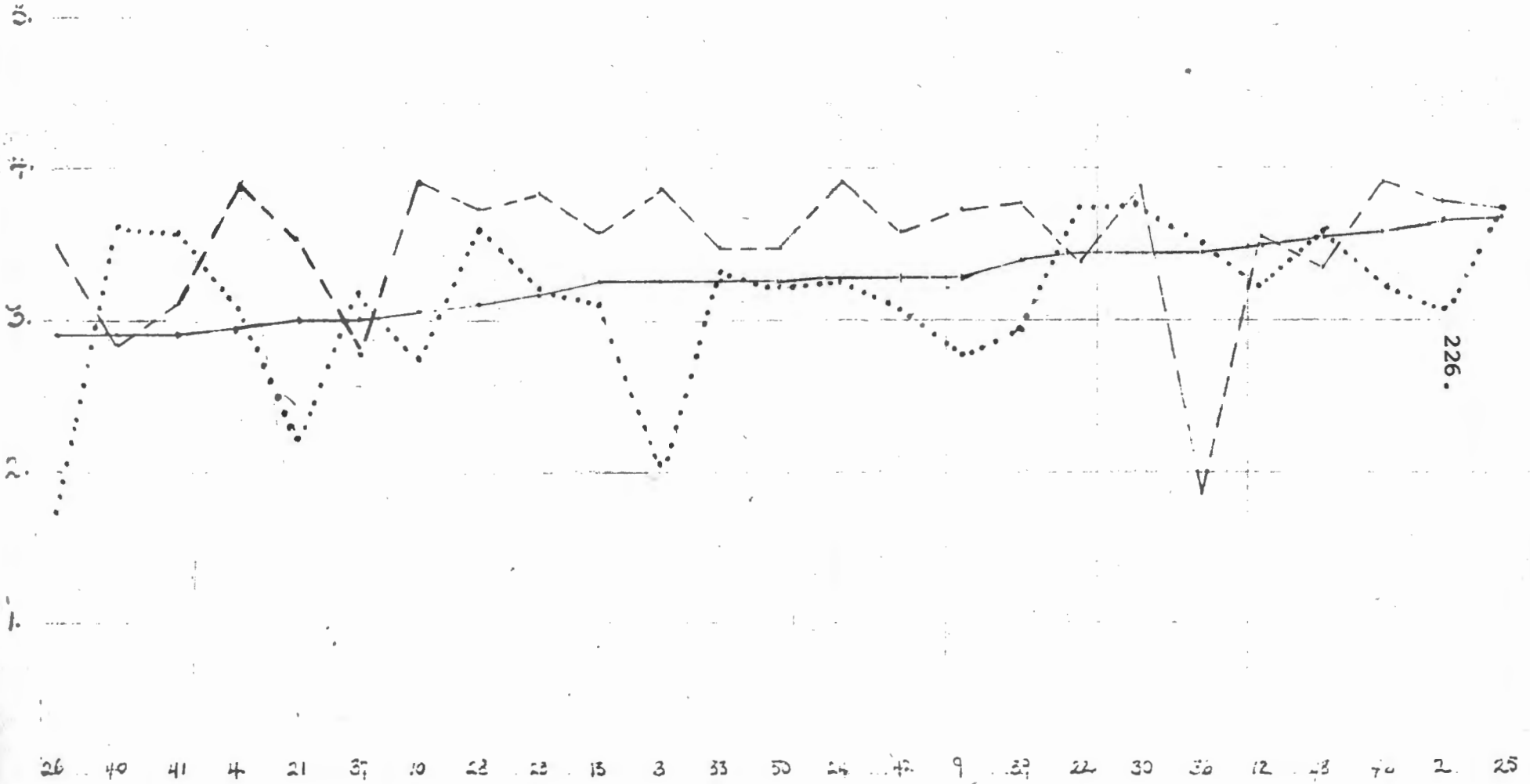
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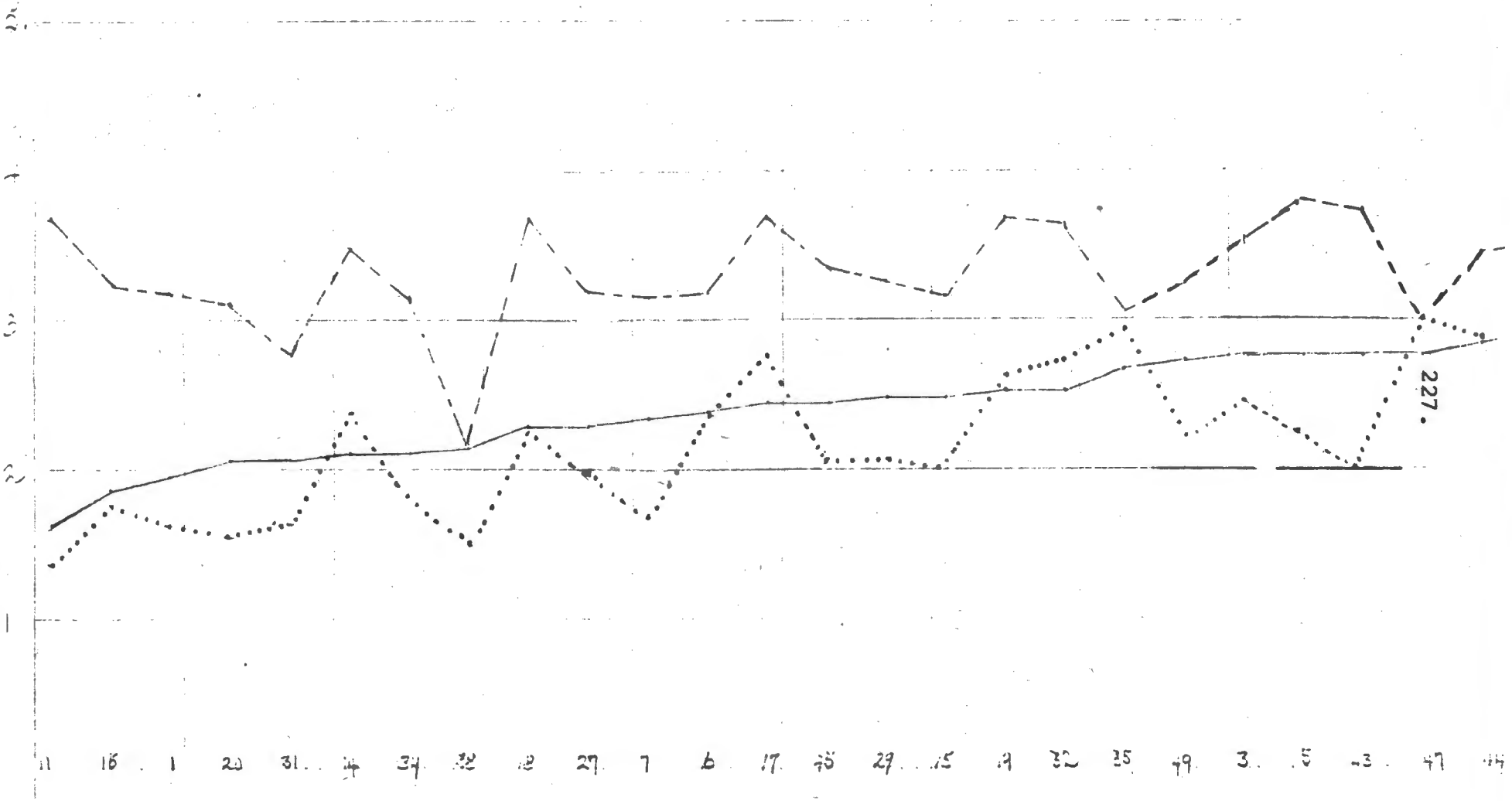
APPENDIX P

School F

Walberg-Thomas Testing Means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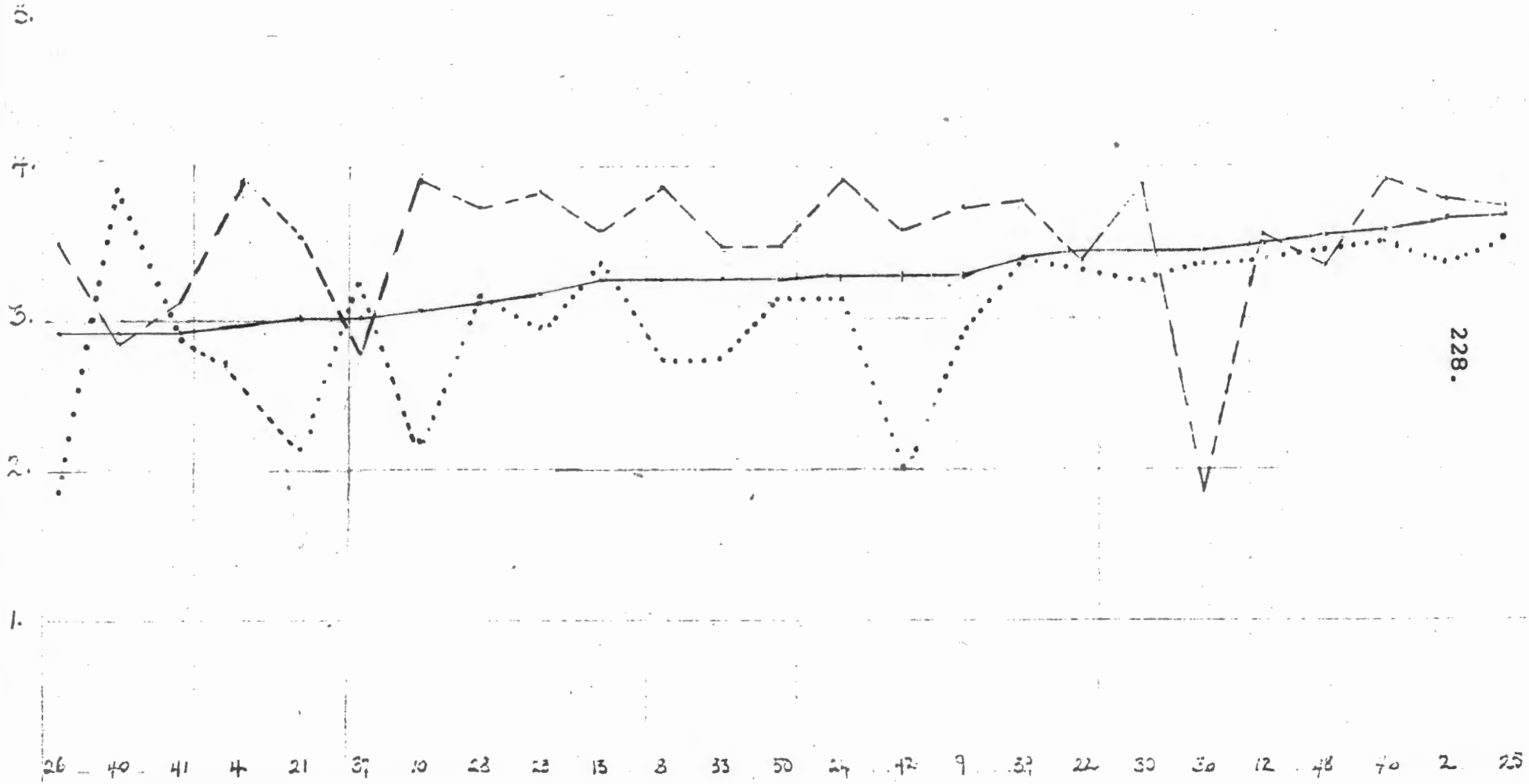
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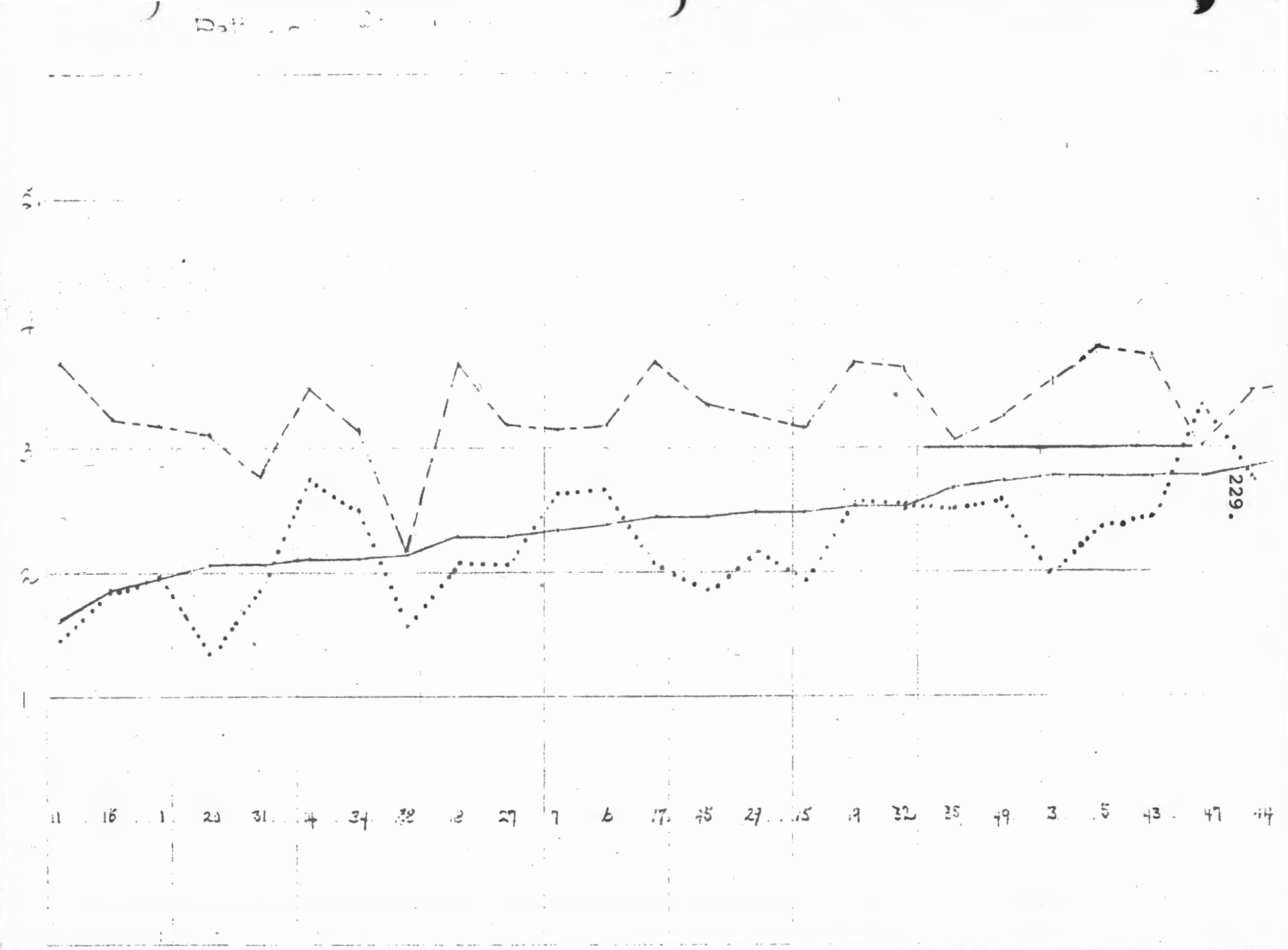
APPENDIX Q

School G

Walberg-Thomas Testing Means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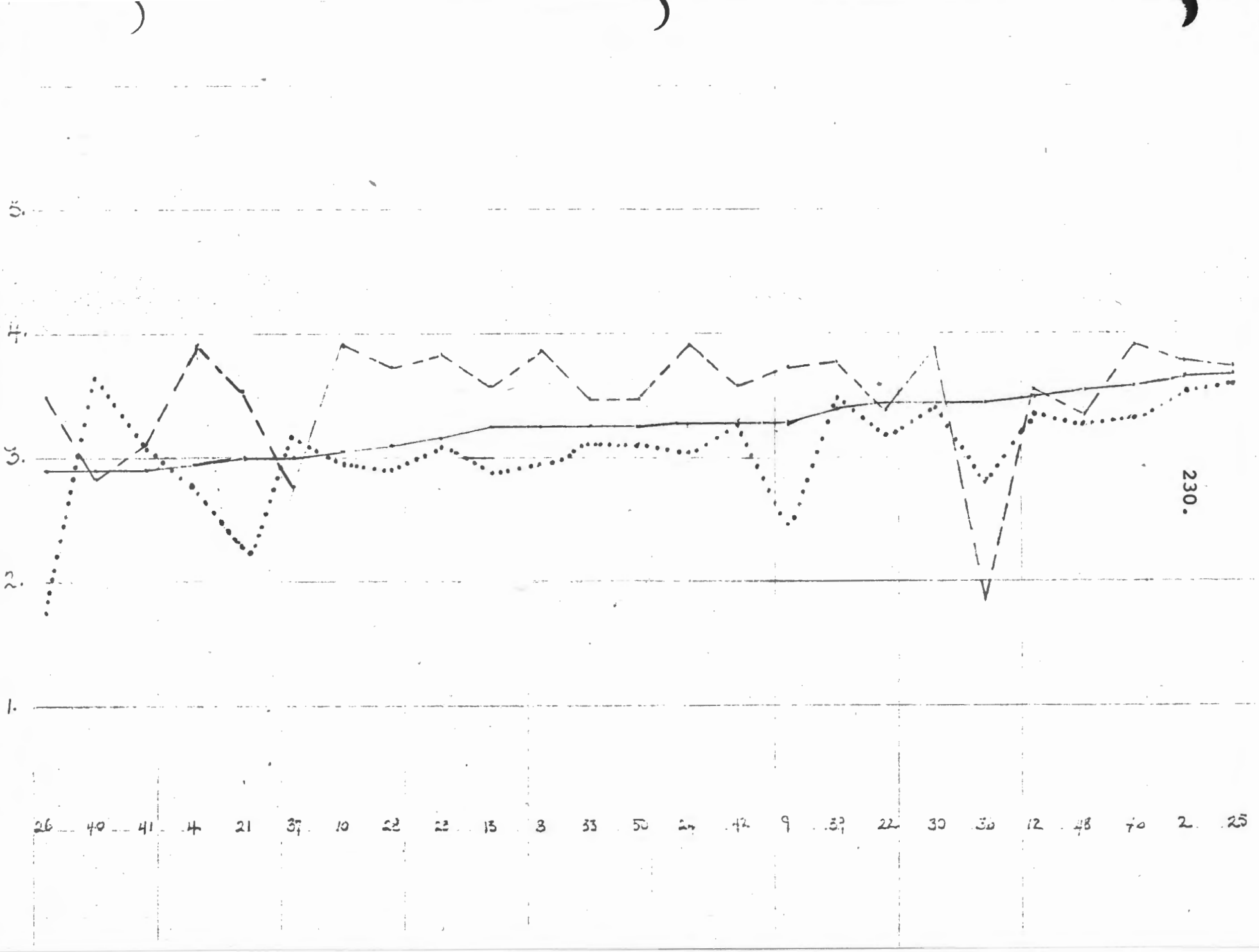
5.
4.
3.
2.
1.
230.
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