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THE UNIVERSITY OF ALBERTA

A SURVEY OF ELEMENTARY SCHOOL PHYSICAL EDUCATION IN THE EDMONTON PUBLIC SCHOOLS

by

© JOHN B. BELL

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A Survey of Elementary School Physical Education in the Edmonton Public Schools submitted by John B. Bell in partial fulfilment of the requirements for the degree of Master of Education.

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Supervisor

[illegible]

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Date 17th July 1974

ABSTRACT

It was the purpose of the study to identify the general characteristics of the physical education facilities, equipment, supplies and programs of the elementary schools of the Edmonton Public School Board. A sample of twenty-six schools was studied and a schedule which consisted of a series of check-lists and a questionnaire was completed for each school. This method was used to ascertain facilities, equipment, supplies and a general outline of the type of activities pursued in each class of the twenty-six schools.

A sample of forty-eight teachers was chosen randomly and they were interviewed using a questionnaire and discussion procedure in order to find out opinions of their programs. The teachers were given an opportunity to express their opinions regarding fifty-four questions dealing with nine aspects of a program.

The results of the first schedule were expressed in the form of tables and discussed in the body of the text. The second schedule results were expressed in a summative form for each aspect of the interview schedule and displayed in the form of numerical tables in the text and histograms in the appendix.

The results indicated insufficient time was being given to 170 of the 207 programs studied. The space available appeared to be sufficient to accommodate classes having the length of time required by the Program of Studies. Apparatus and equipment appeared to be satisfactory in amount and quality. Reserve was expressed about the cumbersome nature of large apparatus and the lack of suitably light weight supplies and equipment for very small children.

Results indicated that further research was urgently needed to ascertain teacher competence, the best form of teacher education for the nature of the role and ways of allocating qualified teachers in order to make the best use of their expertise.

ACKNOWLEDGEMENTS

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THE PROBLEM

INTRODUCTION

The investigator of an instructional program has two main approaches to a problem. His design and report may emphasize what he can measure given his modest resources or it can reflect the nature of the program over the wide range of a variety of transactions. A survey cannot be a precise analysis and a reflector of tendencies and interrelationships. This survey is an attempt to undertake the last approach.

> The whole cloth of an educational program is a grand accumulation of intents, transactions and outcomes. The teachers intend to deliver on many promises and to take advantage of many targets of opportunity. Students and parents have their expectations and apprehensions. . . . Each child brings his own complex of convictions, misunderstandings and propensities and takes away some of those. Each class is a community with rules and stresses and competition and compassion. Yesterday's subgroups are not tomorrow's. An educational program has countless objectives many of them dormant until a crisis arises. The priorities vary over time from person to person. No statement of program objectives ever devised has come close to representing the real-world intents of the people involved in an educational program. (Stake, 13:4)

It is Stake's suggestion (13:5) that an attempt be made to study "the whole cloth" of an instructional program before using procedures to examine "the minute detail of education." Guba and Clark (7) and Thorne (15) have suggested that achievement is a function of a number of variables, including teaching and that the impracticability of meeting the many assumptions embedded in statistical data in real life, often invalidate their usefulness to decision-making. A broader

evaluation should be undertaken first.

Scriven (10) has said that judgements of worth are comparative and that the proper evaluation of an educational program requires that a comparison be included in any evaluation. Sjogren (12) on the other hand, says that a comparison can be made, without the comparison being built into the design, by obtaining reasonably comprehensive decriptions of them. In this survey an attempt is made to heed both points of view.

BACKGROUND TO THE STUDY

Claims of Physical Education

Many claims have been made about the effects of Physical Education in general. The Alberta Program of Studies (13) refers to the development of motor skills, physical fitness, emotional control, socially acceptable behaviour and desirable knowledges and attitudes to leisure time activities. The British Columbia (4) and New Brunswick (6) Guides make somewhat similar claims with lessened emphasis on fitness. The Manitoba Guide (5) refers specifically to the development of such aspects as desirable attitudes, self confidence, self-control and generosity as well as to the development of physical attributes.

Williams in 1927 (17:9) argued that education through the physical upheld the democratic way of life, while others such as Jerome Weber in 1968 (16) have pointed out its limitation by stating that only exercise is unique to Physical Education. The statements indicate the broad spectrum of the claims.

Change in Physical Education

> Nothing characterizes the present more than change . . . but the rapidity with which it presently occurs is unparalleled in human history. We feel it in all facets of our lives. (Siedentop, 11:4)

Physical Education has not escaped the influence of change as witnessed by the increased emphasis in Movement Education with its "new" terminology in aspects of Gymnastics and Dance. It is included in the Program of Studies (1968) for Elementary Schools of Alberta and is enlarged upon in the Provincial Curriculum Guide to Elementary Physical Education. The training and education of elementary school teachers in the educational institutions of Alberta is based for the most part on this approach to Physical Education.

The Role of the Teacher

Great changes have occurred, during the last decade, in the content and process of the schooling of children.

> Several instances of changing perspectives come to mind: new concepts of the roles of learners and teachers; new ideas about the nature of a curriculum; different notions of what constitutes a school and an increasing emphasis on forecasting the future. (Hersom, 8:41)

There still remains the demand that elementary education concern itself with the teaching of basic fundamentals as well as producing innovative programs. "Society's concept of the function of the public school determines to a great extent the kind of curriculum schools will have" (Taba, 14:16). Johnson (9:127-140) would agree with Taba that "the values and problems of society are . . . the only possible source of the curriculum."

The resolving of the dilemma is placed in part at the teacher's

door. The Alberta Teachers' Association in its publication Curriculum Development for Classroom Teachers notes that there are various levels of curriculum decision making but states that the classroom teacher is at the crucial point of curriculum development.

> . . . but the real maker of curriculum, the decider of decisions, the answerer of questions, is the teacher in the classroom after the door is closed. (1:4)

How the teacher comes to terms with her role depends not only on her strengths as a person and as a professional but to a large extent on the supporting systems provided by the administration.

THE PURPOSE OF THE STUDY

It was the purpose of this study to identify the general characteristics of the physical education facilities, equipment, supplies and programs of the elementary schools of the Edmonton Public School Board.

LIMITATIONS OF THE STUDY

The first questionnaire confined itself to the gathering of information of a general nature about a school, its activity space, supplies and equipment and its staff, by means of a check list. The principals, the files of the Central Office and the School Planning Department were sources of information. A number of experts from the University, the Department of Physical Education, Edmonton Public School Board, and two elementary schools, their principals and teachers, were asked to examine the first questionnaire for credibility.

A major portion of the study was given to the involvement of

forty-eight teachers in an examination of their own programs through the medium of an interview. The interview, while generally of a broad discussive nature, required the teacher to rate aspects of the program by means of a series of questions. A number of experts from the University and a number of graduate students who had at least three years of teaching experience were asked to give their views on the nature and form of the questions. Two pilot interviews were held and alterations were made as a result of teachers' opinions.

The major limitations centred around the collection of data and two assumptions were made.

1. The samples of schools and teachers were typical of the populations.
2. The responses to the questions during the interview represented the teacher's personal opinions and judgements in the matter.

JUSTIFICATION FOR THE STUDY

In its section on Elementary School Physical Education, the Program of Studies states broad objectives, indicates time allocation, its frequency and length, makes recommendations regarding suitable dress for children and teachers and reveals, in some detail, the content of the three fields of activity to be taught—Games, Gymnastics and Dance. The process of teaching is succinctly mentioned—

> The teacher should allow for experimentation, discovery, selection and consolidation. . . . These problems based on analysis are designed to make the child aware of what, where and how, he moves. Each child is free to work out the problems individually within the limits of his capabilities. The teacher, cognizant of the individual's ability, observes

carefully and encourages maximum performance from each child.

> . . . all [three fields of activity] should be of equal importance in a well-balanced program. (3:46-47)

Detailed lists of equipment, supplies and reference books are included.

The Curriculum Guide (2), a comprehensive document, expands greatly on the Program of Studies and is prescriptive in so far as it duplicates the Program, as are the numerous supplementary publications issued by the Provincial Physical Education Department to aid teachers.

Nevertheless, individual schools, their principal and teachers, in concert, in groups or as individuals, have autonomy over their programs within the limitations of the provisions and conditions which prevail. These provisions and conditions are formed of teachers' aspirations, abilities and enthusiasms. They are shaped and moulded by the space in which teachers and children work, the time given and the equipment available. The student body with its great variety of ability and aptitude add another dimension.

It would appear to be a logical step, before researchers focus analytical instruments on specific areas of schooling, to examine the context of the whole picture.

In this survey an attempt is made to describe the situation as it is and recognizes its own limitations, in accuracy and scope. Lack of time and shortage of funds were basic to the survey.

DEFINITION OF TERMS

A Physical Education Program; a program; activities of a physical nature as generally identified by the Program of Studies.

They take place under the jurisdiction of a teacher of the school in school time.

Elementary School Physical Education is as exemplified by the Alberta Program of Studies and its Curriculum Guides.

Movement Education is a series of activities identified in the Program as Gymnastics, Games and Dance. Inherent in Movement Education is a problem-solving approach.

A teacher of Physical Education is one who has been assigned the role.

A specialist teacher of Physical Education is one who taught two or more classes of Physical Education.

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Chapter II

A REVIEW OF RELATED LITERATURE

INTRODUCTION

Bruner (10:22) emphasised the importance of stating goals when he wrote, "Each generation must define afresh the nature, direction and aims of education to assure such freedom and rationality as can be attained for a future generation." Goodlad (37:173) gives a conception of the nature of such goals when he states that societies should systematically evaluate national and worldwide trends, appraise individual problems and restrictions upon them and document significant advances of knowledge. The author of this chapter cannot hope to attain such ends for elementary school Physical Education, yet an attempt was to be made to explain the factors which lie behind the program which was now being offered, and to expose its essential, component parts. It was never the aim of the study to justify or to challenge the philosophy and practice of Physical Education but to present a background of which the teacher should have some knowledge.

"An Historical Survey of the Physical Education Programs in Alberta" (p. 11) was written in an attempt to show the growth and the nature and direction of influences as they related to the Program of Studies. In "Roots of Movement Education" (p. 19) the author delved into the historical significance of social movements and their influence on Physical Education and education in general. This had been achieved by focussing on a number of educators and the important

changes they brought about. Their work as it affected Physical Education in schools culminated in the paragraphs on the "Movement Concept" (p. 44). The influence of the changes in European philosophy and practices brought about in the United States were looked at in "Influences from the United States" (p. 40) and the "American Concept" (p. 43).

The present situation and its attendant problems were presented under the headings of the "Role of the Teacher and the School" (p. 48), "Programs and Projects" (p. 50) and Space, Facilities and Equipment" (p. 50).

A BRIEF HISTORICAL SURVEY OF PHYSICAL EDUCATION PROGRAMS IN ALBERTA

Some Physical Education Programs 1906 to 1968

The bibliography for this section is included under catalogue numbers in the Archival Material shown in SELECTED BIBLIOGRAPHY. Direct reference is made, in the text, to various Programs of Study and their dates, as well as to Annual Reports.

A standing committee on schools (board of education) was formed by the Administration of the Northwest Territories in 1884 and a year later grants were made towards teachers' salaries. Normal Schools were founded at Edmonton, Calgary, Medicine Hat, Lacombe, Moosinin and Regina.

By 1905 there were 14,000 students at schools in Alberta. Figures for that time (Chalmers, 11:127) showed attendance as being 50 percent. There is no mention directly of physical activity (1905)

specifically, though the Annual Report (1906) recommends certain texts for gymnastics and physical culture exercises. The Annual Report 1913 (16:182) states that physical culture

> . . . should have a recognised and fixed place on the timetable . . . to afford relaxation . . . to bring about better conditions for mental work . . . a wholesome break in routine. . . . Half hour periods are suitable . . . daily.
>
> The first four years will consist of what we may call "free gymnastics." At the beginning of the fifth grade, in town and country, light apparatus should be introduced i.e. dumb bells and indian clubs and in the last two years . . . fixed apparatus . . . parallel bars, horizontal bars, flying rings, climbing rope, trapeze and vaulting horse.
>
> In the case of girls . . . exercises in deportment and carriage by figure marching and drills and games such as basketball. . . . and for boys cadet training and field and athletic sports. . . . fire drill.

The Program of Studies of 1918 (16:100-113) reiterates the aims and general format of 1913 and has this to say

> Scope. Class tactics, marching, elementary drill, free gymnastics, kindergarten games, figure marching with dance steps, dumbbell drill, wand drill, indian clubs, Fire drill, stationary apparatus work, track and field, basketball, hockey, squad drill, skirmishing, rifle drill and target practice.
>
> The aims are . . . to give right [sic] physical development and to correct physical defects by attention to movement . . . to counteract morbid tendencies . . . to develop a capacity for corporate action by discipline and prompt obedience . . . to develop grace of movement, muscular development . . . courtesy . . . relaxation of tension.

There were to be three necessary features in a lesson: silence, steadiness and precision. It was to form a wholesome break of some ten to thirty minutes daily. "No wraps or rubbers were to be allowed, no lying down in seats and the boys were to take off their coats" (16:113). Equipment was only necessary in town or city.

> In country schools nothing is necessary beyond jump stands, basketball nets, football (soccer) goals, vaulting poles and tug-of-war. . . . owing to the fact that a complete course is perhaps not so necessary. (Annual Report 1913; Program of Studies 1918)

The influence of European attitudes was quite strong through graduates of Ontario training colleges. The work of Ling and Jahn in Europe had been adopted by Ryerson in 1880 and "visitors from the United Kingdom, Boston and Harvard encouraged the work" (Annual Report 1918). An Official Syllabus of Physical Education for Use in State Elementary Schools was published in Britain in 1904. This and subsequent revisions in 1909 (16), 1919 (16) and 1933 (16) showed the transition from military drill, exercises and physical training to that of Physical Education. This text remained in Alberta schools from 1909 (ca.) until quite recently, with special Canadian editions being published in 1911 and 1923.

Team games, of British derivation chiefly, came with settlers from the east. Sir J. Colborne in 1829 said of the aims of Upper Canada College ". . . to foster in the new institution a love of the old manly British field sports" (Consentino, 13:10). References to football (soccer), cricket (for a while - to 1914), and baseball leagues were common from 1880 onwards in the Edmonton Bulletin (Eckbert, 28:24). From the same source came the first report of school soccer and baseball games (Edmonton Bulletin, December 1881). By 1888 clubs had been formed in many Alberta towns and by 1908 strong leagues were formed in cricket, lacrosse, rugby, football and hockey. In 1905 a six school league was formed in girls' basketball. "Community games leagues were formed, fields acquired and recreation councils elected in Edmonton

and Calgary by 1920" (Eckbert, 28:67). A desire for physical activity and the presence of a community spirit brought about the rise of sports sponsored by community groups.

The 1922, 1924 and 1929 Programmes of Study show a gradual change from an imposed curriculum to one where the individual and society were to be considered before learning situations were to be constructed.

> . . . the exact nature of any curriculum is the result of somebody's attempt to make a selection from the great race experience. (Program of Studies 1922; 16:5)

> Intelligent selection can be made only when intentional, definite and well-defined purposes are clearly in mind. (Program of Studies 1922, 16:5)

> A function of curriculum is regarded as a summary of solutions of the various problems which the race has devised. (Program of Studies 1929, 16:5)

The schools had a definite responsibility for the preservation of health and physical fitness and for the first time the growing child is mentioned, ". . . varied experiences [to be provided] and all possible activities to result in desirable changes of behaviour" (Program of Studies 1929, 16:169). The lesson in 1924 and 1929 was to be vigorous and enjoyable with plenty of "free movement." The Program called for four lessons each of twenty minutes duration per week; three of formal work and one of games; eighty minutes in all. Rural teachers could have less if they wished. Initiative and the spirit of cooperation were to be encouraged. Maximum participation was expected in games though "girls were not to be allowed to play too strenuously" (Program of Studies 1929, 16:168). The use of apparatus was considered as not essential to a good lesson and only to be used

in upper grades "to promote variety," and lessen boredom.

There had been an immense growth in school population from 1920 to 1930, from 80,000 to 171,000 in Alberta. The effect of educators such as John Dewey was evident in new attitudes to society and the individual. The 1936 Programme of Studies was innovative. The school system was now 6-3-3 with subject promotion and flexible programs. Work was adapted to individual needs with activity programs and goals which were to be immediate and accessible. Learning and enquiry were encouraged through the study of ways of life, and subjects or enterprises.

Physical Education aimed at the growth and development of the whole child according to ability and intelligence. Health development, social efficiency and culture were important and to be approached through group games, dramatic initiative, rhythmic and self-testing activities as well as relays and athletics (Program of Studies 1936, 16: Physical Education Section).

The Programs of Study for 1941 and 1944 were very much as in 1936 with requirements that the child have the opportunity to solve its own problems and with an increase in the variety of activities. The scope and sequence of work in Physical Education was specifically mentioned in 1944 and a large reference library (15 texts) was suggested. "The growing child must be regarded as the central figure" (Program of Studies 1944, 16: Physical Education Section).

"Bulletin 4 Elementary School Physical Education 1951" and the Guide of 1957 (16) made broad statements regarding "glorious heritage . . . democracy . . . dynamic posture . . . the correction of

remedial posture defects." The action through the 1930's and in the 1940's had been through an increase in knowledge in all facets of Physical Education allied to a critical examination of the needs and interests of the individual in society. Now the action, chiefly in the senior and junior high schools, which radically affected the elementary schools, turned around a group of people who attempted to produce a Guide (1957) which was teacher-proof. The program was planned for the entire year, unit and lesson. Apparatus was allocated and skill progressions laid down.

A forward step visible in the official literature of the decade 1947 to 1957 was that the Program for 1951 was specific in stating the establishment of facilities and equipment, for the first time.

The 1967 and 1968 Programs of Study were based on Movement Education, an approach to physical activity which originated in the educational philosophy and practices of Europe. The Guide of 1969 (18) and such supplementary material as "Dance in the Elementary School" (December 1968) and "Resource Units" (December 1973) collected the activities into three main areas of gymnastics, games and dance. The author attempted to provide unity of the whole through Laban's Analysis of Movement (52:84) and by its terminology, to provide for individual work through the application of theme and task or its equivalent, and for cognitive work through "experimentation, discovery, selection and consolidation" (Program of Studies 1968, 16:46-47). The basis for the selection of activities was more specific. For example, the games lesson content was to be based on the developmental characteristics of children, ways in which children learn and the common elements of games.

Work by the present Assistant Supervisor of Physical Education for the Edmonton Public School Board and her predecessor, visits from instructors from England for periods up to one year and the involvement of government in setting up two committees in 1960 and 1963 to deal with curriculum, culminated in the publications of the Program of Studies (17) and the Provincial Guides of 1967 and 1969 (18).

Courses in elementary school Physical Education were offered at the University of Alberta in the Fall of 1960. Margaret Caudwell, a member of the staff of Coventry Training College, England, was on staff at the University for the academic year 1963-64. Permanent staff were hired specifically for elementary education commencing the academic year 1964-65.

A Review

Official sources (16) have been quoted throughout; there is no evidence that what was demanded by them or suggested to the teacher ever came about. Certainly every program would be decidedly limited without space and equipment and these did not become mandatory until 1951.

The time allocation of 1913 was a maximum of 150 minutes a week in five lessons; today the minimum is 90 minutes (3 periods for division II; 5 for division I).

Space for vigorous activities requiring movement indoors did not exist in the early days especially in rural and small schools. Assembly halls in the larger, richer areas in the city became basketball courts and court dimensions were built in to the auditoria of the 1930's, 40's and 50's. Modern specifications for elementary school

gymnasia do provide for a large number of physical activities and are used solely for Physical Education.

Space outdoors, up to the middle 1920's, was by regulation well fenced and policed. Children were not encouraged to play after school. The growth of community clubs and leagues, the subsequent formation of recreation councils in 1920 (Eckbert, 28) and their acquisition of land led to the satisfactory provision and use of land adjacent to each school, today.

Changing of clothes for activity was not insisted upon. It was not mentioned in the elementary school program until 1951 and then only regarding footwear. Stronger "suggestions" are made in the 1969 Guide encouraging changing by students and teachers.

No reference is made in any Guide or Program before 1967 regarding storage areas for the "mandatory" equipment. Specifications do now exist (Appendix D).

At no time has any program of studies alluded to the training of teachers. This would appear to be a major factor behind any program.

The variety and nature of equipment to be supplied by school authorities has changed and increased enormously. This increase is based on the increasing importance placed on variety in elementary school work as well as on a desire to increase upper body strength and mobility.

Problems

Sande (94) and Locke (59) specify a number of problems connected with the study of Movement Education and serve to strengthen the argument that, before teachers accept the philosophy and can construct curricula, they must be convinced of the soundness and relevance of the "discipline." The problems appear to remain: (1) The variety of terms used by the writers tend to cloud the issue, (2) A lag in literature explaining the method and its introduction and (3) The difficulty in finding a relationship between the works of many authorities in many disciplines and their importance on the evolutionary tree of movement education.

The Spectrum of Gymnastics, Games and Dance

The gymnastics of Bilbrough and Percy Jones were not those of proponents of gymnastics through the ages; nor have they quite the same total base as those of Stanley (101), but in origin may be nearer that of Maulden (63). In many modern schools, many practical aspects of early age level gymnastics had the nature of an activity, a game, a dance, a drama-song-play or a mime. In fact, gymnastics has a wide range of human expressions and functions.

Dance had the wide range of human functions and emotions; from the most formal and stereotyped of court ballets to the most free and untrammelled Duncan-type dance. The total range is an acknowledged part of human experience. Dance, the universal activity, was also part of communicative systems extant in the arts and drama. In the

early years of the elementary school, Movement Education and creative dance may be, in effect, the same as gymnastics. What may be of recent origin is the revelation of the inner self through dance gesture and the belief that widening of gesture experience brings awareness and growth (Laban, 50).

Skill games and activities had, through the ages, represented man at his noblest and weakest. They include, as an end result, the "professionalism" and financial avarice of Roman and modern athletes (Lindsay, 58), as well as ways in which man has expressed his appetite for vigorous movement in relation to other people and objects. Most of the nationalistic spirit which pervaded human physical activity through the ages, has focussed itself on games and activities ostensibly for national political survival. There is a growing opinion among teachers nowadays that this attitude should not affect elementary school children and form a reason for games in the program.

Gymnastics: Ancient and Modern

Gymnastics appeared through the centuries as an umbrella term and included those activities which were not art forms such as drama, dance or games, although at times the boundaries have been vague.

The Greek male, 500 years before Christ, indulged in some form of music and gymnastics from the age of seven onwards. The gymnasium was an athletic ground which may have contained among other facilities—a palaestra where men and boys met and clubbed together, a bathroom, ball courts, oil stove and dusting room. Boxing, wrestling, pankraton, riding, running, vaulting, javelin, discus throwing and jumping with weights were all evident, and so was the presence of a flute player. Usually the gymnasia were public institutions. The process used to

produce "strength and activity" was not known although it appeared to be progressive. The whole was involved with religious life, particularly the epheboi, whose training was free and must have included war-like exercises. Swimming and rowing were also given attention.

Physical Training in Education: A Beginning

The discovery in the fifteenth century of the ancient civilizations, the revelations of their cultural values and the new learning they provided spread into the European world through the Italian courts (McIntosh, 62:55). Castliglioni (1528) and Mercurialis (1569) in Italy and Mulcaster (1560) in England published books on gymnastics, having the Greek Galen's (150 A.D.) work as a basis (McIntosh, 65:70). It was from such sources that the eighteenth century teachers culled their knowledge of gymnastics and knightly exercises. Philosophers and educators of young people of this time were interested in exercising the body, too. Rabelais (1483-1553) (Brown, 8:9) encouraged learning by doing, mind with body, play with work, gymnastics with music, harmonious development of the physical and mental. Montaigne (1533-1592) and Locke (1632-1704) (Van Dalen, 109:194) carried these ideas to the populace to a greater degree and envisaged the molding of the man of wisdom and virtue, reasons and judgement, with disciplined training based on experience and observation. Both recommended a Spartan existence to habituate the body to discomfort and hardship. The Age of the Common Man in the image of God was rapidly approaching and showed in the work and writing of Comenius, philosopher and educator (Rusk, 91). Understanding came through the senses: Man was inherently good: the child was father to the man and

therefore must receive attention. Comenius studied children and organised materials and methods to aid in the education "of the whole man, body and soul, as well as the mind" (Van Dalen, 109:183). A treatise was written on the rearing of infants and articles produced on the organisation of programs for education. Such admonitions were prevalent—

(1) Teach from simple to complex

(2) From known to unknown

(3) Give examples before rules (relevance)

(4) New knowledge tied to old

(5) Limit materials to child's experience

(6) Make explanations clear, simple, humorous

(7) Have studies graded according to child's development.

Brown (8) cites Munroe as suggesting that Comenius was a strong influence on Franke, Rousseau, Basedow, Pestalozzi, Froebel and Herbart. At this time proposals regarding the place of physical education in education came from philosophers, writers and teachers.

From this point onwards (1790) texts tended to describe the work of individuals inside national identities (8, 44, 59, 64, 65, 66, 77, 78, 109). A series of somewhat narrow viewpoints were therefore presented spanning a time of turmoil in Europe that lasted for at least 100 years. Nations changed their boundaries, appeared and disappeared, and the growing masses of Europe's population revolted in violence and wars, or emigrated in their millions to the empty spaces of the world. North America was one of those empty spaces.

The texts available tend, therefore, to focus on the periods

and people which produced the specialist. Little really is known of the school educator and physical education until the mid 1800's (1814 in Denmark) when institutions officially encouraged physical education.

A Divergence

Two lines of development seem evident in the education picture, and numerous are the names of those who were involved, as people published their ideas and specialisation occurred in the administration of schools and curricula. One line is through Basedow, Salzmann, Simon, Du Toit, Nachtagall, Guts Muths and Ling: the other through Pestalozzi, Froebel, Spiess (Jahn)—and perhaps the later Lings. Offshoots, formed by teachers and graduates of their schools and institutions, affected the trends in Europe, England and the United States from 1800 onwards. No doubt too, that the parent institutions were sensitive to the work of their graduates.

Basedow opened his Philanthropinum (Dessau) in 1774 and included knightly exercises, dancing, fencing, riding and vaulting the live horse. Saltzmann (a pupil from Dessau) opened his school at Schnepfenthal in 1784, and like Basedow, adopted methods and materials to suit the capacities and interests of children in Arts, Sciences, Manual Work and Physical Education (McIntosh, 65:197). Gymnastics were of the old Greek Pentathlon type and games, recreational activities and military drill. Natural obstacles were used, like ropes, beams and climbing poles. Simon became the first specialist teacher of physical education at Dessau and devised Greek gymnastics for the young boys and girls. Du Toit, his successor, added skating, swimming, climbing, hanging and walking expeditions. Guts Muths developed and

systematised their work, and published a book on gymnastics for youth in 1793. Other publications followed in 1796 and were translated into seven languages.

And A Convergence

We find the work of Guts Muths and Jahn affecting the background to Ling's initial work at the Central Institute of Gymnastics in Denmark and that of Clias (1823), Walker (1834), MacLaren (1861) and W. Morris (1882) in England (McIntosh, 65:201). The Pestalozzi, Froebel, Spiess and Jahn group affected the whole of the work in Germany and Switzerland. Spiess, for example, with eleven years in Pestalozzi's Burgdorf, and much encouragement from Froebel, integrated his form of physical education into the regular school curriculum. His influence extended from Switzerland into Germany. "Founder of all school gymnastics and gymnastics for girls in particular" (Van Dalen, 106:109). A manual for physical education in schools in Germany was published in 1862.

Jahn, whose effects on the growing Germany were tremendous, through the nationalist turnvereine movement, was unable to produce a system suitable for the growing school population. The memory of his work is to be found in men's formal Olympic gymnastics and such gymnastic apparatus as pommel horse and rings. In 1923 Dr. Charles Follen, a pupil of Jahn, founded the Boston Gym, and the Round Hill School in Philadelphia was founded by Joseph Cogswell and G. Bancroft (109, 78, 8). The last wrote a school text used in Alberta at the turn of the last century.

Ling, on the other hand, formed a focal point for many

influences, including Basedow, Guts Muths and Nachtagall. It would seem impossible that he and his followers could be unaware of the work of Pestalozzi, Froebel, Spiess, Jahn and others. It can be shown that turnplatz, common in the schools of Pestalozzi and Froebel, contained apparatus and obstacles, artificial and natural, that Ling's successors used.

Exercise for the Masses

Ling attended Nachtagall's Danish Gym in 1804 and from 1814 to 1839 was head of the Central Gymnastic Institute in Copenhagen, where initially he taught fencing and vaulting and apparatus was freely employed. Gradually activities were dropped which did not conform with scientific (medical) theories, and eventually his gymnastics consisted of free-standing work and work with light apparatus. Free-standing work appealed because he observed that: (May, 64:31)

(1) More can exercise under one teacher.

(2) Exercises did not need a large space and were not affected by the space.

(3) There was no capital outlay or maintenance costs.

(4) The entire squad taking exercise at the same time helped the promotion of strength, agility and bodily control.

(5) The execution of gymnastics by word of command reinforced the military effect.

(6) "Free movements" were more readily acceptable to individuals.

(7) They were better than "machine" gymnastics. (Machines had been made to produce resistance at this time.)

The military needs of the era affected Ling: the same needs were evident in the education of the masses of immature children in the schools of that time. Students of the Central Gymnastics Institute—DeBeton, Ehrenhoff and Georgii all opened gymnasia in London. It was Georgii who persuaded the health authorities in London to accept Ling gymnastics as a beginning to a cure for the debilitating effect of crowded living conditions in industrial areas. Georgii, too, taught Elizabeth Blackwell who went to Catherine Beecher's School for Young Women in Hartford, Connecticut (Brown, 8:52).

The London School Board was fortunate in having, eventually, the lady who became Madame Osterborg, and the development of her work was interesting when compared with the Ling-trained establishments, and teachers who remained directly connected with the National School Systems.

The Swedish system of gymnastics was developed from P. H. Ling's work by his successors—Branting, Hjalmar Ling and his sisters, as well as Rasmussen-Knudson (Van Dalen, 109). It had, as its basis, a desire to produce "an harmonious development of the whole body" (May, 64:42).

From the moment of her arrival in London, Osterborg was a success. The ground had been well prepared—aristocracy bent an ear, educational and medical people were demanding action, there were at least nine other Ling women graduates in London besides a number of influential men, e.g. Georgii. Inservice courses were instituted in 1882 and public displays given. Elementary girls and boys were affected—at first. All was free standing work for the

masses (May, 64:47).

In 1887 her "Gymnastic Tables" were produced and contained "Actions for undernourished children," notes regarding suitable clothing, voice, variation of materials, observation, manners with class, method of command, lesson plan, position and exercise (May, 64:52).

Physical Education for Young Ladies

In 1884 (Daily News, July 1884) Osterborg opened a private gymnasium in Newington, England, which contained climbing apparatus, ropes and poles suspended from the roof, springboards, parallel bars and window ladders. She completed her contract with the London School Board and went into business entirely on her own. Not for her the smelly, unwashed, half starved illiterates of the National Schools, but the finishing of refined, well educated young ladies. Her Dartford syllabus eventually included cricket, tennis, swimming, fencing, dancing (ballroom type at first, national, folk, skirt "and others"), physical training and anatomy, physiology and hygiene, slojd, remedials, field hockey, bicycling on the track and practice teaching (May, 64). Dartford had two "purpose-built" gymnasia with Swedish apparatus and one outdoor gymnasium.

Madame Osterborg was never closed to other influences. She used German apparatus. She visited the World Education Congress in Chicago in 1893 and en route visited Swedish gymnasia at the Boston Normal School, Nissen at the Washington Institute, the Baltimore Women's Institute, Dio. Lewis (Normal Institute, Boston) whose work Musical Gymnastics (ca. 1860) had been in twenty London schools for

many years, and later, Delsarte. She brought back a version of basketball from her United States trip. A member of her staff was sent to Hellerau to train for a year with Dalcroze: Ann Driver introduced Dartford girls to Dalcroze's Dance. It should be noted that she had produced for her women an amalgam of games, dance and gymnastics. The recipe was to last and last. Her exhortations for a change of attitude in her United States contemporaries and the men in the United Kingdom were to no avail. The American gymnasts would not permit games; the British male had difficulty in accepting anything but games. Indeed the last fact, and possibly professional jealousy between educational administration and the armed forces physical training schools, retarded the entry of the Swedish system into physical education in boys' schools.

Madame Osterborg and the Woman's Training Colleges of Great Britain produced graduates whose diligence shaped the physical education of teachers and their charges for generations to come.

Because so much has been written and catalogued about the British influence on Canadian physical education, Priestley's article (83) is worth noting. He said the following factors encouraged the spread of the Swedish system in Britain: (1) The enterprise of women stemming from the example of Osterborg, (2) The influence of an enlightened Medical staff of the British Department of National Health, (3) The guidance of His Majesty's Inspectors in State Schools and the adoption of official syllabuses of physical education by local education authorities and (4) The

dedication of non-specialist teachers to the cause of the under-privileged.

The Adult World Explained: Pestalozzi

What of the educators, philosophical and practical, who carried physical activities into the educational arenas of the 1800's only to lose them to the physical activity specialists by the end of the century? Comenius is a central figure in the application of a new methodology for the teaching of children: so are Herbart, Pestalozzi, Froebel, Dewey and Montessori essential to the understanding of current thoughts and principles in physical education.

Pestalozzi (1746-1827) was influenced by Rousseau and the lot of the underprivileged and illiterate child. His methods required a communal or family atmosphere in which to work. The product was to be "harmonious development of powers and faculties of human nature" (Silber, 97:200). Learning was based on sense perception and the association of words and thoughts with objects and experiences. There was to be a natural, orderly progression of growth and development. His gymnastics dealt with flexibility, agility, strength, structure and function. Because of the peculiar properties of human nature as manifested in real life (will, intelligence and practical ability) elementary education had to be divided into moral, mental and physical education; the aim being to promote unity through "educational measures arranged in psychological order." By 1809 Pestalozzi's Institute at Yverdon was Europe's cultural centre where both boys and girls were taught in separate schools (Silber, 97:211). People like Elizabeth Hamilton (1801), Maria Edgeworth (1802) and Mme. de Stael, all informed

the educated English speaking world about Pestalozzi and German philosophic literary movements. His methods spread through the Evangelists', Quakers' and Methodists' movements and many infant and elementary school societies. Unfortunately, internal dissension and strife marred Pestalozzi's later years, but Froebel, once a student at Yverdon, was able to enlarge on Pestalozzi's work (Silber, 97:212).

The Infant's Progress: Froebel

Work became much more child-centred with Froebel (1782-1852). Previously adult values had been broken down to allow assimilation by the child. Froebel believed that the concepts of feeling, thought and soul manifested themselves in life and death, and that there was an inner connection between the mind and things perceived. Interests were revealed through the child's natural activities; thus the child revealed the good as well as the bad features of his true self. Play was important in Froebel's approach, for "here feeling, thinking, and doing were united" (Brown, 8:77).

Johannes and Bertha Ronge introduced Froebel's methods to England (London, 1851). Their text A Practical Guide to the English Kindergarten (Ronge, 90) was an exposition of Froebel's system of infant training. Charles Dickens wrote an article in Household Words (Number 278, July 1855) extolling its virtues—"we exhort everyone to consult [this book] for a close insight into Froebel's system." Rev. M. Mitchell (Her Majesty's Inspector of Schools 1854) spoke of "a new era for our children" and ". . . the grand feature is occupation . . . the child produces for itself" (Ronge, 90:4).

Froebel placed love and observation of children as paramount

in his teaching. The children-gardens (kindergartens of Froebel) and turnplatz of Nachtagall, Simon, Du Toit, Guts Muths and Jahn were now part of the public as well as the educational scene. The Diems were to carry this facility into more modern times. The Ronges in their kindergarten used musical gymnastic exercises for the arms, legs, trunk and head, singing games, actions to music, dancing in pairs and songs about different kinds of work (Ronge, 90:15).

Small Children and the Trained Observer: Montessori

Maria Montessori (1890-1952) saw four areas in the education of a small child (72:114-133): (1) an emphasis on intellectual (cognitive) development, (2) encouragement of the child's spontaneous interest in learning, (3) training through the senses and (4) the recognition by observation of the sensitive periods in the growth of the individual child. These would appear to be an extension of the observations and applications of Froebel. The environment and materials she produced were much improved on Froebel's. Piaget confirmed sensori-motor training—"Sensori-motor training lies at the source of thought . . . The role of perception cannot be neglected . . ." (Furth, 33:18). Both Montessori and Piaget saw repetition as taking place when the child is forming a base for moving into abstract thought. Montessori found that egocentricity in the infant developed social and affective characteristics in relation to interaction in a prepared environment. "Movement," said Montessori, "is the servant of the whole life; the spiritual economy of the world . . . the conclusion and purpose of the nervous system" (74:48-59). She suggested and used four kinds of gymnastics:

(1) Muscular. These were to develop normal physiological movements. She felt that the "medical gymnastics" of the day were too coercive and were based on adult physiology. A playground (a turnplatz indeed) was evolved containing (72:143):

(a) The Wire Fence for upper body, left and right work.

(b) Seguin's trampolina

(c) The pendulum

(d) The cord

(e) The rope ladder

(f) The spiral stair.

(2) Free gymnastics. Marching, singing, tag, hide and seek, chasing, catching, activities with hoops, bean bags, balls and kites.

(3) Educational gymnastics. Actions used in gardening and in practical life.

(4) Respiratory gymnastics.

Montessori's early work was based largely on the work of Itard and Seguin in sensory perception and muscular activity (Gitars, 36:23). Practical application backed by knowledgeable skillful observation placed emphasis on the development of the young child from the gross activity to the refined, from sensation to perception and conception, from observation to comparison. The teaching was always in context and always in relationship to the environment. Should we be surprised if she is considered a modern exponent of the art most important in movement education—observation of and by the child?

A Major Influence: Dewey

John Dewey (1859-1951), aided by a vast increase from Froebel's day in the knowledge extant in anatomy, physiology, anthropology, psychology and sociology, turned Froebel's philosophy into a modern philosophy for Education (Brown, 8:28).

> All conduct is interaction between elements of human nature and the environment, natural and social . . . The whole organism is concerned in every act to some extent . . . The only true education comes from the stimulation of the child's powers by the demands of the social situations in which he finds himself. . . . the child's own instincts and powers furnish the material and give the starting point for all education. (Archambault, 1:67)

> The initial stage of that developing experience which is called thinking is experience . . . the fundamental fallacy . . . lies in supposing that experience by the pupils may be assumed. The fallacy consists in supposing that we can begin with a ready made subject matter . . . irrespective of some personal experience of a situation. (Dewey, 26:180)

Learning by doing, and discovery methods "are familiar terms describing an educational approach which works outwards from the child, particularly in its early years" (Munrow, 76:19). But Dewey counselled caution, for learning by experience was not automatically to be considered educationally irreproachable.

> . . . experiences may be so disconnected from one another, that, while each is agreeable or even exciting in itself, they are not linked cumulatively with one another . . . their disconnectedness may artificially generate dispersive, disintegrated, centrifugal habits. (Dewey, 27:14)

Movement Training: Cooke, Foster and Perry

Perhaps Johnstone's paper (44) may clarify one of the origins of the problem solving approach. It has been shown that a problem solving approach was no stranger to progressive educators by the 1920's,

and in some areas of Europe for many years before that. It may be shown that the use of apparatus of all kinds and descriptions in outdoor and indoor gymnasia, was made by educators in their schools in the late 18th century. Johnstone (44) claimed a new beginning in 1943 when English school inspectors Foster and Perry visited an Army Physical Training School. From here it is said, grew the idea of applying the apparatus to schools. Perry, Foster and Cooke who was an organiser for Physical Education in Bristol, England, persuaded manufacturers to mass-produce apparatus for the national primary schools, previously considered hardly worth bothering about.

For a time many teachers in the United Kingdom, thought that the provision of equipment was enough, and children were merely let loose on it. However "what emerged appeared to be a new technique of teaching" (Johnstone, 44).

> Children were encouraged to explore the possibilities of such apparatus, rather than required to practise specific activities, an approach which had for some time been typical of infant and nursery schools, and which spread upwards . . ." (Plowden Report. Ministry of Education and Science, England, 1967)

Dudgeon, Bilbrough, Jones

Dudgeon's work, as an organiser of Physical Education for the West Riding of Yorkshire, England, 1926-1950, at the Halifax Remedial Clinic with handicapped children, overflowed into the physical education class of the school child, through Bilbrough. Her "new" teaching method involved working on one's own, observing movement carefully, and teaching through interest. Bilbrough and Sophia Dudgeon's studies led them to believe that the difference in "progress" between the

Clinic and school children lay in the teaching method, and they expanded their approach into the schools. Bilbrough believed that in schools there appeared to exist a philosophy of failure. Teachers planned their work to become more complicated and difficult in order to achieve a stage where the pupil failed. Now a situation was produced which encouraged initiative, and individual ways of solving problems.

Mention has been made of educators who aided in a total educational change which recognised that children needed to do their own learning through play and activity. The transition from the drill gymnastics of Ling to Educational Gymnastics can be seen in the British Ministry of Education texts, Planning the Program (73) and Moving and Growing (72). The writings and work of Ruth Morison (78) in Educational Gymnastics gave form and substance to Laban's analysis of movement. Work in English secondary schools and women's colleges further developed these ideas using theme and total task approach.

Jones joined Bilbrough in Lancashire in 1947 and later (1951-1972) he offered courses in educational gymnastics aimed at primary school teachers. It was evident that many primary teachers hated being drill instructors and preferred to teach as they did in the classroom. By 1960 he was offering the course to secondary teachers. It was Jones who coined the words "educational gymnastics" to differentiate between his work and traditional gymnastics (Johnstone, 44). He believed it was based on sound educational principles. Bilbrough and Jones' Physical Education in the Primary School published in 1963 was essentially a practical book and was

concerned with a complete range of activities associated with physical education in the primary school. Essentially the work of Dudgeon, Bilbrough and Jones was the development of a teaching method.

Dance

There can be no doubt as to the presence of dance in education though the form and approach may alter from time to time. Nevertheless, dance appeared to have had, from pre-historic times, a thread, or threads, linking it with life, religion and education. Problems arise nowadays when dance in education claims the status of a discipline and attempts to take on the philosophic basis of Aesthetics. "To label activity as being expressive or creative does not carry with it the automatic beatification of aesthetic educational respectability" (Munrow, 76:191). Nevertheless, characteristic features of the creative process might be imagination, originality and technical skill, and it is to these characteristics and their development in children that dance has its responsibility in education. Statements of this nature can be made with little fear of contradiction, for to produce knowledgeability and competence in all dance forms is beyond the capacity of most teacher-producing institutions. What is taught is of immediate concern to teachers in Edmonton.

Delsarte and Gesture

It is to the first theorists that we turn for information regarding the evolution of dance; to Weaver (1673-1760), Noverre (1727-1810), Blasis (1797-1878) and Delsarte in particular. Their work offers an historical perspective against which to view the present

and can be said to have anticipated the twentieth century for "in dynamics Laban could only really contribute Flow" (Williams cites Juana de Laban, 112).

Delsarte (1811-1871) seems to provide the common route to European and American modern dance, and requires further study. Laban must have been greatly influenced by his work, but since Delsarte wrote little there is no way of easily judging the chief effects. His area became that of gesture and he had a world-wide reputation as a leading exponent of dramatic expression. Isadora Duncan took lessons from him and many historians consider that he was an enormous influence on American modern dance (Brown 8:34). Yet his fame and influence were short-lived in Europe and England (Kirstein, 48:286).

> Stage movement in the early 19th century was stylised, artificial and arbitrary. Opposed to this kind of acting, Delsarte created a system of movement and gestures which enabled both orator and actor to express thought and motion naturally and gracefully. '(Brown, 8:31)

The law of trinity (body, mind and spirit) he saw as a union of time, space and motion.

The effectiveness of Delsartian exponents on dance and women's gymnastics in the United States has been great. People such as Stebbins, Bishop and Birdie Larson, all of whom were concerned with women's Physical Education at the turn of the century, formed a natural link with the modern era. Stebbins combined the Swedish system into a Delsartian drill. In Shawn's view Delsarte was the founder of German modern dance (Ringle, 89; Kraus, 49:131).

Delsarte's work appears to be the first that indicates a

systematic study of all human movement (not only dance) and this became vastly more attractive to education when stated in Laban's terms. One other aspect of this recognised universality of movement was a system of notation of analysis. There had been previous systems which suppose some classification of movement. Kirstein (48:292) states that Nijinsky had an unpublished choreographic notation by which he could analyse ". . . not only dance movements but motions for sport, industrial activity, physical activity . . . from its formation can be derived canons and theories of movement which are far more revealing than anything conceived . . ."

Dalcroze: Movement Training

Dalcroze (1865-1950) played a prominent role in the formulation of modern thought on movement. In education, in a wider sense, and in England in particular, his presence was influential. His early work was in the teaching of music and he came to the conclusion that musical sensations of a rhythmic nature call for the muscular and nervous response of the whole organism. Dalcroze developed many varied exercises for the improvement of metrical precision, musical memorisation and quick reaction; for simultaneous unrelated actions with different parts, and for leading and following music with movement. His text Rhythm, Music and Education (42) contains much work which has common ground in modern movement education, in movement, dance, drama, music and gymnastics in particular. Within his own time the influence of Dewey, Ling, Delsarte, Pestalozzi and Froebel were noted in his texts. Haddow (Haddow Report, United Kingdom Board of Education, 1926) wrote the foreword to the English edition of his book, and he produced his

own form of notation. Even the terminology of his Eurhythmics, Art and Education (41) was not unlike that used today in Movement Education.

> In 1905, struck by the stiffness of the usual gymnastic movements I conceived continuous bodily movements . . . parts of the body which can move in various places and directions . . . Weight Transfer . . . Ways of moving such as Locomotion . . . (Dalcroze, 41)

Greg Mayer in an article "Modern Dance in Life and Education Today" (Dancing Times, July 1966) suggested that there had been five distinct movement theories developed over the past 125 years which were fundamental to the study of dance: (1) the analysis of gesture by Delsarte, (2) Dalcroze's rhythmical movement training, (3) the total harmonisation of the individual through investigation of human movement, by Rudolph Laban, (4) Martha Graham and her body-centred movement and (5) imaginative exploration of movement by Humphrey-Weidman.

Laban Explains the Harmony

It is difficult for the uninitiated to find a clear perspective of the effect of Laban (1879-1958) upon movement education. His associates and disciples are legion and their work apparently created the need for such texts as Modern Educational Dance (52) and Principles of Dance and Movement Notation (53). We know him primarily as a theorist and teacher. Kirstein described Laban in 1913, when Laban and Wigman were associated, as ". . . a powerful, confused, individualistic dance composer . . . a Nietzchean theorist, Wagnerian innovator dedicated to quasi-mystical attempts to enforce the supremacy of movement as movement" (Kirstein, 48:303). Laban's contribution to

Movement Education appeared to be threefold:

1. His delineation of Human Movement dimensions (Effort (50), Mastery of Movement (51), Modern Educational Dance (52), and Notation (53)) and their origin: their application by themes.

2. The specific delineation of Effort qualities ("shadow movements" of Mastery of Movement) which appear in a form vastly more acceptable and universal than Delsartian gestures.

3. The last is best expressed by quotation:

> There exists in the flow of man's movements, some ordering principle . . . the influence of the repeated performance of similar movements has on man's internal and external attitude to Life . . . Movement . . . the servant of man . . . was brought to life as an independent power . . . stronger than one man's will. (Laban, 52)

and from Ullman:

> The inner body is revealed by movement, and may be altered by movement experiences for it is provoked not only by the outside world, but is self-effected by physical, mental, emotional and spiritual natures. (Ullman, 106)

Not only do man's movements reveal the man, but apparently practice of specific movements brought specific changes in the man.

INFLUENCES FROM THE UNITED STATES

By 1889 there were three major gymnastic systems vying for the support of the school systems of the United States. Firstly that which was introduced by Beck at Harvard and Follen at the Boston Gymnasium in the 1820's based on the work of Jahn (Brown, 8:31).

Secondly, the series of exercises and stereotyped activities of the Turnvereine of the United States through the American gymnastic union. This was a direct result of the work of Jahn in Germany and had strong ethnic overtones for about 70 percent of the German emigrants had arrived in the country between the years 1850 and 1890 (Brown, 8:72). The other major system was that of Ling. It was a relative newcomer to the American scene through the Boston Normal School (1889) and the Harvard Hemenway Gymnasium (1889). There were three other proponents of gymnastics. Lewis and Beecher had produced programs chiefly attractive to women because of an emphasis on music, grace of movement and flexibility. Dudley Sargent (Harvard), by 1880 had produced a series of exercise machines for developing different muscle groups. The functional approach advocated by Sergent had a strong following (Van Dalen, 109). Aspects of all the systems remained; Ling, Jahn, Lewis and Sargent all affected the Program of Studies in Alberta.

The Boston Physical Training Conference of 1889 was called to answer the question as to which gymnastics system should be adopted in the schools of the United States. It never did solve the problem and the argument remains today as one between different philosophies regarding activity as applied to education. Was it to be education of the physical or education through the physical (Siedentop, 96:88)?

Since that time there has been a tremendous growth in the variety of activities under the umbrella of Physical Education. Physical activity, body training, physical training, military

> training, gymnastics, calisthenics, hygiene, physical culture, physical fitness, sports and games, recreation, health education, athletics, sports education, movement education . . . Some [schools] have focussed on only one activity. Others employed only one method of instruction. (Siedentop, 96:29)

By 1940 Physical Education had become a professional discipline having four areas: dance education, health education, athletics and recreation. "Foundation disciplines" were beginning to evolve such as sports psychology and sociology, exercise physiology, kinesiology and motor learning. During the last two decades there had been a tremendous growth in individual activities. Movement education imported originally from the United Kingdom, was to be considered as another activity to compete for space and time with the rest.

The tremendous growth in population and the vast increase in technology which took place from 1850 onwards led to a multiplicity of schools and courses. The general philosophy was that opportunity for all meant education for all. The state systems, therefore, tended to be non-selective and one track, with Physical Education as a subject having equal emphasis with other subjects.

The La Porte Committee (La Porte, 54) had as one of its objectives the development of curricula based on education-through-the-physical using a multi-activity program. Its findings were published in 1938 (La Porte, 54).

Parts of the monograph were the methods to be used to evaluate the programs in different schools. Time allocation was therefore a factor before comparisons could be made to La Porte's ideal standards. One criterion measurement in the score card suggested the block or unit approach as a standard to allow comparison. In a three weeks

block the students experienced ten to twelve activities yearly; in a six weeks block, from five to six activities yearly. The system was based on daily instruction and though this rarely occurred in practice the block or unit system became the accepted method whether the class met daily or once a week. The block or unit system was still accepted in Alberta as a viable method even though the reason for its origin (to allow comparison) had rarely existed. The method had dominated high school physical education in the United States and Canada for almost fifty years.

An aspect of the spectrum of Physical Education had been the dominant role played by university and high school. Major innovations have had to wait acceptance at those levels before filtering in some watered down form to the elementary school (Bookwalter, 4:53). High school teacher preparation, attitude to sports, the control of inter-school athletic competition by bodies other than educational institutions and the consideration of the elementary school child as a small version of an adult, all have prevented the early introduction of innovative programs in the elementary school. They have affected Alberta programs.

EDUCATION THROUGH THE PHYSICAL

The American Concept

The idea of using motor activities as a means of achieving the "general goals of education" was consolidated at the beginning of the century "from the philosophies and work of Rousseau, Pestalozzi, Froebel, Herbart, Hall and Dewey" (Siedentop, 96:67). Wood (115:151)

and Hetherington (39:158-165) were major contributors in the first decade. Hetherington's four phases, first published in 1910 were organic, psychomotor, character and intellectual education and became four objectives. "The Seven Cardinal Principles of Education" published in 1918 by the National Education Association were thought to contain three long term goals (health, worthy use of leisure and ethical character), of which Hetherington's phases were intermediate objectives. The work of the La Porte Committee (1927-38) on a Physical Education curriculum placed emphasis on the evaluation of these four phases and established an ideal format of presentation which has lasted until today. The physical development was to be achieved by ten minutes (ca.) of conditioning exercises and a variety of activities satisfied the neuromuscular and the social development. Emphasis on rules, strategies and histories fulfilled the mental objective. The remnants of this approach to Physical Education were to be seen in some elementary schools of Edmonton.

The Movement Concept

The basis for statements made in this section is to be found in the Department of Education and Science's (Great Britain) publication Movement: Physical Education in the Primary Years (23). Other texts have been Mauldon (63), Stanley (101), Kirchner (46) and Randall (85). The publication was written by a government agency for non-specialist teachers in the primary (elementary) schools and its emphasis was on the application of general educational principles and "an understanding of movement in the Physical Education programme" (H.M.S.O. Preface).

Three statements in Movement must be of particular interest to curriculum developers in Edmonton who have chosen a Movement approach.

> (1) That greater understanding . . . of the differences and variations in children's learning has led to the adoption of more flexible teaching methods. Recognition of a child's urge to know more about his surroundings and his willingness to persist . . . has exerted considerable influence on the content of curriculum and teaching methods. (23:3)
>
> (2) The unity of the learning process and of a child's response to a new stimulus is reflected in the greater freedom from time and subject divisions in the daily program. (23:4)
>
> (3) The role of the teacher has changed considerably from that of instructor to one of consultant and guide. (23:4)

Movement claimed a wide spectrum of human activity "from the artist's creative impulse to the explosive power of the athlete" (23:3). A child's inclination, it is said, is to be active; the child expresses feelings through movement and responds immediately to its environment by movement. It is believed that the child has "an inborn sense of purpose" gradually acquired early by grasping and releasing, by supporting of weight and by locomotion. The achieving of fundamental movements it was stated provided the urge to master ways of travelling; to discover, to extend, to invent, to delight in and be absorbed in routines and rituals; to do and to make, and by inventive imagination, to impersonate and imitate (H.M.S.O., 23:4).

> . . . a child has within him a powerful drive to indulge his capacity for movement. It is the role of physical education to reveal and extend this capacity . . . Movement is a two way channel of learning . . . a way of finding out and a form of accomplishment. It has close links with literature, science and mathematics and reinforces the contribution of music, drama and the visual arts. (23:8)

The beginnings of physical education at school were to be found early,

less clearly defined, in the child's play and then, later, in movements leading to dance, games and gymnastics. Gymnastics dealt with the wide forms of the functional aspects: body management, transference of weight, timing and strength. Dance dealt with the dynamic, qualitative aspects of space and rhythm, while games was involved with the body and its relationship with equipment and external objects in motion. The text stated that each child must be free to work within the limits ". . . of his own unique endeavour" (23:8) and pointed out that control and efficient use of the body can come about "only if the essential features are experienced and understood" (23:8).

To be versatile "children need the widest possible range of experience," so it was stated, and there must be frequent opportunities for application and practice. "Exploration, discovery, repetition, modification and elaboration are all identifiable components of the learning process" (23:12). The teacher was warned that physical, emotional and intellectual progress do not keep pace with one another (23:12), that the pace of progress was uneven and that to achieve any progress there had to be a continual reorganisation of experiences. A need for versatility in the use of time, space and equipment was clearly indicated as essential to success in the application of Movement.

Critics of Education-through-the-Physical

The American concept and Movement Education, though they may have derived from the same sources in the philosophy and practice of European educators, differ widely in approach today. The effect of

the La Porte Report (1938) produced inflexible situations which evolved into emphasis on specific activities over the years in schools where the time allocation was minimal. The same conditions may have the same effect on movement.

The attainment of any degree of fitness was questioned by McCloy (65:6). There were degrees of difference between authorities on what constitutes fitness (Updike; Larsen). Is fitness that which was meant to ensure survival (Updike, 104) or that which was connected with motor performance (Larsen, 52)?

Steinhaus (95), Bowerman (6) and deVries (25) have all linked fitness with circulo-respiratory or aerobic capacity. This has yet to take any precise form, for the developing child, in elementary school programs.

Skill acquisition, through motor learning had its dimensions delineated by Cratty (14), Smith (99), Lawther (56), Gibson (35), Wickstrom (111), Espenschade (30) from among many sources, but it was almost impossible to assess the degree of attainment of this aim, objectively, over the spectrum of activities and their attendant skills in Physical Education. "Many agencies and situations are evident in a child's life. Which were most effective?" (Siedentop, 96:96).

> The literature on the relationship of academic intelligence scores to motor learning scores . . . is extensive and . . . uniform. In general, correlations range from zero to .50 with the average being .20 or less. (Lawther, 56:138)

Physical Education may not lay a strong claim to a connection with academic attainment. H. Smith (99:29-33) points out that if, as Piaget says, sensorimotor training is basic to later intellectual operations, "then none should be deprived." Piaget (as cited by Smith)

suggests that the period starts at birth and extends to the seventh year. Delacato (15) and Frostig (32) would disagree and wish to extend the time span. Nevertheless, those authorities mentioned placed the greatest emphasis on the importance of the preschool and kindergarten period of a child's life.

From Kenyon's work (45) and that of Singer (98) there is little research evidence that participation in Physical Education programs will change habits, attitudes and values. Sportsmanship, fair play and playing by the rules are not learned by the physical act of playing the game but by close contact with those who think these values worthwhile. Munrow (76:81-104) argued that children should be encouraged to have a go, however faltering and tentative their early efforts. But, "if the long term treatment of creativity encourages the view that it is in everybody, simply waiting to come out, then . . . we do a disservice to the aesthetic side of man's life" (76:92). Creative activity is much concerned with technical competency.

> Self-expression or expressive activity are not blanket terms of approval; the programmes they describe need critical scrutiny. True aesthetic education involves appreciation of Form as well as Feeling. (Munrow, 76:93)

"Intellectual education through Physical Education," said Munrow (76:109-120), "comes from knowledge about physical activities, understanding how the Body works and knowledge in related fields." All these factors must be present to a large degree.

THE ROLE OF THE STAFF AND TEACHER

The Role of the Teacher using Movement

It was the teacher's job to see that all the components of the

learning process were present; that the child had opportunities to measure its own efforts, to imitate, to learn the whole movement, to see a good performance, to be directly instructed at times and to have ample time for practice. Knowledge (H.M.S.O., 23:14-15), for the teacher of movement, included

1. the ability to observe movement accurately and sensitively; a technical knowledge and an aesthetic sensitivity.

2. a sound basis in mechanical and physiological principles, "set against a background knowledge of psychological and motivational principles" (23:18).

3. Laban's analysis of human movement, for it provides the unity of analysis and terminology, particularly in quality of effort involved and spatial organisation.

4. a need to be clear in the demands made on children and in assessing what they are doing. "The intent underlying an activity provides the essential clue to its nature" (H.M.S.O., 23:16). This would appear to be the chief form of evaluation.

5. "considerable knowledge of specific activities should supplement movement" (H.M.S.O., 23:18).

The Role of the Staff and the School

Movement (23:18) made it clear that sound teaching stemmed directly from informed observation by the teacher but that cooperative school organisation is required for optimum benefits to ensue. Statements must be made, by the school, as to what can be accomplished and the range of experience to be offered. They should reflect the beliefs of the staff as to what they can do in the circumstances

so that each lesson can be approached with a clear idea of purpose. The responsibility for the operation of an individual Physical Education program lay on the shoulders of the individual teacher and the school must accept some responsibility for the provision of competent teaching. Competency included the provision for some written evaluation of work and records of children's progress (H.M.S.O., 23:18) so that continuity and progress are assured.

PROGRAMS AND PROJECTS

The Provincial Guides for Alberta, 1967 and 1969 (18), Manitoba, Grades 4, 5 and 6, 1969 (24), British Columbia, 1971 (19), and New Brunswick, 1966 (21) were examined as representative of opinion in the provinces across Canada.

The Guides for Alberta and Manitoba endeavoured to give the teacher maximum support while providing choice of selection of method and approach to the teacher. All three saw the basis of the teaching method as being levelled at the education of the individual "expressed through activity" (24:15). It was the role of the teacher, "to provide the learning climate . . . and through observation . . . to encourage the child to improve his performance" (24:15). Alberta's comprehensive guide had already been augmented by "Resource Units" in gymnastics which provided methods and materials for numerous lesson plans and the supplement "Dance in the Elementary School." The initial guide saw the necessity to fill the gap between objective and the teacher and child by presenting sample lesson plans in the non-prescriptive guide and supplements.

The British Columbia Guide and Resource Manual made its situation quite clear in the introduction (19:1).

> It is a format only for curriculum design. . . . anticipated that [it] . . . will provide the necessary information to permit educators to adapt. . . . It presents a series of resource books.

It accepted the unifying design in the division of elementary school Physical Education into the three parts of gymnastics, games and dance and it offered programs in these three areas at two levels, those of the "traditional" and those of the "creative." Apparently it was possible, therefore, to permutate areas and levels. It may be relevant to enquire whether the unifying influence of Laban terms still could exist under these circumstances.

Manitoba's five booklets (24), Teaching Methods, Gymnastics, Games, Rhythms and Dance and Related Activities sections made for easy reference and contained information similar to that of British Columbia (19) and Alberta (18). Each guide made reference to the basis of curriculum planning in different ways but all referred to the characteristics of children, the way they learn, the elements of the activity or discipline. Society, the learner and the subject are all present.

New Brunswick's Guide (21) is typical of provincial guides prior to the acceptance of Movement Education by provincial administrators. It was based on two texts, Ontario Department of Education (22) and Chatwin (12). Each reflected the American concept of multi-activity programs, division I presenting eleven activities and division II suggesting nine. Movement Education is noted in Junior Division (22) as an additional unit. The New Brunswick Guide, unlike

the others, suggested that a comprehensive testing program is possible at the grades III and IV levels and included the names of a number of fitness tests, sports skills, attitude, swimming and posture tests (21:14). Since 1969 New Brunswick has been involved in the revision of its elementary program. The Final Report (November 1973) of the New Brunswick Teachers' Association Physical Education Curriculum Committee contained pertinent remarks regarding the adoption of Movement Education in total in the province. "Movement . . . means more equipment and space, for it is Physical Education for all. More time means more space, more equipment and more capable, trained teachers. In an economically poor province these are decided disadvantages." Recommendations are added which include an emphasis on a variety of equipment, the construction of adequate space in new buildings and the use of space in the present schools. The crux of the matter, according to the Report, lies in the education and training of teachers, especially specialists. (21: Recommendations 7, 8, 9 and 10, Final Report.)

Financial stringencies and problems connected with the provision of adequate time, space, equipment and supplies have led five schools in New Brunswick and a number in Newfoundland, to investigate certain programs aimed at specific behavioral objectives. These programs are discussed in the next two sections.

The McKenzie Project (62)

The program was developed as part of a research project "designed to [illegible]te the concept of individualised instruction at the elemen[illegible]ool level" by classroom teachers of the McKenzie elementary sc[illegible] Victoria, British Columbia, in consultation with

resource personnel from the Faculty of Education, the University of Victoria. The Rationale (Peake, 62:3) contained such statements as:

> Physical Education . . . directed play . . . is movement . . . and the child uses it as his most effective means of communication and expression. . . . Recent findings . . . suggest there is a relationship between physical education type activities and intellectual type learning. . . . Young children learn by doing, by movement, by experience and by communication and that . . . there is empirical evidence to suggest that perceptual and intellectual abilities develop from motor maturity.

Volume I contained a basic model of instruction, the program and its purpose, the rating scale and method of application. Volume II contained seventy sequentially planned lessons suitable for grade 1 and a coded list of additional activities with which to enrich lessons, for those who needed the enrichment. The author stated forty-seven behavioural objectives as being desirable goals for children of kindergarten through grade 2 ages and that the presence or lack of these objectives may be detected by a battery of an eight-item perceptual motor rating scale. He suggested that the lessons provided in Volume II should be used, the class tested using the perceptual motor rating scale found in Volume I and any discrepancies which had become obvious should be rectified by using an enriched program augmented from the coded list of additional activities.

The authors claimed that it was a physical education program based on behavioural objectives, having a program and a testing instrument easily understood and administered by the non-specialist classroom teacher. In essence it was a program, in a developmental stage, which attempted to define and improve upon perceptual motor disabilities.

Physical Education Curriculum

Physical Education Curriculum for Elementary School Grades (108) was composed of a series of programs of activities, "child-centred and stated in behavioural terms" (Van Holst, 108:3). They had been formed into separate teachers' handbooks for kindergarten through grade three. Four, five and six were still in the developmental stage. As Vogel stated (110:72):

> A review of pertinent literature revealed a substantial gap between research evidence and what is eventually practised in physical education. It was apparent that a primary need in physical education was to establish a systematic method of selecting, organising and evaluating curricular content so that relevent knowledges, skills and values could be incorporated into the teaching-learning situation.

The texts were based on the work of the Battle Creek Physical Education Curriculum Project (1969) in which a selected team from the Battle Creek Public School System and the Physical Education department of Michigan State University engaged in developing, implementing and evaluating a model curriculum for Physical Education at elementary and secondary levels. Van Holst was a member of that team and has revised and developed the team's work in order to produce this series of booklets.

The original project teams' objectives were to (1) identify elements necessary to develop a curriculum model, (2) organize the content of the model and (3) develop an exemplary program. The first two were achieved by the logical sequence of (1) recognizing a need, (2) a tentative philosophy, (3) criteria for selecting a body of knowledge, (4) identification of the body of knowledge, (5) revision of philosophy, (6) master plan, (7) scope and sequence, (8) content units

and (9) sequential lessons.

The presentation of the curriculum model was organised through four themes or statements (Vogel, 110:73).

(1) Man's performance and health are modified by adaptions made in response to stressors.

(2) Human development is characterised by an orderly progression; the onset and rate of pace differs.

(3) The interrelationship between body structure and function sets the boundaries of man's potential for movement.

(4) The interaction of the individual with culture and society influences his participation in physical activities. (Vogel, 110:74)

The content of the main statements was organised into key ideas, sub-key ideas, statements and substatements, each one clearly supported by evidence and then transposed into general program objectives, outcomes and major behavioural objectives.

The materials were then implemented in the Ontario Public Schools and were adjusted and revised to the appropriate developmental level of the children. "The completed curriculum materials are child centred with objectives stated in behavioural terms" (Van Holst, 110: 3).

The format of the texts served two purposes. One section was designed for the specialist and consisted of behaviour objectives and social learnings "sequentially arranged at appropriate levels," so that the teacher could arrange the experiences. The second section made suggestions regarding teaching methods and learning situations which had been found useful with children. The author claimed that the experiences followed a simple-to-complex, concrete-to-abstract set of sequences so that a child may move rapidly until its

developmental level was reached.

Physical Education was defined by the project team as:

> That portion of the educative process which utilizes physical activity as a primary means of influencing the psychological, the intellectual and social as well as the physical development of the individual to effectively meet and adjust to the demands of a changing society. (Vogel, 110:75)

Van Holst in the Introduction (108:3) to his texts reminds teachers that "activities are merely used as tools in the teaching-learning situation." They were to be considered as means and not the ends themselves.

The Vanves Experiment

In October 1969 the French Ministries of youth and sport, and education specified that approximately six hours of school time should be given to the students of the elementary schools of France for Physical Education (MacKenzie, 62:4). This move, which was completely at odds with the academic atmosphere which permeated French schools, originated from experimental work commenced at Vanves, a part of the suburbs of Paris (MacKenzie, 62:1). Vanves had a small school of about 250 students and in 1951 became the experimental ground for work in Physical Education. Less than two hours a week were given to students for Physical Education and Recreation before the experiment commenced. Classes were chosen from the student body and a significantly revised timetable was imposed aimed at "altering the intellectual, physical, cultural, social and other educational components" (MacKenzie, 62:1). The experimental classes did their academic work in the morning with a short period of study in the late afternoon or

early evening. The whole of the afternoon was devoted to a daily session of Physical Education, art and music. The time given to Physical Education lay between seven and eight hours while academic subjects retained approximately twenty hours. Comparisons made with control groups eight years later more than confirmed the Vanves hypotheses.

> Not only were the health, fitness, discipline and enthusiasm superior in the experimental schools but the academic results surpassed those of the control classes [illegible] better balance of educational activities resul[illegible] in better performance all round. (MacKenzie, 62:)

The experiments of a long term nature were continued in France in other schools, Brussels and in Japan, "with similar results" (MacKenzie, 62:3). MacKenzie cites (p. 3) the remarks gained from Dr. H. Perie, chief of the medical services of the French Ministry of Youth and Sports.

1. Doctors and educators now think alike . . . physical education is an integral part of education, perhaps even the main part.
2. Scientific research into the long term effects of physical education confirm that
   (a) it promotes the growth of children
   (b) it promotes the health of children
   (c) it promotes motor development.
3. Those participants in the enriched [physical education] program had better performances academically, apparently being less subject to stress. The "tools of intelligence" were much keener.
4. Studies of experimental and control groups showed that the experimental groups
   (a) matured more quickly and were more independent
   (b) would adapt to changes in society to a greater degree
   (c) controlled their aggressions better.

Mme. Boes, the principal of the school in interview had this to say (MacKenzie cites Boes, 62:3):

1. Pupils enter the secondary school at least as well prepared as other students.
2. They [experimental group] are in better health, stronger, not so easily tired, keener.
3. They have better attitudes and less stress.
4. Discipline presents fewer problems.
5. Changing schools—elementary to secondary—presents fewer problems.
6. The "esprit de corps" among the teachers is improved.

Despite the lack of knowledge of the nature of the experiments, their instruments and the interpolation of the results, they should present pertinent questions to the Alberta administrators and teachers.

Among other projects which bore directly on work done in elementary schools are:

1. Suwannee Area Physical Education Project, Lake City, Florida which gave emphasis to elementary physical education and playground equipment. Five Florida counties were in the project which was exploring the benefits of a greatly expanded activity program (Journal Health Phys. Ed. Recreation, December 1970).

2. Elementary School Physical Education Project, Pullman Schools, Pullman, Washington. It had two major purposes: (a) to develop over a three year period a program using selected elements from American, English, Dutch, German and Scandinavian programs and (b) to analyze the effect of the three year program with respect to physical fitness and motor ability (Journal Health Phys. Ed. Recreation, September 1971).

SPACE, FACILITIES AND EQUIPMENT

Outdoor Space and Facilities

Perhaps the most important step taken by the Edmonton City Municipal Corporation and School Boards was that of combining their effort to plan parks, recreational sites and school sites. Eckbert (28:101) noted the involvement of city recreation committees in the purchase and use of land for local community use as early as 1920. The latest agreement in 1966 (due for revision) was indicative of the importance all parties placed on the preservation of open spaces for instructional and recreational use centred around the schools, which in themselves are used by the community.

The Agreement states (paragraph 2(1)) that the School Boards shall purchase the school sites and the ground required for all school purposes on junior high and elementary school sites only. The city shall purchase land for parks and recreational purposes whenever possible "adjoining such junior high and elementary school sites" (paragraph 2(2)). It made provision for a Joint Planning Committee of six, two from each of the Public School and Separate School Board and two from the City Parks and Recreation Branch.

Paragraph 4(1) of the agreement required the boards to make the school buildings available to the city on weekends, holidays and on school days after 6 p.m. until 11:30 p.m. or as shall be provided. Special provisions were laid down for Cubs, Brownies and young children's activities after 4 p.m.. Paragraph 5(1) states that the city shall make its parks, recreation areas, buildings and facilities available to the boards from 8 a.m. to 6 p.m. except for hockey rinks

which shall be available from 8 a.m. to 4 p.m. Maximum usage was to be arranged through the Joint Planning Committee and no charge was to accrue to the boards.

Paragraph 6 requires the city to be responsible for the cost of planning, developing and maintaining school grounds "including fences, goal posts and sports structures." The cost of any damage done to the property was to be paid by the party (city or boards) responsible for the activity from which the damage resulted.

Present plans required an elementary school in each neighbourhood of 4,000 to 6,000 people. According to Edmonton Parks and Recreation Department's Master Plan, 1970-1980 each school must have 2.5 acres minimum for the school site, 6.5 acres minimum for a playfield and additional parkland of 7.5 acres which may be adjacent to the school. The total open land available adjacent to the site could be 16.5 acres of ground or more.

The Guide (18:18) which is not prescriptive, asked for an area of at least five acres for the first one hundred students and an additional acre for every one hundred students. Hard surface areas were mentioned as being necessary around crush areas and for wet days. An area of fifty square feet per student was suggested.

The Pennington Report (81) asked that the quality of the environment be of a high standard. The British Association of Organisers and Lecturers (7) suggested that there should be a covered area for outdoor play in adverse weather, an area for sandpits, an area for water play, mature trees should have hanging apparatus from their branches and that natural hillocks should

be preserved. The British Columbia Guide (19) states, too, that covered hard-top areas should be provided as well as adventure playgrounds. The Alberta Guide (17) required the grounds to supply soccer and baseball fields of regulation and non-regulation size, rinks for skating and boarded for hockey and areas provided with apparatus for climbing, swinging and creative play.

Indoor Space and Facilities

The specifications laid down by the Edmonton Public School board provides that a category C school (elementary) shall have, these areas depending on the number of stations.

1 station	2,400 sq. ft.	Storage 200 sq. ft.	Stage 800 sq. ft.
2 stations	3,840 sq. ft.	+ 100 sq. ft.	———
3 stations	5,760 sq. ft.	+ 100 sq. ft.	———
4 stations	7,680 sq. ft.	+ 100 sq. ft.	———

Changing rooms, and their washrooms, shower and drying rooms were not considered necessary.

Category B schools (elementary-junior high combined) had larger specifications for gymnasia—1 station: 3,840 square feet; 2 stations: 4,800 square feet with the service facilities of changing, wash and shower rooms. In each category provision was made for an instructor's office of 120 square feet.

The ceiling height for category C stations was to be 18 feet, the minimum width of 40 feet dictated a length of 60 feet for a one station gymnasium. Category D schools of four rooms or more could only qualify for a multipurpose room of 1,600 square feet. Additions to category C would be of this nature.

The Alberta Guide (18) recommends: 1 station of 2,880 square feet (60 feet by 48 feet) with a ceiling height of 20 feet. Two stations could have an area of 5,760 square feet (90 feet by 60 feet). It went on to recommend the nature of walls, floors, lighting windows and acoustics and the relevant specifications and was quite specific about the provision of changing rooms and their ancilliary service areas. The American Association of Health, Physical Education and Recreation (22:84) asked for a minimum of 4,000 square feet for elementary schools with a ceiling height of 20 feet and all the ancilliary service areas. The British Association of Organisers and Lecturers (7:12) asked that indoor space should have a good and easily maintained floor suitable for bare-foot work; well lit, heated and ventilated with easy access to playground and school. "Storage space should be adequate and easy of access" (7:12).

The British Columbia and Manitoba Guides made no suggestions regarding the specifications of space.

Equipment and Supplies

The list of equipment and supplies recommended in the Alberta Provincial Guide under facilities and equipment (Appendix D) fell into two sections: that which could be expected to last with little or no maintenance for over five years and could be considered "permanent" and that which was "expendable." The major pieces of apparatus such as climbing frames, boxes and spring boards were supplied directly by the School Board. The expendable equipment or supplies were requisitioned by the school using a per capita allowance supplied by the school board. School funds, raised by the students, often augmented

the supplies fund.

All the guides and texts consulted had these remarks in common and listed a large proportion of the equipment noted in the Alberta Guide (Appendix D).

(a) There must be a wide variety of equipment and supplies.

(b) The major pieces of apparatus should include climbing apparatus and all should be capable of being moved by the students. The mats should have dimensions of 4 feet by 6 feet or be of the folding type where each section can be used separately.

(c) The portable equipment and supplies should be stored so that they are easily accessible to the students and so that little time was wasted by furniture removing.

(d) Storage rooms must be of sufficient size to allow students to move freely with equipment and have adequate cupboard and shelf space. Separate storage for outside groups was essential if community use was planned.

A SUMMARY

The first part of the chapter was given to a discussion of the background to the program in Alberta and Edmonton today, derived from a study of archival material lodged in the care of the Alberta Department of Education. The second part was a brief survey of the literature dealing with the historical background to Physical Education, and in particular Movement Education, with its activity divided into gymnastics, games and dance. Particular note was made of philosophers and educators who recognised the importance of the education of body

and mind together.

In the next two sections the literature dealing with the teacher and school staff using Movement Education was discussed. Programs and projects dealt with a number of designs aimed specifically at certain objectives thought to be within the compass of the elementary school.

A final part was presented which dealt with space, facilities and equipment as they were specified by the local authorities. Some indications were given as to what were other authorities' views of the provision of similar necessities for Physical Education.

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Chapter III

THE DESIGN: SOURCES AND PROCEDURES

THE NATURE OF THE SURVEY

The survey was envisaged as having two parts. Firstly, that which dealt with the collection of (a) facts regarding the environment in which the teacher organised and developed the program of physical education and (b) facts regarding the program and the teacher. Secondly, and most importantly, the teacher's ratings and opinions about a number of characteristics relating to the organisation, planning, development and evaluation of the teacher's program.

Kerlinger (11:411) has noted that sample surveys attempt to determine incidence, distribution and inter-relations among sociological and psychological variables, but "that the survey researcher is not primarily interested in sociological variables . . . he is primarily interested in what people think and what they do. The sociological variables are then related in some manner to the psychological variables."

Caro (4:297) has stated that among formal approaches to evaluation a distinction can be made between those emphasizing inputs and those emphasizing outputs. Inputs he would consider as those requiring data collection "obtained typically through site inspection." Outputs were the effects of efforts within a program. Scriven (24) considered "formative" evaluative concerns to be an essential of any ongoing program.

The practical basis of this survey, Popham (21:88) referred to

as belonging to the School Accreditation Model and is to be found in Evaluative Criteria published by the National Study of Secondary School Evaluation, Washington, D.C., 1963 (18).

INITIAL PROBLEMS

In order to carry out the survey, information had to be elicited from teachers and principals primarily. Certain unique characteristics which affect physical education schedules became evident.

(a) Initial visits to two schools revealed that at least half the staff taught Physical Education. Their teaching experience in the subject covered a wide range of years. The teachers' knowledge of Physical Education, its organisation and planning ranged from experience only in high school athletics to that of a physical education degree in elementary school Physical Education. It was understood that these conditions were not uncommon.

> (b) A program of physical education . . . can be analyzed to determine what idea, concept, philosophy or theory undergirds it. . . . It is true that many are developed by first stating a philosophy and then deriving goals from that philosophy. . . . Many programs, however, just seem to happen (Siedentop, 25:61).

(c) Physical Education by the nature of its origins in so many disciplines, and in the special and general activities of a variety of races and cultures, has a terminology having many roots. Evidence of this is extant in such works as McIntosh (15), Munrow (17), Brown (2), Oberteuffer (19) and Weston (30). The confusing nature of the terminology in Movement Education literature is pointed out in such papers as those of Locke (13) and Sande (23).

The problem of constructing checklists and questionnaires

which enable relatively rapid completion without lengthy individual conversations or explanatory notes was difficult therefore. It was decided that because this was an exploratory survey which placed reliance on the teacher's opinion of what was done, that as wide a list of activity names (Appendix A, Form 4) should be offered as possible. A list of activities thought to be common in the elementary schools of Edmonton was compiled. It was given to university professors, colleagues in graduate studies, two physical education specialists working in the field, and to the staffs of two elementary schools, through their principals, for their remarks, deletions and additions. The final list of activities was a composite of opinions and gave an indication of emphasis within related groups.

Initial lists, before pilot studies were instigated, required the teacher to estimate the percentage of the time spent on activities noted. This was found to be inoperable and an estimate, using a Likert-type scale was substituted, based on whether the activity was used Seldom, Moderately or Frequently.

INTERVIEWING AS A MEANS OF SOLICITING OPINIONS

Structured exploratory interviewing was selected because it had certain known advantages. The factual information recapitulated before each interview helped the investigator to establish a rapport—and the physical context of the program to be discussed.

Kerlinger (11:413) pointed out regarding interviews that they produce data about the respondent's behaviour which must have come from them or originated with other people. He went on to say that

interviews form the beliefs, opinions, attitudes and feelings that respondents have about objects with an estimate of their own reasons for doing or believing something. Stake (26:523) has described informal evaluation as "of variable quality—sometimes penetrating and insightful—sometimes superficial and distorted" and has noted that while respondents may suggest important leads, their biasses can never be known and the accuracy of statements is always in doubt. The effect of the interviewer on the respondent verbally or by inferential gesture is an influence which cannot be measured. A further disadvantage for this type of study, is that the length of time which must be given to each respondent affects, adversely, the size of the sample. Wrightstone (31:155) states that the results can rarely be treated in a qualitative manner.

Open-ended items were included in the interview schedule to allow probing for lack of knowledge and to clear up misunderstandings and ambiguities. This was not always possible to both parties' satisfaction within the time limitations given to each interview.

An attempt was made to construct funnel-type sets of questions whereby, "the funnel starts with a broad question and narrows down progressively to important specific point or points" (Kerlinger, 11: 484). The same technique was attempted in the order of the sections in which the questions were posed.

A schedule guide (Appendix B) was written and adhered to so that each respondent had a review of background information regarding the survey, the basis of the interview questions and the nature of the rating scale. By this means it was assumed that any bias produced

by the interviewer would tend to be of the same nature for each interview.

Suggestions regarding interviewing techniques were adopted from Hoke (10) and were used in the two pilot interviews to test the telephone contact procedures, schedule guide use and schedule use. These two interviews were tape-recorded and a summary was made from the recording. Two mature teachers, graduate students of the University of Alberta, judged the technique for inconsistencies and bias.

It was decided to condense the interviews from the tapes, and précis teacher-comments related to a specific question or questions. Comments were amalgamated where relevant and pertinent. In order to recapture the immediacy of the "teacher in a situation," verbatim comments were selected for reproduction in relation to specific questions. The same authorities chose four tapes each at random during the three weeks interview period and judged each summary for inconsistencies and bias. They reported them as consistent and unbiassed.

PRELIMINARY CORRESPONDENCE

A request to make the survey was made through the Division of Field Experiences, University of Alberta, to the Department of Research and Evaluation, Edmonton Public Schools, on February 8, 1974. A favourable reaction to the initial idea had been received from Miss Marion Irwin, Assistant Supervisor of Physical Education before the

request was made. A letter, giving permission to proceed and outlining the conditions, was received March 14, 1974 (Appendix C).

THE FIRST SCHEDULE

Other surveys, their checklists, questionnaires and schedules, used by various authorities and authors were examined. They included the self-evaluation checklist devised by the Physical Education Specialists' Council of the Alberta Teachers' Association (1), the Health and Physical Education Score Card compiled by LaPorte (12) and the theses of Metevier (16), Webb (29), Crabb (5), Enger (7), Martens (14), Hoke (10), Taylor (28), Calabrese (3) and Eckbert (6).

Surveys noted of a comprehensive nature were those undertaken by the Department of Education, Province of New Brunswick (commencing 1966), the Pennington Report, Province of British Columbia (20), the Greater Victoria School Board Physical Education Survey (8), and that of Statistics Canada (The Wicks Report) (27).

None of the standard survey forms seen were exactly suited to the needs of the situation but the Statistics Canada and the New Brunswick instruments were used as a basis for the collection of data.

The Schedule (Appendix A) consisted of four forms:

Form 1. (a) General Information regarding the School.
Enrolment. Staff numbers. Teachers of Physical Education.
(b) Physical Education Facilities.
Number and Type of Activity Spaces. Specifications of main and ancilliary areas. Service Areas.

Form 2. (a) Gymnasium Equipment and Supplies.

(b) Extra-curricular Activities.

Form 3. Outdoor Facilities.

Form 4. Personal Details of the Instructional Staff Member and the Program.

THE SAMPLE OF SCHOOLS

Table I

Number of Students in Sample of Schools (26) by Grade

Grade	No. of Schools	No. of Students in Sample	Total Population	Sample Total Pop.	
Kindergarten	20/66	628	2547	24.7%	
1	26/113	1285	5266	24.4%	Div. 1
2	26/113	1211	4921	24.6%	24.4%
3	26/113	1279	5335	24.0%	
4	26/113	1496	5976	25.0%	
5	25/113	1427	5911	24.1%	Div. 2 24.6%
6	25/113	1453	5875	24.7%	

One quarter of the 113 elementary schools operated by the Public School Board were chosen randomly from the School Directory 1973-74 published by the School Board. At the suggestion of Dr. T. Blowers, Director of Research, Edmonton Public School Board (Letter in reply to request: Appendix C) this was reduced to 26 schools.

The random sample was closely representative to the situation found in the elementary schools in general as may be shown by: (Figures taken from a School Board publication dated November 9, 1973)

(1) Table 1. Number of students by grade shown as a percentage of total grade population.

(2) the enrolment of the schools which varied from one of the smallest (94) to one of the largest (710). Four lay below the 200 mark, eight between 250 and 400, and nine more between 400 and 550.

(3) six schools which combine elementary with junior high. There are 20 such schools in the System.

(4) dates of construction of the schools. The sample contains three built before World War I (1911, 1912 and 1914). Two were shown as being constructed between World War I and World War II—typical of depression times in Western Canada. Eight schools of the sample were built in the post-war boom period 1948 to 1960. The School Board's greatest school construction period, 1960 to 1970, was represented by nine schools.

COLLECTION OF DATA FROM FIRST SCHEDULE

Each school was visited in March and an interview obtained with the principal in which the nature of the survey was explained. In all cases reactions were favourable. At the request of their principals, two schools were revisited to allow the investigator to talk to the staffs regarding their part in the survey. Sufficient Form 4's (Appendix A) were left with the principal of each school to cover the needs of the staff teaching Physical Education. Verbal instructions were given, through principals, requiring the teacher to check, only once, an instructional program activity which best described that part of the program. This was the only form with which the teacher had to deal. Completing this form took approximately ten minutes for

a non-specialist teacher as reported by the staff in one pilot-study school.

A stamped, addressed envelope was left with the principal to facilitate their return. This was delayed by the Easter Holidays and a two week Postal workers' strike. Two schools did not return any Form 4's even after a further visit from the investigator.

Two days were spent in the School Planning Department of the Public School Board offices examining school plans and noting the size of each school's activity spaces and the service areas attached to them.

Identification of each school was established by a number code. Identification of a teacher was assured by a letter code in addition to the school number.

THE INTERVIEW SCHEDULE

The original schedule was based on the self-evaluation schedule to be found in Evaluative Criteria (18).

Three major revisions took place, each new version being given to university professors, colleagues in graduate studies and, importantly, to the staffs of the two schools for their comments. No schedule was produced which satisifed everyone. Flexibility was lost when questions became specific; accuracy was lost when questions became too general.

The original schedule contained checklists and evaluations lists in these sections and was the only one to hand since this type of evaluation was not available for elementary schools.

Organization of the Program.

Nature of the Total Program.

Physical Facilities.

Direction of Learning.

Instructional Staff.

Instructional Activities.

Instructional Materials and Equipment.

Methods of Evaluation.

Outcomes.

Special Characteristics of the Program.

General Evaluation.

Recreational Opportunities.

These items formed a comprehensive picture and were descriptive of what was considered to be a well-developed [illegible]gh program in the United States.

Certain sections, therefore, eliminated themselves for they did not apply; others were removed for they were redundant within the provincial context. "Physical Facilities and Equipment" was retained as an area for discussion only, requiring no rating, for a number of teachers thought it a good idea to have a break in the interview before final evaluation. Sections such as "Recreational Opportunities" were eliminated by the insertion of a checklist on Extra-curricular Activities found elsewhere in the First Schedule. "Special Characteristics" required an overview which it was thought few individual teachers would have.

An attempt to be more specific regarding the nature of the program in the elementary schools was made by the inclusion of sections

on Gymnastics, Games and Dance. This allowed the elimination of the original section on "Outcomes."

There was much revision of the wording of individual questions in each section. Two or more questions of a broad nature were asked initially. Questions of a more precise nature followed and were related to them. The nature of the probes connected with each question were meant to open the discussion again. The original two-code procedure required for rating was abandoned in favour of one code. (Evaluative Criteria (18) and Appendix B.)

Questions under the section titles had three uses:

(1) To give structure to the interview.

(2) To provide a focus for discussion, an opportunity to clarify terms and meanings, and to identify levels of opinions.

(3) To allow the teacher to express a degree to which a provision or condition is extant or necessary.

Under the section entitled "Organisation," questions centred around the broad areas which dealt primarily with Time, Planning and the Teacher, Class Size and Evaluation. In "Nature of Total Program" the first two questions break down to those which dealt with Content (Individual Activities, Motor Skills, Fitness, Dance, Body Management, Movement Patterns), Process (Variety, Problem-solving, Sequence planning) and Socially Acceptable Behaviour.

Each section was similarly constructed with broad questions funnelling into more specific questions. An attempt was made to retain the idiom and terms used in the Program of Studies and the provincial Guide.

Appendix B contains the Schedule Guide, the Schedule, its questions, probes and rating scale.

THE SAMPLE OF TEACHERS

Table 2

Numbers of Teachers in Sample of Schools

	School Code Number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
No. of Teachers	6	8	25	20	7	23	20	20	10	27	13	21	15
Teachers of P.E.	2	6	6	12	5	11	10	10	3	20	11	12	9
Returns	2	-	2	5	-	7	10	9	1	14	9	11	9
School with J.H.		*									*		

	School Code Number												
	14	15	16	17	18	19	20	21	22	23	24	25	26
No. of Teachers	8	17	8	11	9	20	26	9	19	14	14	7	5
Teachers of P.E.	3	10	5	6	7	9	22	6	7	11	10	6	4
Returns	3	8	2	6	7	4	5	3	6	4	9	6	3
School with J.H.	*		*		*			*					

In the 26 schools of the sample there were 384 teachers of whom 223 (58.4%) taught Physical Education. 143 (64.1%) of the 223 teachers were willing to be involved in the survey.

It was believed that comparison was possible between teachers whose responsibilities differed somewhat because of (1) the characteristics of the children they taught and (2) the frequency with which they taught. An examination of the returns (Tables 1 to 5) showed that useful comparisons might be made following the main divisions (Division 1: Division 2) and further sub-division into Specialists and Non-Specialists.

Table 3

Qualifications of Teachers from Returned Questionnaires (143)

(Elements of the Sample shown in brackets)

Nature of Main Qualifications in P.E.	Totals		Division 1		Division 2	
	%		Non-Spec.	Spec.	Non-Spec.	Spec.
B.P.E.: B.Sc.(P.E.)	4.9	7	1 Sec. (1)		3 Sec. (1)	3 Sec. (2)
B.Ed. Early Childhood + Elementary P.E. Major	1.4	2		2 (1)		
B.Ed. Elementary P.E. Major	7.0	10	3 (1)	2 (1)	1	4 (2)
B.Ed. Elementary P.E. Minor	7.7	11	5 (1)	2 (1)	2 (1)	2
Inservice or Introductory Courses	24.5	35	14 (3)	9 (6)	7 (5)	5 (2)
Outdoor Education. Inservice or Courses.	1.4	2				2 (1)
No P.E. Qualifications	53.1	76	32 (6)	5 (3)	32 (5)	7 (5)
	100	143	55 (12)	20 (12)	45 (12)	23 (12)

Table 4

Sex of Teachers in Sample

		Division 1		Division 2	
	Total	Non-spec.	Spec.	Non-spec.	Spec.
Female	34	11	10	7	6
Male	14	1	2	5	6

Table 5

Classes Held Weekly

	Div. 1				Div. 2		
	K	1	2	3	4	5	6
No. of classes held weekly by Grade	15	35	29	27	37	35	29
A grand total of 207.		106				101	

The population was stabilized by making these divisions:

1. Where grades were joined together for Physical Education the higher grade present decided the statistical allocation.
2. Where a teacher took two grades, one in each division, the teacher remained a non-specialist in the higher (Div. II) division. There were no teachers who had two grades in both divisions.
3. A teacher having three grades became a specialist in the division in which two of those grades were to be found.
4. No opportunity groups were recorded as such.

In order to describe the qualifications of the teachers these statements were made:

1. A B.Ed. teaching specialization in Physical Education (or Early Childhood) required three or more full courses.
2. A B.Ed. minimum teaching specialization required less than three full courses.
3. Teachers who had taken "Introductory Courses" in a general program or "inservices Courses" were placed together under one heading. A catch-all grouping.

Of the 143 teachers, 100 taught one grade only. Of the remainder, eight teachers taught three different grades, three taught four grades each and one taught seven grades; the rest taught two grades each.

Twelve teachers were selected from each one of the four sub-groups. A total of 48 interviews appeared to be possible within the

time available to the investigator and 12 in each sub-group satisfied Remmers' remark (22:359) that though reliability increases with the number of judges, "the increase is not worth the trouble after 10 ratings have been averaged."

THE COLLECTION OF DATA FROM THE INTERVIEWS

Pilot studies had shown that the interview could be administered between one hour to one and one quarter hours. A and B sections had to be completed in half an hour for the whole interview to be completed in that time.

Teachers' telephone numbers were procured from principals in order to arrange interviews. Interviews were arranged at the teacher's convenience and took place before school, at lunch breaks, immediately after school and at homes in the evenings and at weekends. Four interviews a day with time for travel and tape transcriptions provided a ten hour day, approximately, for two and a half weeks in late April and early May. Summaries of recordings were done the same day to ensure the accuracy of the transcripts in meaning, inflection and content. The summaries were completed before any analyses of question ratings were done.

SUMMARY

The nature of the survey presented problems regarding terminology-ogy and content of schedules. The development of schedules, the interview guide, sampling procedures and data collection were discussed.

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Chapter IV

RESULTS AND DISCUSSION

The Chapter contains an analysis and summary of the information received from the twenty-six schools of the sample, found in forms 1, 2 and 3 of the First Schedule (Appendix A) and from the 48 teachers who were involved with the Interview Schedule (Appendix B).

Information relating to the actual sample of schools is to be found under Appendix D, in Table 1 and to the relevant attendant information on pages 78 and 79.

SPACE OUT OF DOORS

Chapter III, pages 59 to 63, contained basic information relating to school sites planned in conjunction with the Edmonton Parks and Recreation Department. It was at this level that initial plans were laid for outdoor space for each school and its subsequent maintenance. Five schools, to be found in the city core, built before World War II (three before World War I), were not as well supplied with fields as the rest of the schools. The minimum developed for each of the others was 9.0 acres. This consisted of the 2.5 acres for the actual site and the addition of 6.5 acres, or 1.5 acres per 1000 population, which ever was the greater. Most schools enjoyed the space provisions supplied by the addition of 7.5 acres of parkland, playgrounds, adventure playgrounds and sand lots built adjacent to the schools' fields as part of the policy. Community leagues had planned their facilities with the aid

and cooperation of the City Parks and Recreation Department to be close to the school facilities and to be part of the open area in most cases.

Information supplied by B. Prasad, Parks Planner, Department of Parks and Recreation, City of Edmonton, gave details of site characteristics taken from various memoranda. The site shape varied but a square or rectangular design was functional and preferable, having a configuration of a 6:4 ratio. Buffer strips around the schools were approximately 40 feet wide and formed about 10 percent to 12 percent of the site. These were the School Boards' responsibility and included the building, side-yard planting, parking, and paved areas. District parks, having an area of 20 acres, were to be found in close proximity to some schools and enclosed such natural features as ravines and wooded areas. District facilities close to high school sites, were often within walking distance. The cooperative assistance between School Boards and the City Parks and Recreation Departments had produced admirable amounts of space of a unique nature at times. Table 6 shows an abstract of facilities.

Fields

Soccer fields and baseball backstops were adequate, and more often, in ample supply to satisfy the needs of any one of the schools in the sample. The largest soccer fields were of 100 yards average size and between 50 yards and 70 yards in width. There did not appear to be any policy regarding the size; the criterion appeared to be the most efficient way of using the space. There were no fields especially suited to the size and ability of

Table 6

Abstract of Outdoor Facilities

School	Fields			Play		Pool				Rinks						
Code	s	b	t	ch	cl	id	od	c	p	o	c	ci	CR	al	id	od
1	x	x	x	x	x	-	-	-	-	x				x		x
2	x	x	x	x	x	x		x			x					x
3	x	x	x	x	x	x		x			x		x	x		x
4	x	x		x	x	-	-	-	-	x						x
5	x	x	x	x	x	x		x				x	x	x		x
6	x	x	x	x	x	x		x				x	x	x		x
7	x	x	x	x	x	x		x				x	x	x	x	
8	x	x	x	x	x	x		x			x		x	x		x
9	x	x	x		x	-	-	-	-			x	x	x		x
10	x	x	x	x	x	-	-	-	-		x		x	x		x
11	x	x	x	x	x	x		x			x		x	x		x
12	x	x	x		x		x	x			x		x	x		x
13	x	x	x	x	x	x		x			x		x	x		x
14	x	x	x		x	x		x		x				x		x
15	x	x	x	x	x	-	-	-	-		x		x	x		x
16	x	x	x	x	x	-	-	-	-			x	x	x	x	
17	x	x	x	x	x	-	-	-	-			x	x	x	x	
18	x	x	x	x	x	-	-	-	-		x		x	x		x
19	x	x	x	x	x	-	-	-	-	x						x
20	x	x	x	x	x	-	-	-	-		x		x	x		x
21	x	x	x	x	x		x	x			x		x	x		x
22	x	x	x	x	x		x	x			x		x	x		x
23	x	x	x	x	x	-	-	-	-			x	x	x		x
24	x	x	x	x	x	-	-	-	-		x		x	x		x
25	x	x	x	x	x	-	-	-	-		x		x	x		x
26	x	x	x	x	x	-	-	-	-			x	x	x		x

Symbols

Fields: s: soccer. b: baseball backstops. t: track and field pits and grass tracks.

Play areas: ch: chinning bars. cl: climbing apparatus.

Pool: id: indoor. od: outdoor. c: city. p: private.

Rinks: o: own. c: community. ci: city. CR: Changing Rooms. al: artificial lighting. id: indoor. od: outdoor.

-: No program offered.

elementary school children. Some goals were reduced in height from 8 feet to 7 feet but most had the full international size of 24 feet by 8 feet.

There were no football or field hockey fields on areas adjacent to the elementary schools.

Long jump and high jump pits had been dug parallel to boundaries and in ground otherwise unuseable. Most of them required more sand or a new location because of worn run-ups.

Tracks of 200 or 400 metres were to be laid in the Spring to allow running practice. All schools said that this was to occur.

Play Areas

Apparatus provided by the School Board was chiefly chinning or turning bars and climbing apparatus (jungle gyms). These were adjacent to the school, being established, usually, along the edge of paved surface areas. In isolated cases the playgrounds and sand lots provided by the Parks Department were close enough to allow their use during recesses. Usually this was not possible because the facilities were on a farther part of the open area. Nevertheless imaginative use had been made of materials, and in layout, in the Parks Department playgrounds.

Paved areas were generally of negligible proportions. Authorities differed in the suggested specifications. No one authority justified its requirements. Frequently parking lots were larger than hard-surface play areas.

Swimming Pools

Twelve schools organised visits to swimming pools at which some instruction was available from City Parks Department employees. Fourteen schools took no advantage of this provision. No school offered an instructional program in swimming. Reasons given for this were two fold: (1) the City Parks Department offered a variety of courses at accessible pools or (2) the pools themselves were not conveniently located for class instructional visits.

Rinks

Twenty-six schools used adjacent rinks at some time during instructional periods. Only six schools said that this time was used for instruction in skating and hockey practice. Twenty schools used the time as a game-recreational period. Nevertheless the provision of facilities was ample and generally well maintained. There were few complaints that facilities were not available or were inadequate when needed.

SPACE INDOORS

Three types of gymnasia appear evident. The auditorium-type whose function was originally to provide a meeting place for the community. Usually the panelling was of dark wood, the lighting of a series of 300 watt bulbs, the changing rooms small and primarily planned for theatrical use, the storage rooms built chiefly as dead storage areas from the original cloakrooms. Schools built in the 1940's and 1950's were invariably of this type and proved inconvenient to adapt to modern requirements.

Table 7

A Comparison of Specifications

	Main Activity Area	Auxiliary Activity Area	Ceiling Ht.	Storage	Changing Rooms	Instructor's Room
Provincial School Regulations	60 x 40 + m/p 1600 2400 or 3840		18	200 + 100	Nil	One for each station
Provincial Guide (Suggestions)	60 x 48 2880 or	90 x 60 5760	20	200	400 for each sex (Showers)	120 sq. ft. for each sex

m/p: multipurpose room.

Dimensions in feet. Area in square feet.

Table 8

Abstract of Indoor Facilities Used by Elementary Schools

School Code	Space: Type	Area	Floor Marks	Ceil. Ht.	Storage (Sq. ft.)	C.R. (Sq. ft.)	Wall Space	Instr's Room
1	m/p	1620-	v.l.c.	14	Cupboards	nil	nil	nil
2	a	2240	b/m.c.	18	288	nil	nil	nil
	m/p	1400-	t.v.	10	—	nil	nil	nil
3	g	2400	b/m.v.c.t.	18	200	nil	4/12	nil
	a	1200		18	nil	hil	5/12	nil
	m/p	1000		10	nil	nil	nil	nil
4	g	2400	v.l.t.	18	180	nil	6/12	nil
5	m/p	1650-	b/m.c.	10	128	nil	nil	nil
6	g	3800	b.b/m.v.t.	18	324	nil	nil	nil
7	g	2580	b.b/m.v.	22	260	nil	8/12	99
	g	2280	t.c.	18	429	nil	4/12	nil
8	g	2820	b.b/m.v.	18	324	200	8/12	120
	m/p	1050-	c.	10	220	200	—	nil
9	g	2240	b.v.b/m.c.	18	220	nil	4/12	nil
10	g	3000	b/m.v.c.	18	90	nil	4/12	nil
11	g	2400	b/m.v.c.t.	18	240	nil	6/12	nil
12	g	2400	b.b/m.	18	210	nil	3/12	112
	g	2400	v.t.c.	18	143	nil	9/12	112
13	a	3525	b.	22	200	nil	4/12	nil
14	g	3819	b.v.b/m.t.	24	300	1429s 1429s	6/12	120
15	g	3900	b/m.v.t.	22	286	nil	6/12	130
16	a	3120	b.v.b/m.	22	240	600s 500s	nil	60
17	g	2400	b.v.b/m.c.	20	144	390 390	4/12	nil
18	g	2400	b/m.c.	14	120	nil	nil	nil
	a	3900	b.b/m.v.	22	456	643s 636s	6/12	nil
19	g	3800	b/m.v.t.	22	324	nil	6/12	120
20	g+m/p	3000;900	b/m.v.t.	18	150	nil	5/12	nil
21	a(+g)	1749+	b.b/m.v.	22	80	204s 204s	nil	nil
22	g(+a)	2500+	b.v.t.	20	192	nil	4/12	nil
23	g	1960-	b.v.b/m.c.t.	14	60	nil	nil	nil
24	a	2204-	b.b/m.v.	16	150	nil	nil	nil
25	g	2400	b.v.t.	18	270	200 200	6/12	nil
26	g	3650	t.	18	120	629s 595s	4/12	120 120

SYMBOLS:

g: gymnasium
a: auditorium
m/p: multipurpose room
b: basketball
v: volleyball
b/m: badminton
t: targets
l: lines
c: floor circles
—: less than 40 ft.
+: auxiliary space
s: showers
12/12 = 4 clear walls

Schools built before 1940 had assembly halls; these had been replaced (with one exception) by gymnasia of the late 1950's and early 1960's. The earliest type had only one remnant in the sample of schools.

The third type was of the modern era where Physical Education functions had dictated the dimensions and an attempt had been made to provide storage of adequate proportions.

The construction period covered sixty-five years and successive attempts had been made to upgrade the facilities as time and needs dictated. Twenty schools had gymnasia whose main activity areas were in excess in size of those laid down by the Provincial School Building Regulations (1970). It may be argued, as do the Provincial Guide (1) and the Alberta Teachers' Association Physical Education Council's specifications (2), that they were not adequate in the first place. As had been pointed out elsewhere no authority has actually justified its space specification. They appeared to be commonly accepted figures; a basic size was 60 feet by 40 feet, this was augmented to 70 feet or 75 feet where authorities wished to enclose a full size volleyball court and three badminton courts.

Teaching Stations and Time Allocation

Table 9, page 99, showed the requirements of the sample schools under four different teaching loads; 70, 90, 100 and 95 minutes. The first depicted the average time spent by each class in Physical Education as it now exists (Table 10). The second was the minimum time that the Program of Studies (1968) required; the third was that minimum time requested by the Provincial Guide for Division I classes,

Table 9

Teaching Stations

School Code	Teaching Stations available	Teaching Stations required for: A	B	C	D
1	multi-purpose	.27	.33	.39	.36
2	audit. multi/purpose	1.01	1.21	1.44	1.33
3	gym. audit. m/p.	1.14	1.37	1.62	1.50
4	gym.	.81	.97	1.16	1.07
5	multi-purpose	.24	.29	.34	.32
6	gym. shelter	1.02	1.23	1.46	1.32
7	gym. gym.	.57	.68	.81	.75
8	gym. multi/purpose	.83	1.00	1.18	1.09
9	gym.	.26	.32	.37	.35
10	gym. playrooms	1.17	1.41	1.67	1.54
11	gym.	.57	.68	.82	.75
12	gym. gym.	.80	.96	1.14	1.05
13	audit.	.63	.76	.90	.83
*14	gym. audit.	.28(.70)	.33(.90)	.39(1.0)	.36
15	gym.	.68	.81	.96	.89
*16	audit. (stage)	.65(.97)	.78(1.25)	.92(1.39)	.85
17	gym.	.37	.44	.52	.48
*18	gym. audit.	.42(1.14)	.51(1.47)	.60(1.63)	.56
19	gym.	.75	.90	1.07	.99
20	gym. multi/purpose	1.42	1.70	2.02	1.86
*21	gym. gym.	.41(.97)	.49(1.25)	.58(1.39)	.54
22	gym. (gym.)	.70	.84	1.00	.92
23	gym.	.46	.55	.65	.60
24	audit.	.43	.52	.61	.57
25	gym.	.21	.25	.29	.27
*26	gym.	.20(.63)	.24(.81)	.28(.90)	.26

* Elementary and Junior High School

A Situation: A requirement of 70 mins. per week (actual average from all sample schools).

B Situation: A requirement of 90 mins. (As required for Div. II programs—per Provincial Program of Studies.)

C Situation: A requirement of 100 mins. (As required for Div. I programs—per Provincial Guide.)

D Situation: Half allocation (Div. II) at 90 mins. Half at 100 mins. (Div. I). As suggested in the Provincial Guide.

Table 10

Class Time in Minutes

Class time	30	40	45	50	60	65	66	70	74	75	80	90	94	100	105	120	165	180	210
Number of classes	3	1	1	6	90	3	3	35	2	3	29	16	1	3	3	4	2	1	1

Total time in 26 schools	14,450 minutes
Total number of classes	207
Average time per class	69.8 minutes

while the fourth attempted to present the situation where one half of the school population (Division I) had 100 minutes and the other half (Division II) had 90 minutes. The figures in Table 9 represent whole teaching stations and fractions of wholes and were reached using the formula noted below.

$$\frac{\text{Total population of School}}{\text{Average size of classes (25)}} \times \frac{\text{Total weekly time given to P.E.}}{\text{Total student time (1400 mins.)}}$$

The figures in brackets represent the requirements of the combined populations of elementary and junior high schools.

Two schools had difficulty in offering 70 minutes per week; three would not be able to offer 90 minutes. Six would have difficulty in offering 95 minutes per week.

Wall Space

The Guide (1:17) specifically notes the importance of wall space in the instructional program and required it to be unbroken to a height of twelve feet. Table 8 indicated that ten schools had no useful wall space available anywhere. Two schools had more than two walls. Seven schools had the equivalent of two walls; eight schools had the equivalent of one wall. Extraneous equipment such as switches, fire extinguishers, doors with projecting handles, stored equipment, chairs and nets, obstructed the remaining space.

An excellent supply of wall targets were painted at different levels on the walls of all but two of the gymnasia. Over one half of the targets were obscured by extraneous objects. The ubiquitous volleyball net hung on projecting hooks was frequently the culprit.

EQUIPMENT AND SUPPLIES

The equipment and supplies available were all of adequate quality and in good supply. The expendable materials provided from the funds made available to the school were all in excess (except in one case) of the establishment suggested in the Provincial Guide (1:18). The equipment of a more permanent nature usually consisted of a vaulting box, a bar box, a number of benches, mats, a spring board, a beat board, wall-mounted climbing apparatus and various games equipment such as standards and nets. It did not include climbing ropes in sufficient quantity (except where one or two were included with the Canadian climber or in combined elementary and junior high gymnasia), storming stands, planks, parallel ropes and hexagonal boxes.

Mats were generally of the 4' x 8' and 4' x 10' variety. Recent purchases had produced mats of the folding type having 2 foot panels which were just as heavy and cumbersome as the others for small children. The most recent purchase had been of "two by two" panel mats.

Storage

The storage areas built for the gymnasia before the last building era (1960's and 1970's) were never adequate for the job. Renovations to the buildings had provided, in most cases, sufficient shelf and cupboard space.

EXTRACURRICULAR ACTIVITIES

Table 11 depicts those extracurricular activities of some

Table 11

Extracurricular Activities

Activity	No. of Schools Involved	Grades	Approx. no. of Boys	Approx. no. of Girls
Baseball (Soft)	14	4,5,6	1228	1010
Basketball	3	4,5,6	200	200
Bordenball	1	4,5,6	100	100
Bowling	1	4,5,6	45	45
Camping	3	5,6	150	147
Canoeing	2	5,6	140	140
Curling	1	4,5,6	67	64
Deck Tennis	1	4,5,6	45	45
Floor Hockey	13	3,4,5,6	1247	1085
Football	2	4,5,6	170	---
Goodmanton	1	4,5,6	---	70
Kickball	1	4,5,6	45	45
Percyball	1	5,6	60	60
Skiing	1	K to 6	40	40
Skittleball	1	4	30	30
Snowshoeing	2	1 to 6	178	181
Soccer	14	4,5,6	1386	990
Track and Field	16			
Volleyball	6	4,5,6	746	554
TOTALS (— Track and Field)			5877	4806

standing, brought to the notice of the principal, and in many cases arranged with his help and cooperation. However it should be noted that other activities not catalogued actually took place. This was especially true among the classes of Division I, where teachers tended to be more independent, and spontaneous arrangements were common.

The policy of the administration, if not encouraging inter-scholastic competition, did not prevent a number of schools from indulging in competition in soccer, baseball, hockey and track and field. The coaching and organising were in wise hands who were aware of the undesirable nature of many senior competition aspects but were equally desirous of producing an environment where the best and most skilful of their players were extended.

PROGRAM ACTIVITIES

The activities listed on Form 4 of the First Schedule (Appendix A) were divided into four sections: Sections I, II, III and IV. Administratively this division was convenient but it also had a basis in the type of activity and its growth and development. Section I contained gymnastics, dance and games primarily using a Movement Approach. Section II consisted of activities found in guides and texts previous to 1967 and were designed primarily for Division I children. Section III were individual activities for the most part while Section IV were team games. The histograms were constructed by using the frequency which the teacher had chosen (seldom, moderately or frequently) in conjunction with the percentage of times which the activity was

programmed out of a possible 106 classes in Division I and 101 classes in Division II. In the estimation of the investigator, "Seldom," in practice, came to mean once or twice a year, "Moderately" more than two or three times a year and "Frequently" twice a week for a block or unit of time or once a week for most of the year. Only one teacher provided class or lesson outlines so that her response could be checked to provide any degree of accuracy.

A Comparison between Division I and Division II in Section I Activities (Tables 12 and 13)

Division I teachers said that they did Movement leading to games and gymnastics more frequently than any other activity. Gymnastics using apparatus and creative dance were third and fourth respectively on this list. Activities occupying time moderately were the same but in a slightly altered order.

In Division II tumbling and gymnastics with apparatus were the most popular. Creative dance was said to be done moderately 17 percent of the time and frequently only 6 percent of the time.

Activities seldom indulged in were the same in both divisions; dance-drama, formal gymnastics and modern dance.

A Comparison between Division I and Division II in Section II Activities (Tables 14 and 15)

The responses from Division I were higher in number, in this section than in any other. Division I teachers said they did throwing and catching games, chasing games, relays and contests and balance bench activities more frequently than any other. The same activities

Table 12 Frequency of Activity: Division I, Section I

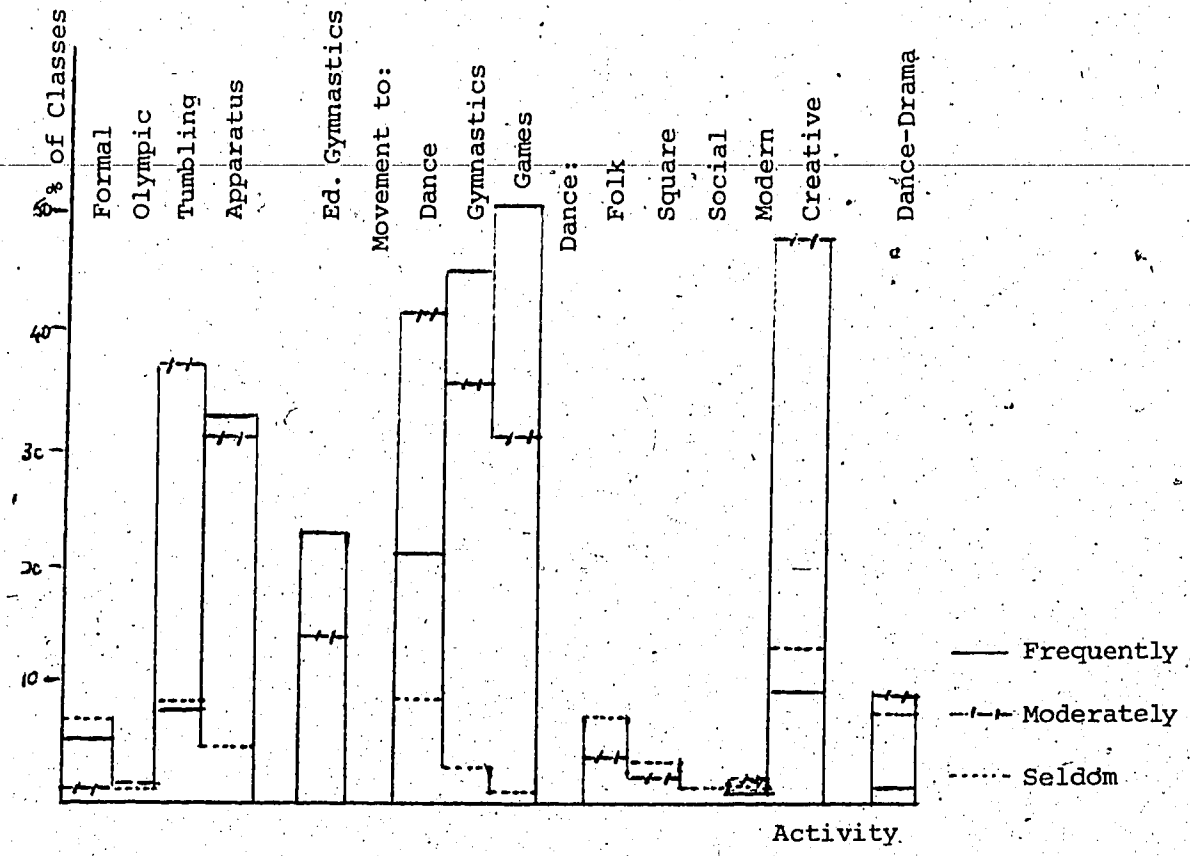


Table 13 Frequency of Activity: Division II, Section I

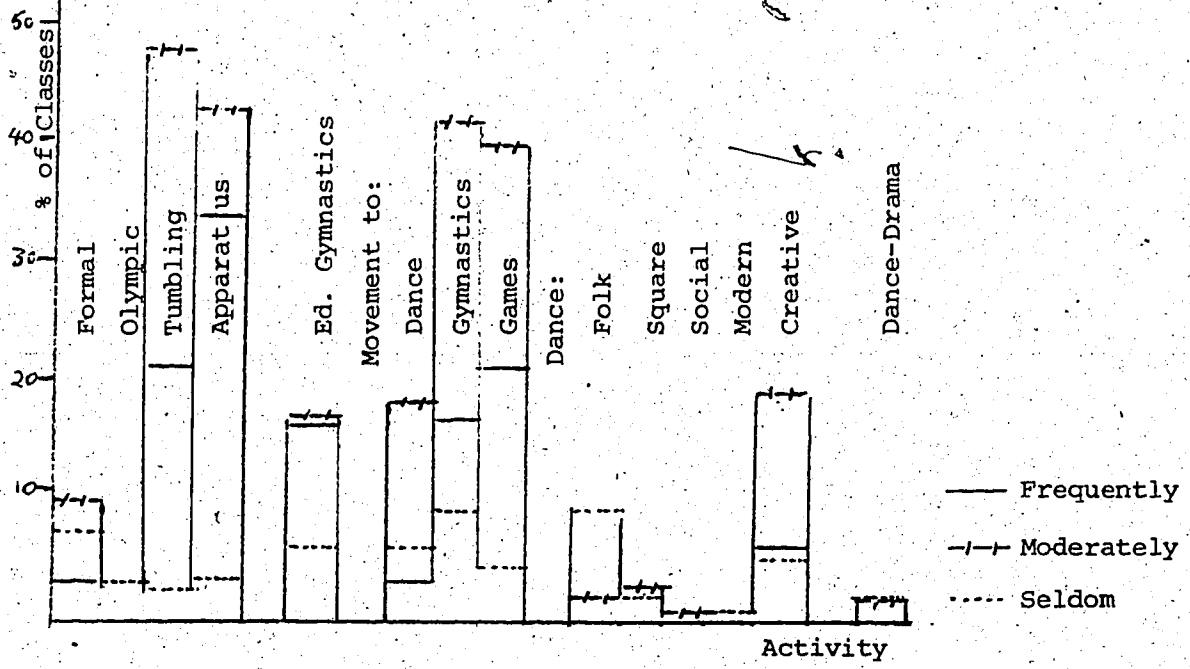


Table 14 Frequency of Activity: Division I, Section II

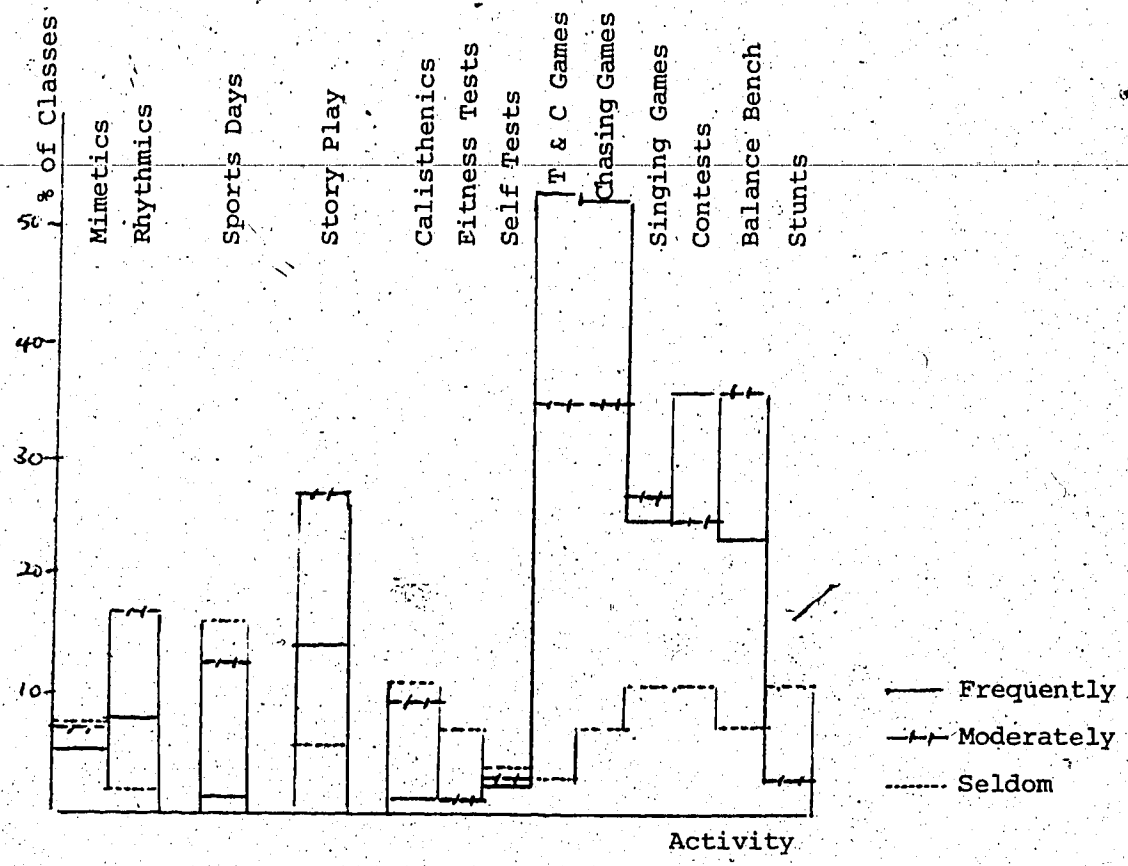
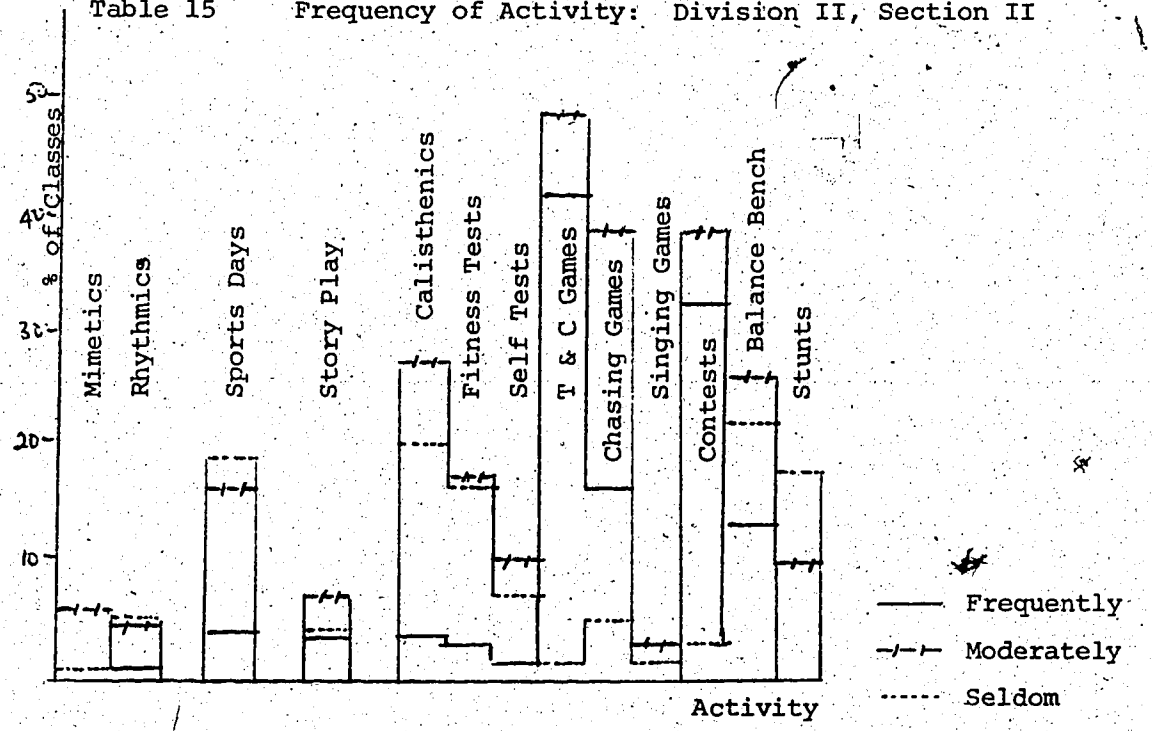


Table 15 Frequency of Activity: Division II, Section II



were said to be done to a moderate degree. Least done in Division I were self-tests, fitness tests and mimetics.

In Division II the choice was much the same though the activities had not the same popularity. Throwing and catching games, relays and contests, chasing games and calisthenics were the first four, in that order of popularity.

A Comparison between Division I and Division II in Section III Activities (Tables 16 and 17)

Skating and track and field were activities at the head of the lists in both divisions. They occupied incongruous positions as activities presented by teachers in instructional periods, for it was discovered (a) that little actual instructional skating ever took place and (b) that track and field periods were primarily of a skill-testing nature with little instruction possible within the time limits imposed by the short season. One school scheduled track and field in the Fall, in preparation for the crest competition and sports day in the Spring.

In Division II these two activities of skating and track and field had a wide spread over the three frequencies. All the other activities were indulged in by three or four classes only.

In Division I camping and orienteering did not score; all the other activities occupied some time in each of two or three classes.

A Comparison between Division I and Division II in Section IV Activities (Tables 18 and 19)

Division I classes participated least in activities listed in

Table 16 Frequency of Activity: Division I, Section III

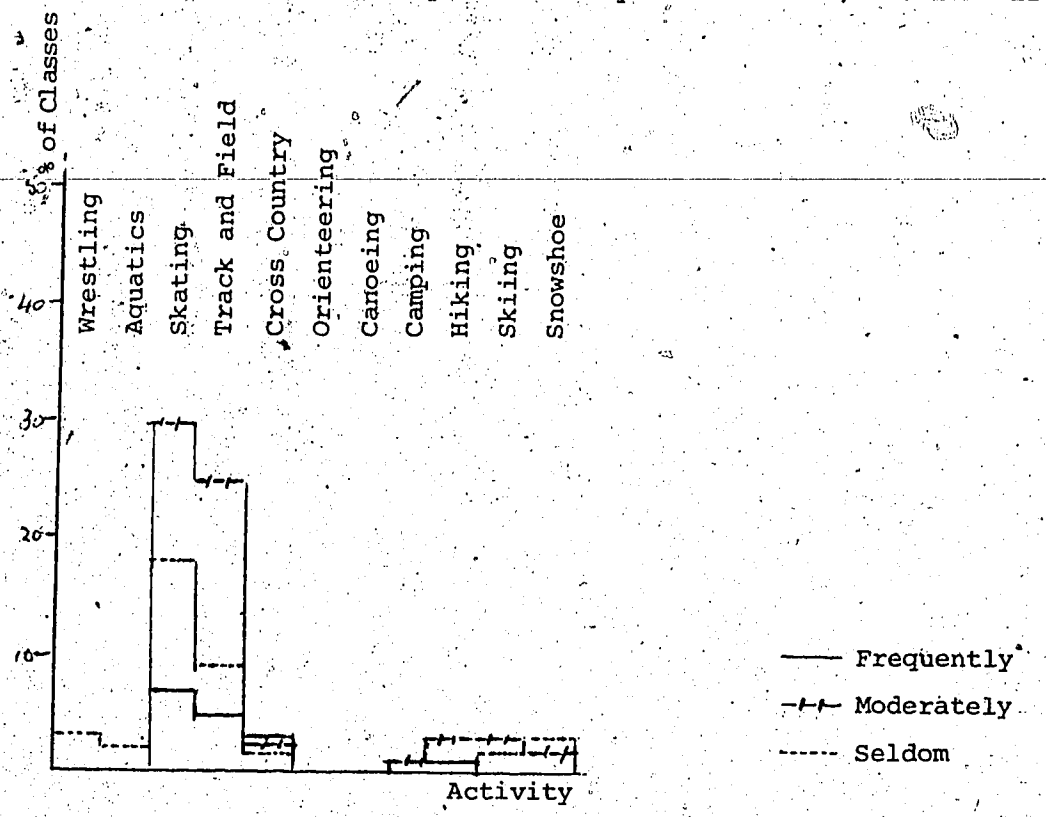


Table 17 Frequency of Activity: Division II, Section III

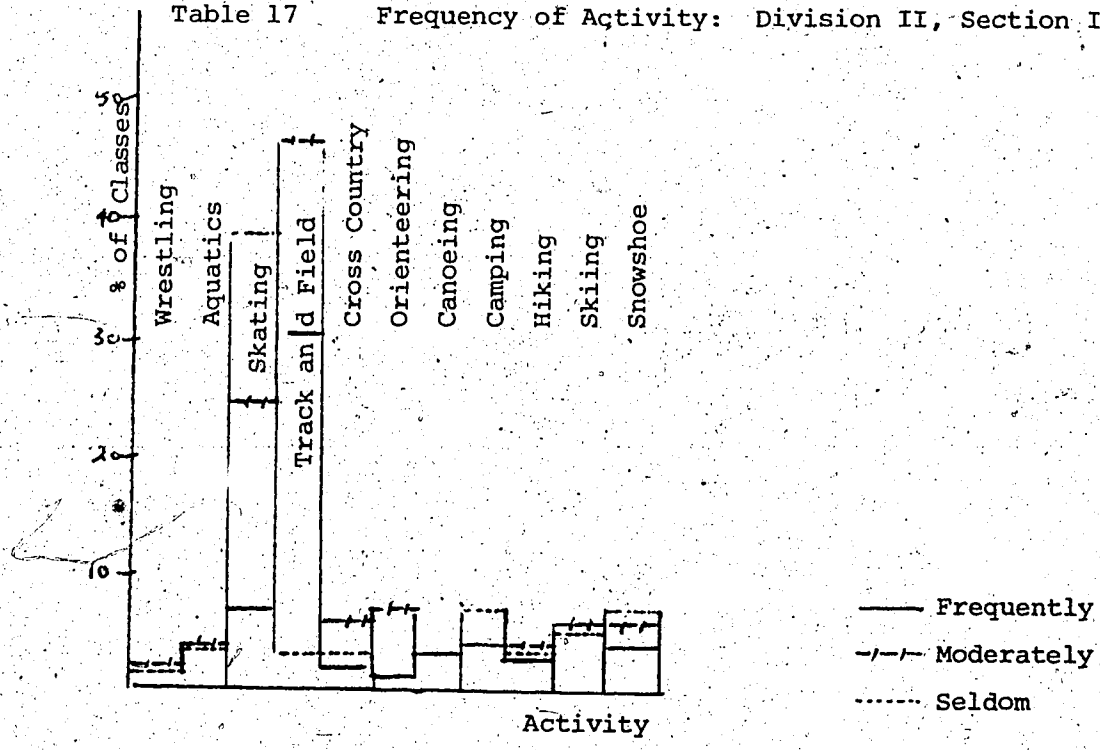


Table 18 Frequency of Activity: Division I, Section IV

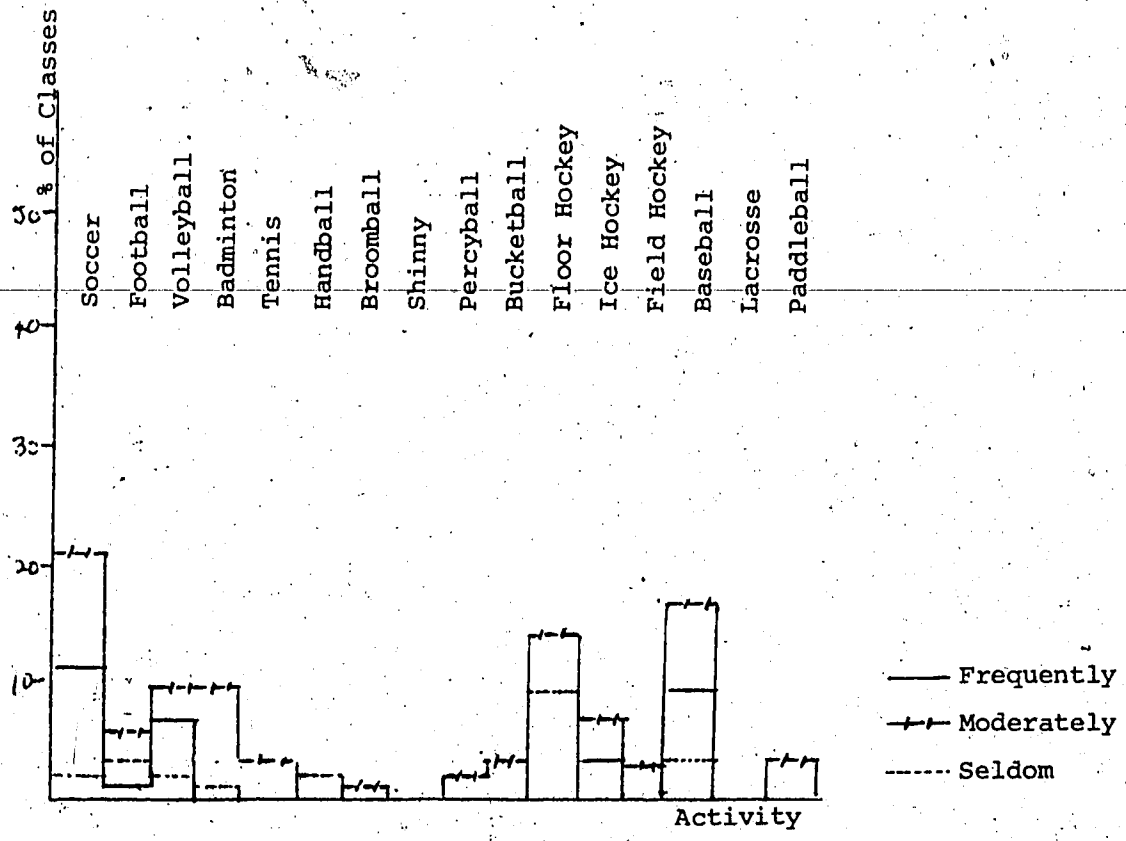
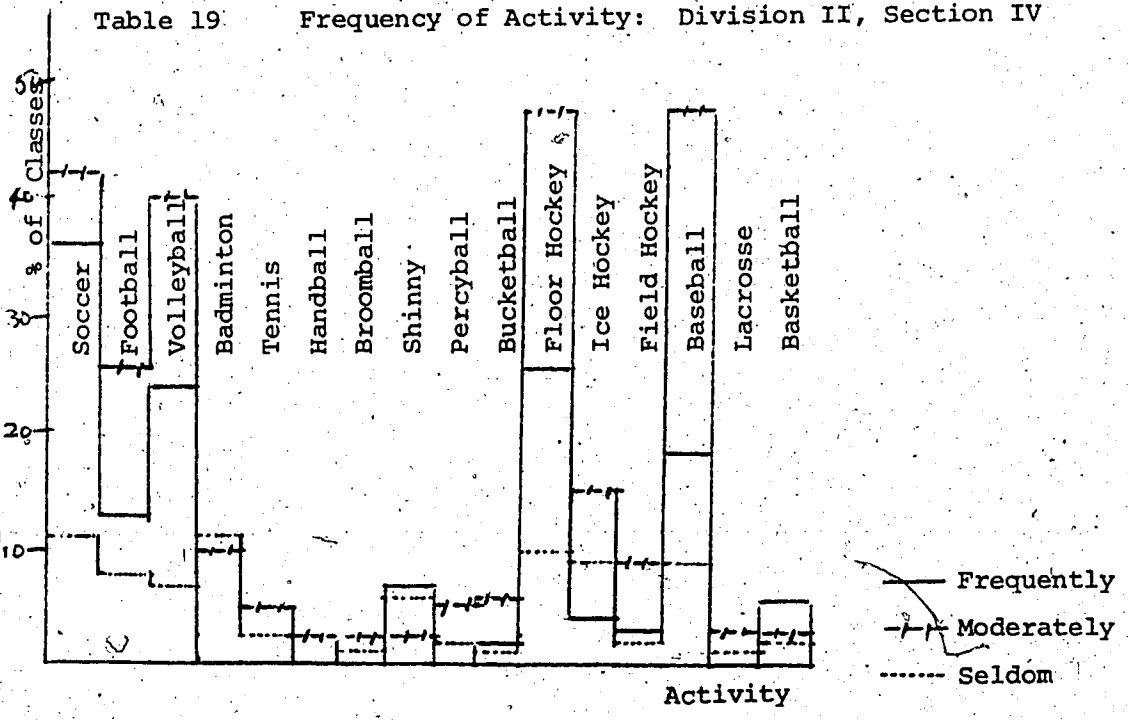


Table 19 Frequency of Activity: Division II, Section IV



this section. Eighty-four percent of Division II classes participated in floor hockey; only in Division I, Movement leading to games, was equal involvement to be found.

Soccer, floor hockey and baseball were the chief activities in Division I. Shinny and field hockey had few participants.

Division II teachers said that their classes played chiefly floor hockey, baseball, soccer and volleyball. The surprising discovery was the lowly position afforded basketball at Division II level especially in view of its importance as a game in a nation of basketball players and in a city with a long tradition in successful women's teams.

The histograms for Kindergarten and Grade 6 have been included in Appendix E. They serve, primarily, to point out the tendencies noted in the overall figures for each division. In Grade 6, Section IV activities, baseball stood out as the premier game of the schools' instructional period with volleyball and soccer close behind in popularity. In Kindergarten, Section I activities, Movement leading to games and to dance were conspicuous.

In summary, in Division I teachers said that Movement leading to games, throwing and catching, chasing games, Movement leading to gymnastics and activities leading to baseball, soccer and floor hockey were part of their programs more frequently than any others. Movement leading to dance and creative dance were significant. In Division II the teachers said that tumbling, gymnastics with apparatus, throwing and catching games, chasing games, baseball, floor hockey, soccer and volleyball figured prominently in their

programs.

Calisthenics, self-tests, fitness tests and dance in all its forms played small parts in Division I and II activities, though creative dance was significant in Division I.

INTERVIEW SCHEDULE

Tables 20, 21, 22 and 23 noted in the text are those formed from answers to the Interview Schedule in Appendix B. They are presented using the section headings of: A. Organisation; B. Nature of the Total Program; Instructional Activities, C. Gymnastics, D. Dance, and E. Games; F. Instructional Staff; H. Evaluation of Students; I. General Evaluation. The tables show the opinions of forty-eight teachers, twenty-four of whom taught in Division I classes and twenty-four of whom taught in Division II classes. Each division contains two equal groups of Specialists and Non-Specialists.

Each section was dealt with in two ways. First, under the headings of each question, the results of opinion counts were used to note special aspects. Secondly, since the interview transcripts totalled 150 pages, an attempt was made to consolidate the remarks of the teachers and to quote them verbatim only where they appeared relevant. This was done under "Discussions with teachers." Comparisons were made, where possible, between Division I and Division II teachers and between Specialists and Non-Specialists. Data are also displayed in the form of histograms and are included in Appendix F.

A. Organisation (Table 20)

This section had twelve questions each one of which was related

TABLE 20

FREQUENCY OF TEACHERS' RESPONSES

A. ORGANISATION

Opinion	Division	Teach.	Questions 1	2	3	4	5	6	7	8	9	10	11	12
E	I	Spec.	10	3	6	2	--	8	8	2	4	2	6	--
		N-S	10	1	6	--	--	5	4	--	5	--	5	--
		Total	20	4	12	2	--	13	12	2	9	2	11	--
	II	Spec.	9	2	4	3	--	6	1	2	4	1	2	--
		N-S	4	--	2	2	--	3	1	1	3	--	--	--
		Total	13	2	6	5	--	9	2	3	7	1	2	--
S	I	Spec.	1	--	3	--	1	3	2	1	5	4	--	1
		N-S	1	5	5	--	3	2	4	1	4	2	1	2
		Total	2	5	8	--	4	5	6	2	9	6	1	3
	II	Spec.	3	1	2	--	1	3	2	2	2	--	1	1
		N-S	3	1	4	1	--	4	--	--	1	1	2	--
		Total	6	2	6	1	1	7	2	2	3	1	3	1
L	I	Spec.	--	6	1	5	2	1	2	3	2	2	1	1
		N-S	--	5	2	2	--	5	2	6	2	3	3	1
		Total	--	11	3	7	2	6	4	9	4	5	4	2
	II	Spec.	--	5	4	3	--	2	4	3	4	4	1	1
		N-S	5	4	2	3	2	4	3	3	8	3	5	--
		Total	5	9	6	6	2	6	7	6	12	7	6	1
M	I	Spec.	--	1	--	1	6	--	--	4	1	2	1	2
		N-S	--	--	--	4	5	--	2	4	--	3	--	4
		Total	--	1	--	5	11	--	2	8	1	5	1	6
	II	Spec.	--	1	2	3	4	1	5	5	2	3	2	3
		N-S	--	--	--	4	6	1	8	7	--	3	--	1
		Total	--	1	2	7	10	2	13	12	2	6	2	4
N	I	Spec.	1	2	2	4	3	--	--	2	--	2	4	8
		N-S	1	1	--	6	4	--	--	1	1	4	3	5
		Total	2	3	2	10	7	--	--	3	1	6	7	13
	II	Spec.	--	3	--	3	7	--	--	--	--	4	6	7
		N-S	--	7	4	2	4	--	--	1	--	5	5	11
		Total	--	10	4	5	11	--	--	1	--	9	11	18

Teach. - Teachers Spec. - Specialists N-S - Non-Specialists
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable
Total number of teachers: 48
Number of teachers in Division I: 24; in Division II: 24.

to the way in which the program was constructed.

Question 1. Do objectives of the nature quoted in the Program of Studies appear in your program?

Results:

Forty-six teachers said that the objectives appeared to some degree. More Division I teachers than Division II teachers were sure that the objectives stated in the Program of Studies were adhered to. Two Division I teachers thought that the question did not apply to their programs.

Discussion with Teachers:

Most teachers were aware of the objectives as stated in the Program of Studies but did not plan directly for their regular inclusion in the lessons. All teachers were concerned primarily with the inculcation of motor skills and socially acceptable behaviour. Following are typical comments made by teachers:

> I've never separated Physical Education objectives from those of the total school environment except in special motor skills and physical fitness.
>
> I don't follow the program at all. I've never read it. We have our own program. . . . Moving is a part of small children. They think and move together.
>
> There is so much planning of other subjects that I don't structure it much [in Physical Education].
>
> I bear them [the objectives] in mind and consider them important. We work on socially acceptable behaviour in our intramurals and award sportsmanship trophies . . .
>
> A lot of my Grade 6's are involved in Community League games so they get the skills which are needed there. My emphasis is on socially acceptable behaviour and emotional control.

Question 2. Is the Physical Education program integrated with other school subjects?

Results:

Thirty-three teachers, of whom twenty were in Division I, were of the opinion that some integration took place. Ten Division II teachers said that the question did not apply at all.

Discussion with Teachers:

Most integration of other subject matter with Physical Education was done in the Kindergarten and Grade 1 classes. Division II classes had a number of teachers involved in the weekly schedule which made efforts towards integration more difficult, according to some.

> I like the approach of Movement very much. There might be a story which could be applied to dance. A walk might produce a snowball—a flower. A folk-dance might come from the study of a culture. (Division I)

> Children have no choice . . . nor have I. (Division II)

> I haven't got the time to give to this aspect [integration]. It isn't called for anyway. (Division II)

> . . . especially in Grade 1. The seasons, holidays, poems. (Division I)

> I'm the music teacher so we coordinate the two. I like them to walk and run in rhythm. We do creative dance by building on this. (Division II)

Two schools had advanced programs in outdoor education and allied outdoor skills. Here the natural sciences had a direct link through work in and out of school. Most Division I classes found common ground in language, art, counting and number work in general.

Question 3. Is consideration given to individual differences when assigning a child to the Physical Education class or group?

Results:

Forty-one teachers were sure that consideration was given, more of them being from Division I than Division II. Responses to Form 4, First Schedule in Appendix A indicated that only thirteen classes from Division II divided into single sex groupings for Physical Education. Eight of the thirteen classes were taken by Specialists.

Discussion with Teachers:

From teachers' remarks it appeared that where direct teaching was found, less attention was given to individual differences in ability and aptitude. This was the case, for the most part, in Division II classes. Lack of time allied to the abundance of work to cover made the situation more inflexible.

Teachers said that differences due to sex did not create an issue even in Grades 5 and 6, though, as has been noted, 13 classes became single sex classes for Physical Education at this level. However, it was stated by a number of teachers that this would receive attention when time became available.

Question 4. Are teachers able to design, cooperatively, the continuity and progressive nature of the instructional program in the school?

Results:

Opinions were divided on the issue. Twenty-one teachers believed that they were able to cooperate to some degree with their colleagues. Twelve believed that the condition was missing but needed,

while fifteen were of the opinion that conditions did not apply to the situation at all.

Discussion with Teachers:

It appeared that teachers cooperated together when the need was apparent. For example (1) when cumbersome apparatus was to be used, teachers decided to use it at the same time of day so that as little furniture removing occurred as possible; (2) when a house league game was to be inaugurated teachers decided to use a block of Physical Education lessons in which to teach the basic skills and rules. Some reasons for no cooperation were given by one teacher:

> It would need a staff meeting especially for this. We have sufficient [staff meetings]. Everybody does their own thing. There are too many people without any expertise . . . I'm a phys. ed. major and my two colleagues have had no training. Unless we team teach—and we don't, who loses in this? The children? The public who paid for my education? I do—in personal satisfaction?

Question 5. Is consideration given in the teacher's schedule to plan and organize Physical Education lessons?

Results:

General indications by the teachers were that more time should be given to teachers to plan their lessons, although eighteen said that the question did not apply to their situation.

Discussion with Teachers:

Widely diverse opinions were expressed by teachers and opinions were based apparently on whether or not the teacher considered Physical Education worthy of more time and from whence the extra time would come.

Question 6. Is the Physical Education program under the direction of an instructor who has adequate training for the post?

Results:

Division I and II teachers were almost all sure that they had adequate training; twenty-one declared themselves extensively so; thirteen of these were Specialists. Division II teachers were not as positive about their adequacy as those in Division I.

Discussion with Teachers:

Teachers appeared satisfied with the series of lessons they had produced within their environment. Objectives were sometimes unsure and evaluation of any kind often non-existant. As one Grade 1 teacher said:

> In my last school I taught three classes and preparing for them was satisfying and a joy. They were back to back and we had lots of apparatus and I knew what I was doing and it was all worthwhile. Now I cut corners [only one class]; my reasons for doing it [Physical Education] have changed.
>
> We only have 30 minutes and changing shoes takes time and getting out the apparatus takes more so I'm left with about 15 to 20 minutes. I used to change myself but now it's not worthwhile. My creative dance and gymnastics lessons were my pride and joy, now—. I'm lucky if I have time to get my sneakers on. I use the class time so that they enjoy themselves—praise-time—I must get more [praise-time].

Question 7. Is the time allocation adequate to take care of the children's needs?

Results:

Division I teachers were generally satisfied with the time allocation given to them, although eight signified that the condition was missing but needed. Division II teachers were not satisfied generally with the situation and thirteen declared that an adequate time allocation was missing but needed.

Discussion with Teachers:

Teachers, on being probed more deeply, all agreed that much more time should be given to Physical Education, but there were problems with the subject's status in schools. As teachers commented:

> Where does P.E. rate? Down with music, art and French. And the importance of reading and arithmetic? We have difficulty in keeping up to date with those. But in my first school the guy in charge of phys. ed.—he spent hours evaluating. I used to pass him my evaluations regularly. Beautiful. He knew each child so well. Even if you gave each teacher a five minute checklist they wouldn't think it worthwhile, here. It doesn't rate.
>
> I'd like more than my 100 minutes but if it means giving up my time or subject time—no sir!

Question 8. Are children able to change from their outdoor clothing into more suitable attire for activity?

Results:

Twenty teachers declared that the habit of changing was missing but needed. Twenty-four stated that it was present in their classes to some degree. Answers to the question on Form 4 of the First Schedule (Appendix A) indicated that no classes in Division I changed their clothing at all, while only twelve out of 101 classes did so in Division II.

Discussion with Teachers:

Teachers reported that children were asked to change their shoes. They did not change any garments except in gymnastics when some used shorts or slacks. Two schools changed throughout. In most schools there was no policy and most teachers did not wish to "go it alone." There did not appear to be anywhere for children to change or to leave their clothes if they wished to. Most schools had no

changing rooms. The building regulations did not require them.

> In terms of shower and locker rooms, forget it. We do have them but they are used as store rooms and in any case I am sure that they are not big enough for any one class. Change-over time between classes would be chaotic. It means that our 6's when they've had a vigorous class raise an ungodly stench in the classroom.

Question 9. Does the class size allow satisfactory learning situations to be presented?

Results:

Most of the teachers indicated that they were satisfied with the size of their class. Opinion was equally divided between the divisions. Teachers' opinions indicated that twenty to twenty-five was within the range of what was considered a "good" size, under the prevailing conditions.

Question 10. Are efforts made to note the progress of students for future reference in planning?

Results:

Twenty-two teachers were of the opinion that they made a note of the progress of their students to a limited extent. Sixteen were of the opinion that there was no need for this to occur.

Discussion with Teachers:

Most teachers said that rarely did they place their observations on paper except at home report time and they kept no personal record of that. A few typical teachers' comments were:

> I've no time at all for evaluating children or myself.
>
> . . . no time at all to make any worthwhile records of student progress or of my own.
>
> I'm spread pretty thinly. I'm not very sure of what is a completed activity so I cannot—do not—have to observe or

record phys. ed. accurately or minutely. Not as I do reading. I really don't know enough [about Physical Education.]

I note only those with special problems.

Most of what I note are behavioural problems and attitudes; they are sent to parents.

I have a check list which deals with various kinds of coordination. This we send to parents along with references to social development.

I make copious notes at the beginning and try to update this information each term. I note any extraordinary behaviour.

There really isn't time for this sort of thing.

I think it is important, but not so important as math, reading, writing, languages and social studies.

Question 11. Is provision made for those who are low in skills, who may have perceptual motor problems or who may have inadequate background in Physical Education to receive special instruction?

Results:

Few special classes were held for the groups noted in the question. Twenty-seven teachers, most of them from Division I, said that they made provision within the normal lesson for those students to receive special attention. Twelve Division II teachers said that the question did not apply to their program.

Discussion with Teachers:

As has been reported a number of teachers made efforts to give attention to children with problems.

Yes, we run one period a week of adaptive work with about thirteen emotionally disturbed children.

The total program approach especially in gymnastics allows me to look at problem areas and children.

Question 12. Is consideration given to the teachers' schedule for planning, organizing and supervising intramural activities?

Results:

The weight of the teachers' opinions was that the question really did not apply to their situation. There was no need for extra time to be given.

Discussion with Teachers:

Division I teachers rarely found this an issue and were seldom involved in house leagues and tournament play. What activity appeared, was of a spontaneous nature, and arranged with little fuss between the teachers. However Division II was a different state of affairs, the Physical Education period often being inextricably involved in some way with the intramural activity.

> We're not given any time in order to do this sort of thing. In track and field—this takes time—we all give up a number of noon hour periods so that children may be tested if they so wish. It is up to them—and us, I suppose.

The section on Organisation was concluded with a general probe regarding the hiring of specialists in Physical Education. Almost all the teachers interviewed were sure the children would benefit from the hiring of such people. Almost all teachers said they wanted more help.

> I can see that a specialist [in physical education] would be of inestimable value in a school. Not to take all the phys. ed. but to act as a resource person and a teacher. We really don't know enough by ourselves.

> If I gave up p.e. I'd lose a great rapport-developer.

> It would be an excellent idea if a school decided on the emphasis which was to be placed on aspects of phys. ed. You know—produced some objectives they could attain and have everybody work for these. A specialist would

> have the same effect. At the moment we go in a hundred different directions. But who cares? Changing is a case in point. The principal doesn't care to make a policy statement—nobody cares to—yet everybody knows that exercising with minimum clothing is healthful, hygienic and is most satisfying.

> Do you know that it is possible to go through E.C. [Early Childhood, Bachelor of Education] without doing phys. ed.? I think that this is outrageous. Anything than this. A resident specialist (a resource person) could be the answer. Not the best. But an answer.
>
> Consultants don't really help although it would be great if there was one for every three or four schools. But they [people] have got to have definite roles in schools before they can be taken seriously.
>
> I'd go for the specialist idea providing the person is not a jock-strap type. A resource person is needed who can relate to teachers and children. Consultants are great people; never there when you want them. It ought to be possible to get the help that you want just down the hall.
>
> I like specialists [in Physical Education], but in 1, 2 and 3 they should be consultants. A lot of my p.e. [kindergarten] grows out of something else. I'd lose—so would the children.

B. Nature of the Total Program (Table 21)

This section had eleven questions, each one designed to discover the content of the teachers' program. Discussion with teachers was limited to the first two questions.

Question 1. Are activities directed at clearly formulated objectives?

Results:

Question 1 of section A dealt with the specific objectives mentioned in the Program of Studies. This question was aimed at the immediate objectives. Forty-six teachers were of the opinion that they had objectives for each unit in the program to some degree.

Discussion with Teachers:

A dichotomy appeared to exist between the answers to this question in the interview schedule and what they said was their practice. Few teachers actually had written lesson plans; on further enquiry most said that they did not plan lessons by specific objectives. The teacher's part of some of the dialogue is included below.

> I know that they have to do with ball skills—batting skills et cetera—they need these things for all the major games. I give them opportunity to get these things. I hope they do.
>
> No not really; [any objectives?] there are more pressing things to do.
>
> I do have a theme in mind in gymnastics. My first objective in games is to see that they enjoy the game. In floor hockey my aim may be in stick-handling.
>
> The only objective I have is to improve the coordination of the child. I don't try to separate the efforts of maturity and experience.
>
> We start off [the year] with a lot of games lessons and then intersperse it with dance and then when the real winter comes we go into the gym. But even so the only way we can set up the gym is with heavy mats we cannot move and the Canadian climber. Often other activities [it is also a junior high] are scheduled and we have to get out and lose our p.e. period.
>
> I use units of activity given to me by the School Board in dance, gym and games.
>
> I plan in units and work on motor skills and fitness. With the Grade 5's I do work with specific games. With the 4's I do wide themes of catching and throwing and so on.
>
> I make plans but for a section or a month. This gives me an opportunity to be flexible. I may run through an area and then come back to it again.

Question 2. Does the program provide the child with experience in gymnastics, games and dance as a basis for the year's work?

Results:

Teachers in Division I used the three activity areas to a greater extent than those in Division II. Sixteen Division I teachers used it extensively; fourteen Division II teachers to a limited extent. Forty-seven teachers said they used all three activity areas to some degree.

Discussion with Teachers:

The details of teachers' programs were widely diverse in content and the way in which they planned their instruction that it was thought better to include a number of remarks made by teachers.

> Gymnastics and dance blend together [Grade 1] so I have them alternatively. We wrestle, we snowshoe. I am rarely held up. . . . We walk, we observe. We get outside whenever possible.
>
> Gymnastics and games alternate in blocks of one month (in the indoor season). I use the Guide and Lesson Outline given by Central Office.
>
> Games way up. The others way down. I've no idea, probably 80-15-5 [games, gym, dance] and this goes for my colleagues.
>
> I do very little in dance and work on the block system.
>
> My program is about—a period a week on games and one on gymnastics with a bit of dance thrown it. Maybe 10 percent.
>
> Indoors we started Movement and then gymnastics—straight tumbling before Christmas. Then we did some square dancing. After Christmas we did volleyball and small games—newcomb ball—and then we went back to gymnastics, vaulting and climbing. We used all the apparatus for them to get used to. We are into track and field now. I wouldn't have done it but we're kinda forced to do so by Central Office. . . . It is far too much work, it is time consuming . . .
>
> I alternate gymnastics, games and dance in this way . . . about two weeks in one . . . It depends how the children

feel. We play more games than anything else.

I prefer to work in a block. Grade 1 children cannot remember work done the week before.

Not much dance, I'm afraid. Soccer only (at first), then volleyball, then basketball. After that I alternate games and gymnastics. In the Spring we go into softball and track and field.

Games and gymnastics three quarters of the time. Dance about one quarter. I try to do a games lesson and then a gym lesson with dance being used to give variety.

I'm least efficient in dance. I find it most difficult.

Dance not at all. It is my intention [a principal] to bring dance into the school with the help of the Parks program. Why? It's available. The inclusion of gym, dance and games is not realistic . . . We want to teach activities only which all children enjoy now and have a carry-over value. They must be of a recreative nature. Activities like dance and gym are isolated areas and have little contact with the child's environment. They don't fit . . . Winter sports—swimming should be of paramount importance, snowshoeing, skis, et cetera—individual activities. Gymnastics can be used for a problem solving area but not the skills of team sports. Too much time is wasted. They must have the skills first.

I have no clearly formulated objectives.

Question 3. Are vigorous activities provided which contribute to total fitness?

Results:

Most teachers believed this aspect to be present to some degree, twenty of them being of the opinion that it was there to an extensive degree.

Discussion with Teacher:

Further probing into the question revealed that teachers believed that any form of activity contributed to total fitness. Many teachers started their lesson with a short period of calisthenics or a vigorous activity which formed, for their children, a warm-up period.

Specialists in Physical Education knew of the characteristics; very few others were aware of them. It appeared that fitness was of secondary consideration in practice though it loomed large as an important aspect of Physical Education.

Question 4. Are activities provided which promote the acquisition of motor skills?

Results:

The acquisition of motor skills was the most important aspect of all the programs according to the teachers' opinions. Forty-seven teachers stated that they made this provision, twenty-four of them in Division I and twenty-three in Division II.

Question 5. Are experiences possible in outdoor education?

Results:

It was the teachers' opinions that more was done in Division I than in Division II although the total involvement was not large overall. Eighteen teachers were of the opinion that it did not apply to school work. Three schools were extensively involved in outdoor education which used instructional periods as well as much out-of-school time.

Discussion with Teachers:

Further discussions with teachers revealed that outdoor education had a wide spectrum covering all that which could be taught best out-of-doors. It had come to mean, in the schools, outdoor activities allied where possible with other subjects. Three schools were primarily involved in raising money to finance their out-trips. One school had purchased its own bus and was busy making canoes from fibre-glass

moulds. A number of schools had acquired sets of snowshoes. Two schools had close connections with local ski clubs. All partook in the excursions run by the School Board to Fort Edmonton and a large number indulged in hikes and some camping (tenting). Most of this work was done outside the Physical Education lesson and should be classed as extracurricular activity.

Question 6. Does the teacher find the problem solving approach a practical proposition in the environment?

Results:

Thirty-seven teachers said they used this approach to some degree, twenty-one in Division I against sixteen in Division II. Six teachers stated that the approach could not be applied to their situations.

Question 7. Does the program cater to individual differences, needs and interests?

Results:

Forty-six teachers were of the opinion that their programs did provide for these differences. More of Division I teachers were of this opinion than Division II teachers.

Question 8. Is the student allowed to procede at his own best pace?

Results:

Division I teachers were sure this condition was provided for, sixteen extensively so. Ten Division II teachers made provision extensively for this condition.

Question 9. Are regular opportunities provided for children to work with a variety of equipment and apparatus?

Results:

It was the opinion of forty-four teachers that these provisions were made for their children. Others said it was missing but needed.

Question 10. Is a sequence of progressively planned lessons offered throughout the year?

Results:

Forty-four teachers stated that they planned a series of lessons to some degree. Division I teachers planned their lessons more frequently than those of Division II. The Specialists in both divisions said they used progressively planned lessons more extensively than the Non-Specialists.

Question 11. Are activities provided which promote the acquisition of socially acceptable behaviour?

Results:

Next to the acquisition of motor skills, all teachers agreed that socially acceptable behaviour was important and well provided for in their lessons.

Instructional Activities: C. Gymnastics (Table 22)

This section of the interview schedule contained eight questions and commenced with a request from the interviewer for a brief resumé of the teacher's gymnastic program. The number of responses are to be found in Table 22.

TABLE 22

FREQUENCY OF TEACHERS' RESPONSES

Opinion	Division	Teach.	C. GYMNASTICS Questions 1	2	3	4	5	6	7	8	D. DANCE Questions 1	2	3	4	5	6	E. GAMES Questions 1	2	3	4	5	6
E	I	Spec.	10	8	6	9	1	11	11	3	4	5	3	1	5	2	10	1	1	2	8	7
		N-S	11	5	3	6	--	8	7	2	5	5	1	4	5	--	6	--	1	2	8	5
		Total	21	13	9	15	1	19	18	5	9	10	4	5	10	2	16	1	2	4	16	12
	II	Spec.	9	6	6	6	--	6	5	5	--	1	1	--	--	--	8	3	1	5	2	6
		N-S	8	7	2	2	--	4	3	2	2	4	--	2	2	--	7	--	--	4	5	8
		Total	17	13	8	8	--	10	8	7	2	5	1	2	2	--	15	3	1	9	7	14
S	I	Spec.	1	3	2	3	1	1	--	--	1	1	2	3	1	--	--	1	1	1	2	3
		N-S	--	5	6	3	5	2	2	5	2	3	4	1	2	3	3	5	3	3	1	3
		Total	1	8	8	6	6	3	2	5	3	4	6	4	3	3	3	6	4	4	3	6
	II	Spec.	--	1	--	1	--	4	1	2	2	--	1	1	3	1	4	1	1	2	7	4
		N-S	2	--	4	5	--	5	1	2	2	--	2	--	2	1	3	2	2	3	5	3
		Total	2	1	4	6	--	9	2	4	4	--	3	1	5	2	7	3	3	5	12	7
L	I	Spec.	--	1	3	--	4	--	--	3	3	2	2	4	1	4	1	8	7	4	1	2
		N-S	--	1	2	1	3	1	1	3	2	1	4	4	2	3	2	3	6	2	2	4
		Total	--	2	5	1	7	1	1	6	5	3	6	8	3	7	3	11	13	6	3	6
	II	Spec.	4	3	4	3	1	1	2	1	1	2	1	2	--	2	--	5	8	4	2	2
		N-S	2	4	6	3	3	2	7	4	1	1	2	3	1	3	2	9	6	5	2	1
		Total	6	7	10	6	4	3	9	5	2	3	3	5	1	5	2	14	14	9	4	3
M	I	Spec.	--	--	1	--	--	--	--	--	--	--	1	--	--	1	--	1	2	1	--	--
		N-S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1	--	--	--
		Total	--	--	1	--	--	--	--	--	--	--	1	--	--	1	--	4	3	1	--	--
	II	Spec.	--	2	1	1	--	1	--	2	--	--	--	--	--	--	--	2	1	1	1	--
		N-S	--	1	--	1	--	--	--	3	--	--	--	--	--	--	--	--	1	--	--	--
		Total	--	3	1	2	--	1	--	5	--	--	--	--	--	--	--	2	2	1	1	--
N	I	Spec.	1	--	--	--	6	--	1	6	3	3	3	3	3	4	1	1	1	4	1	--
		N-S	1	1	1	2	4	1	2	2	3	3	3	3	3	6	2	1	1	4	1	--
		Total	2	1	1	2	10	1	3	8	6	6	6	6	6	10	3	2	2	8	2	--
	II	Spec.	--	--	1	1	11	--	4	2	9	9	9	9	9	9	--	1	--	--	--	--
		N-S	--	--	--	1	9	1	1	1	7	7	8	7	7	8	--	1	3	--	--	--
		Total	--	--	1	2	20	1	5	3	16	16	17	16	16	17	--	2	3	--	--	--

Teach. - Teachers Spec. - Specialists N-S - Non-Specialists
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable
Total number of teachers: 48
Number of teachers in Division I: 24; in Division II: 24.

Question 1. Does the gymnastics lesson provide skills and movement patterns fundamental to all human movement?

Results:

A total of forty-seven teachers, thirty-eight of them extensively, gave it as their opinion that their programs provided these conditions. All the teachers in Division I were of this opinion.

Discussion with Teachers:

There appeared to be much misunderstanding as to what constituted fundamental movement patterns and skills.

> Grade 3 gym? We learn to do those things which define body parts and functions—something about over and through, weight from one place to another. . . . I tell them what to do.
>
> We start with just basic things. Pyramid building, forward and back rolls, head stands and handstands. Somersaults. We do a few shoulder stands in pairs. Cartwheels. A little bit of vaulting . . . Educational gymnastics? That's the stuff without spotters isn't it?

Question 2. Is opportunity given for the children to apply the concepts in a variety of situations in each lesson or group of lessons?

Results:

A total of forty-four teachers, twenty-six of them extensively, stated that this condition was provided in their programs. There was little variation in teachers' ratings of this question between the divisions.

Discussions with Teachers:

The specialists in Physical Education were aware of the inference of the question. The responses were generally of an indeterminate nature because of lack of knowledge.

> [What do we do?] The typical rolls and curls and so on and so forth. Aerials, head stands, handstands—tuck their heads and so on. I guess you'd call it formal work.
>
> We have stations—they spend some time familiarizing themselves—5 of 6 of them. They learn lots of things. I decide when they've had enough. I watch the time and divide by five.
>
> I use the brown guide and the consultant has given me lessons to follow. I know that it [the Guide] contains a problem approach but its effect can be lessened. There are [given] a number of tasks of increasing difficulty at each station. The students rotate through each station. Perhaps if we had a full 30 minutes they may have some experience in 2 or 3 tasks, but I don't know the criteria which decides the finished article. We may stay on this for a month or six weeks until they have experienced all the tasks. Of course the stations are chosen [for them], the time limits are chosen, the nature of the task of the action variety. The child does not have all that much freedom of choice!

Question 3. Are opportunities given to explore, experiment, select and to complete sequences of movement patterns?

Results:

Forty-four teachers, only eighteen of them extensively, said these factors were important elements in their programs. Both divisions found them of equal importance; twenty-three of the Specialists rated the four factors of importance.

Discussion with Teachers:

The time factor was the predominant problem in putting the aspects into operation. There was not sufficient time.

> The grade 1's need introducing to new apparatus and this takes a little time before they can use it properly—before tasks become realistic. What you can accomplish depends on time. All arguments become futile in the face of this factor.
>
> If they are to produce sequences, then more time must be given. It [educational gymnastics] could fail because of time [lack of]. When you are exploring you cannot put a time limit on it.

We just about have time to explore. Refinement is impossible. It [gymnastics] is a bit ridiculous really.

I don't think that I can afford the time [for educational gymnastics]. I realize that the best kind of learning is from your own efforts . . . finding something on one's own cannot really be substituted for. The same value may be placed on learning from one's peers. But all this takes time. Naturally I weigh each method carefully against the vast material to be covered in P.E. The scales come down heavily on direct teaching. An injustice is done by wasting time in discovery work; first base is never reached.

Question 4. Are wide themes developed from the child's natural activities?

Results:

It was the opinion of forty-four teachers that wide themes were developed. Division I and Division II found this to be of equal merit as did Specialists and Non-Specialists.

Discussion with Teachers:

The choice of a theme as a unit of work appeared to be well understood by teachers. They said:

You take a theme and work out 8 to 10 tasks on it. I introduce 2 at a time. The one of the preceding day is an introduction to the next time.

. . . I followed the construction of the themes. We had 8 stations. We alternated this with games for the whole of the indoor season. I directed the type of activity. If you talk about the Canadian climber you don't have to tell people what to do. They just climb.

Question 5. Are wide themes developed around the Effort factors of time, weight, space and flow?

Results:

Teachers had not preferred to base their lessons on such factors as basic themes although thirteen teachers in Division I found them worthy of note, as did five in Division II. Eleven Specialists made

most use of them. Thirty teachers said that they did not apply them to their programs.

Question 6. Are opportunities given to children so that they may recognise, understand and adapt to space both personal and general?

Results:

Forty-five teachers stated that these aspects were present in their programs. They were relatively evenly divided across division and among Specialists and Non-Specialists.

Discussion with Teachers:

The theme of space was well understood by most teachers and used extensively.

> Use of space? I do it all the time. Travelling, balance, weight transference, partnerwork. Yes, but what happens afterwards [with the themes]—they are kind of useless.

Question 7. Are wide themes developed on the floor and then with small and large apparatus?

Results:

Forty teachers planned their programs on these lines, twenty-six of them extensively. The opinions were evenly divided across the divisions and among Specialists and Non-Specialists.

Discussion with Teachers:

There was a great diversity of views as to the importance of developing work on the floor before putting it on apparatus.

> I decided whether they should move [rotate stations] because of the time. Children demanded that they should go through all stations whether they had completed the task or not. Our periods are so small (may be 12 minutes) that really I cannot give you much information. We run gym as a block in December, January and February . . .

> I started gym on the floor then on mats, then on mats with apparatus . . .
>
> Oh yes. We divide them into groups—four groups and they have different tasks. They have to wait for the group to move . . . We may stay rotating around four stations for a month or so. We stop doing it when we feel that the children have had enough.
>
> We don't bother with work on the floor and just use the apparatus stations. The children are only interested in that.
>
> In gym. we have lessons outlines provided by Central Office and we work carefully with those. . . . I am not sure when one decides to move from one [station] to another. Some of it is out of boredom. . . . Quality? I'm not sure that I should be able to discern this every time.

Question 8. Are opportunities given to develop work involving partners and groups?

Results:

Eleven teachers were of the opinion that these provisions did not apply to their programs. Only thirty-two found them of merit, twelve extensively so.

Discussion with Teachers:

Most teachers understood the question to mean the formation in which they asked the children to work in order to facilitate the use of space or apparatus.

> Tasks on the floor are about 4 out of 8 stations. In fact some of them are on the floor and on apparatus. We also do formal gym. with very little partnerwork.

Instructional Activities: D. Dance (Table 22)

This section had six questions, each one dealing with wide aspects of dance as presented in the Program of Studies. A brief account of the dance program was requested from each teacher. It was

not considered necessary, because of the lack of dance in the schools, to deal at length with each question.

Results:

The general pattern of opinion observable in the dance section of Table 22 was to be seen in all questions in section D. Slightly less than one half (twenty-three) of all teachers did no dance whatsoever and of that proportion sixteen were in Division II, nine of whom were Specialists. Division I Non-Specialists were all of the opinion that they did dance extensively.

Discussions with Teachers:

Questions 3, 4 and 6 in the Dance Sections presented difficulties.

Question 3 included "technical ability" with "creativity" and "imagination" as essential parts of a dance program. Most teachers found difficulty in accepting technical ability, yet realised that it was a part of any form of human movement and was a prerequisite to the other characteristics of note.

Question 4 required the teacher to give opportunities to the children to dance without accompaniment, with music and by making their own rhythms. Most teachers made rhythms for their children by using tambour, tambourine and recordings of music. No one teacher provided all three. Not one teacher was the custodian of a set of percussion instruments; many had their own tambours. Percussion instruments were to be found in the schools but rarely left the care of the music teacher.

Question 6 was not applicable in more opinions than any other

question. Effort qualities were not well understood in any case and few teachers seemed to have progressed with their classes to the point where their children could work with and dance for other people. In any case dance was most prevalent in the early years of Division I when gross activities of an individualistic nature were most common. These remarks give some indication of teachers' feelings about dance.

> I work on themes like the gymnastic themes and introduce rhythms and music to describe ways of moving. Sometimes we act and dance poetry and stories. . . . Wind and Leaves.
>
> Our dance is square dancing.
>
> No time for this—technical work.
>
> My dance is interrelated with gym. We work from the functional with more imagination.
>
> I relate my dances to pets and toys and how they move and act. . . . I tell them what I want them to feel and act.
>
> Very rarely do I do 40 minutes of dance by itself. Sometimes we move back the desks and do it here. I do [it] half a dozen times a year (by itself maybe) all the period.
>
> I use tambour and a tape deck. I haven't got Listen and Move.
>
> Language—my favourite theme in dance.
>
> We dance to nursery rhymes, poems and Noah's Ark. We danced in February only.
>
> I started out with gym. themes and used a drum . . . Then we added music (Listen and Move) but all this petered out because I think it was the wrong time of the year. It fell through. We used Words and Actions.
>
> We developed shapes, landings and take-offs as we started gymnastics. I used tambourine and drum to initiate movement.
>
> Really it's Movement leading to dance. I've used Listen and Move. I think there are a lot of other instruments upstairs.
>
> We took poetry and danced it and made up poetry and danced that.

I feel terribly guilty. I do so little. I ask them to listen and feel what they should do. Moods, expression, sinking, rising.

Dance needs a special person with special training.

Instructional Activities: E. Games (Table 22)

This section had six questions and dealt with broad aspects of the content of, and approach to, broad aspects of games. A brief account of the games program was requested from each teacher. The numbers of responses are to be found in Table 22.

Question 1. Is emphasis placed on learning the fundamental skills and tactics required for developing participation in major games?

Results:

Forty-six teachers were of the opinion that their classes offered these aspects. Thirty considered the offering to be extensive. In each division the Specialist and Non-Specialist found the question to have equal merit.

Discussion with Teachers:

Concern was shown by the teachers with lack of time particularly and difficulties with class size. These led to a need for direct teaching of specific skills. Following are typical comments:

I'm not interested in teaching skills for major games. I'm interested in inventiveness and coordination.

I teach them directly . . . The Parks people look after skating and swimming.

I have to play too many on each side. But what do you do with fields that are too big? We've got to play more than 10 on each side in softball.

There must be a strong skill learning period. Random learning is a waste of time.

Question 2. Are opportunities given for the children to have experience in individual activities such as swimming and track and field?

Results:

Twenty-two teachers in each division stated that they included individual activities in their programs, primarily of a limited nature.

Discussion with Teachers:

These activities often required the use of outside-school facilities. The extra time needed for the class to travel was difficult to arrange. Teachers did much work in out-of-school time.

> The organising of these activities comes to grief by cross-setting and class arrangement. We cannot free the extra time needed.
>
> I think the community should do this.

Question 3. Are situations structured which allow children to play games of their own invention, play variations of games they already know and to solve problems in connection with them?

Results:

Forty teachers stated that they included some form of invented games to some degree, twenty-seven of them of a limited nature.

Discussion with Teachers:

There was a wide diversity of opinion from that of the kindergarten teacher who said that children learn best through their own invention to the Division II teacher who believed in teaching major games solely. Selected teachers' comments follow:

> We play tag and other games which require little cooperation. They do not create their own games. There is never enough time.
>
> We play games where there is no scoring.

> Man has built games from specific skills and has imposed certain rules. I don't see that inventing games would produce anything but what we have.
>
> The time factor will not allow this sort of thing. I feel the same about outdoor ed. . . . they detract from basic p.e.

Question 4. Are strategies and tactics of team playing practised?

Results:

Of the thirty-seven teachers who included these characteristics in their programs, twenty-three were to be found in Division II. Eight Division I teachers were of the opinion that they did not apply.

Discussion with Teachers:

Many teachers saw the teaching of tactics and strategy as concerning junior high schools only. Most teachers relied on periods of game playing to inculcate these aspects.

> Tactics . . . teaching are for the junior highs; our job is skills.
>
> The children are anxious to play . . . so little time is spent on teaching.
>
> We have a game every period . . . an essential part.

Question 5. Is the program concerned with the practise of foot work and body work?

Results:

Forty-six teachers were of the opinion that these aspects applied to their programs, sixteen extensively from Division I and seven extensively from Division II.

Discussion with Teachers:

Division II teachers said that they were concerned with drills and game situations and that the aspects noted in the question were

covered in this way. Division I teachers said they saw the need:

> A lot of it is in running games. We've done paddle bats and balls, balls of different sizes, hoops, sticks, bean bags and that's all the equipment we have. . . . The first part we explore, then we look at other people . . . then we try things I think are suitable. Then we have a game; they like competition [Grade 1].

Question 6. Are the games periods concerned with the skills of handling balls, bats, pucks and sticks in relation to targets, boundaries and people?

Results:

All teachers in both divisions were sure that they included these skills in their programs.

Discussion with Teachers:

The teachers said they were much concerned with this aspect, Division II teachers especially so. Division I teachers had said they had some difficulty with equipment which was too large.

> Only as it helps me with my aims of inventiveness and coordination.

> They move freely using balls, hoops and skittles. Bats are too big for them. I wish there were smaller paddle bats.

> We practise with bats in the Spring outside. I don't do much work inside with hitting and kicking. We do a lot of work with missiles. My children work in pairs with bats and ball.

F. Instructional Staff (Table 23)

This section contained three questions which dealt with the way in which the teachers maintained their professional expertise, knowledge and skills.

TABLE 23

FREQUENCY OF TEACHERS' RESPONSES
F. INSTRUCTIONAL STAFF AND H. I. EVALUATION

Opinion	Division		F. INSTR. Questions			H. STUDENT EVAL. Questions						I. EV. Questions	
		Teach.	1	2	3	1	2	3	4	5	6	1	2
E	I	Spec.	4	3	2	2	12	--	--	--	3	6	3
		N-S	2	3	1	5	10	--	--	--	4	3	1
		Total	6	6	3	7	22	--	--	--	7	9	4
	II	Spec.	3	2	3	2	11	--	--	2	2	5	2
		N-S	2	2	--	--	12	1	--	--	2	3	2
		Total	5	4	3	2	23	1	--	2	4	8	4
S	I	Spec.	4	4	1	2	--	--	--	1	4	3	2
		N-S	8	3	1	1	--	1	--	2	5	2	5
		Total	12	7	2	3	--	1	--	3	9	5	7
	II	Spec.	1	--	1	--	--	2	--	3	4	3	3
		N-S	2	4	4	2	--	1	--	1	1	6	1
		Total	3	4	5	2	--	3	--	4	5	9	4
L	I	Spec.	2	5	7	5	--	4	2	4	4	--	3
		N-S	2	5	9	1	--	2	--	2	1	3	3
		Total	4	10	16	6	--	6	2	6	5	3	6
	II	Spec.	8	7	5	5	--	4	2	5	5	3	3
		N-S	6	5	8	7	--	1	2	8	8	2	7
		Total	14	12	13	12	--	5	4	13	13	5	10
M	I	Spec.	2	--	2	--	--	--	2	--	--	--	--
		N-S	--	--	--	1	--	--	2	--	--	--	1
		Total	2	--	2	1	--	--	4	--	--	--	1
	II	Spec.	--	2	1	3	--	1	3	1	1	--	--
		N-S	2	1	--	2	--	1	1	--	--	1	1
		Total	2	3	1	5	--	2	4	1	1	1	1
N	I	Spec.	--	--	--	3	--	8	8	7	1	3	4
		N-S	--	1	1	4	2	9	10	8	2	4	2
		Total	--	1	1	7	2	17	18	15	3	7	6
	II	Spec.	--	1	2	2	1	5	7	1	--	1	4
		N-S	--	--	--	1	--	8	9	3	1	--	1
		Total	--	1	2	3	1	13	16	4	1	1	5

Teach. - Teachers Spec. - Specialists N-S - Non-Specialists
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable
Total number of teachers: 48
Number of teachers in Division I: 24; in Division II: 24.

Question 1. Does the teacher keep informed of the current developments in the professional field and their educational implications?

Results:

Forty-six teachers gave it as their opinions that they kept in contact with developments; most of them to a moderate degree.

Question 2. Does the teacher maintain active participation in in-service physical education through formal study and other professional activity?

Results:

Forty-three stated that they maintained active participation, most of them to a limited extent.

Question 3. Does the teacher maintain an active interest in professional advancement including participation in educational organizations?

Results:

Forty-two teachers said that the condition was present; twenty-nine to a limited degree.

Discussion with Teachers:

Question 1 asked for the teachers' opinions regarding their professional knowledge of current programs in subject areas and in curriculum development generally. Question 2 concerned the teacher as a teacher of Physical Education and question 3 asked the teachers' opinions regarding the maintenance of standing in the profession generally. Teachers had difficulty in understanding the nature of the questions. They said they had difficulty in finding time to attend meetings and lectures. Typical remarks were:

> Phys. Ed. is low in my priorities. It really isn't worth great attention. If we are serious then let us have all

children taught basic skating, swimming, skiing, et cetera. Everything else is a parody and not worth a serious teacher's attention.

Never enough time!

Inservice courses are available if you have the time and energy to make use of them.

The P.E. teacher must be a super teacher—a super psychologist—a curriculum specialist.

Inservice courses are a repeat of my university course. So I don't go to them any more.

Time is the problem. [Information] re p.e. has to be in a form easily assimilated—not an ideal. It must fit my picture.

Yes, but I have no interest in p.e. whatsoever and I think that I'm succeeding with my life style.

How can I run my family and my class properly and still have time to spare? My priorities just don't allow it.

G. Facilities and Equipment

Discussion with Teachers:

No questions were asked of the teachers in order to allow an opinion count to take place, as the actual facilities were noted in the First Schedule and are recorded in Table 8. Nevertheless it was thought useful to gain teachers' opinions by very general probes.

The actual supply and quality of equipment was thought to be adequate to good by the teacher. Division I teachers had complaints about the unsuitable size of equipment and their inability to move certain large apparatus.

Some older schools had inadequate storage areas many of which had poor shelf and cupboard accommodation. The use of equipment in confined spaces by a number of teachers led to untidiness and confusion

in some cases. Most schools had adequate, if somewhat inconvenient, storage areas. Certain teachers said:

> We make our program fit the facilities.
>
> Storage room is poorly organised. Too many people use it.
>
> I'm lucky having good gym space, equipment and an outside playground.
>
> We need a separate establishment from that of the Junior High. They hog the space and the equipment. Only the Junior High counts. We cannot get into the Junior High store; I haven't got a key though I use the space.
>
> Wall space! It's covered by nets, fire extinguishers, chalk boards, tack boards, projecting handles and switches and surrounded by apparatus, chairs and benches.
>
> We have excellent space.
>
> We must have changing rooms . . . [if only] that there are problems in Junior High when children [have to] "expose" themselves for the first time. Changing should be a natural event.
>
> I like to see a lot more equipment of the size my students can manage [Grade 1]—mats, climbing apparatus, skipping ropes, bats particularly. Canadian climbers are too clumsy and are limited in use.
>
> The apparatus is too heavy for my Grade 2's to move . . . [It] is set out for me by other grades and I don't alter them. . . . I group my kids and they play at each station for 5 minutes and then we rotate. Get pretty boring . . . That's ed. gymnastics.
>
> Instructor's office is a store room. . . . There is no place to put clothes safely.
>
> The smaller children need lots of small climbing apparatus.

H. Evaluation of Students (Table 23)

The section had six questions each dealing with the nature of aspects of evaluation of a Physical Education program. The results are to be found in Table 23.

Question 1. Is evaluation an integral part of the total program?

Results:

Thirty-two teachers were of the opinion that evaluation was an integral part albeit to a limited extent generally. Ten considered that the question did not apply to their program.

Discussion with Teachers:

Most teachers who agreed that evaluation was an integral part, considered it as a hypothetical question, there being insufficient time to institute effective evaluative procedures it was felt.

> Evaluation? I'm not sure of what to evaluate.
>
> There really isn't time for evaluation—subjectively it aids progress—objectively it's impossible and would be a collection of numbers gathering dust.
>
> Where's the time coming from?

Question 2. Is evaluation of student progress based on teacher observation?

Results:

Forty-five teachers stated that progress was evaluated extensively in this manner. Three considered that the question did not apply.

Discussion with Teachers:

There was a diversity of views as to how this should be done. Most teachers wanted to report skill level and attitude.

> I have two groups. Those who are excellent and those who are not.
>
> My main objective is for the children to enjoy themselves and to learn to play. I evaluate their attitudes.
>
> Really my evaluation, only, is informing the parents of their [child's] progress in coordination. We play together and grow together.

Question 3. Do students assist in evaluating and recording their own performance?

Results:

Eleven teachers said that their students did assist; thirty teachers felt that the question did not apply to their program.

Question 4. Are fitness tests used at regular intervals?

Results:

Thirty-four of the teachers were of the opinion that the question did not apply to their programs. Six used fitness tests to a limited extent.

Discussion with Teachers:

A proportion of teachers who stated that fitness testing was not part of their program had been concerned with the objective of fitness in their programs in question one of section A of the interview schedule.

Question 5. Are tests and awards used which have been devloped locally?

Results:

Twenty-eight teachers said that they used locally developed tests and awards; thirteen from Division II stated that it was to a limited extent. Fifteen Division I teachers felt that the tests and awards did not apply to their programs.

Discussion with Teachers:

Teachers generally were concerned about the nature of tests for crests and the amount of time that was involved in the testing of children.

We have a crest system in volleyball and track and field.

Crest work is O.K., but there is no follow-up. It is better that nothing I suppose. We do it for a month and that is that.

Question 6. Are individual evaluations included in the child's home report?

Results:

Forty-three teachers stated that evaluations were placed in home reports. Four felt that they had no place in the report.

Discussion with Teachers:

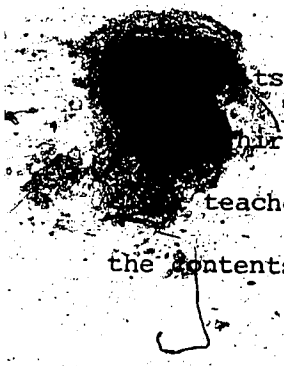
Most teachers used the home report as a means of expressing the attitude of the individual child to the program. Some included an evaluation of skill level; others had difficulty in accepting any form of evaluation.

Evaluation! If you have no specific objectives how can you evaluate? If you have cosmic statements for objectives then you must have woolly standards by which to evaluate. A useless situation. I suppose I go through the motions. I'm glad that we are not producing an indispensible product!

I. General Evaluation (Table 23)

This section had two questions both requiring broad evaluative decisions.

Question 1. To what extent is the Physical Education program consistent with the philosophy, objectives and functions as stated in the Program of Studies?



ts:

rty-nine teachers said that their programs were consistent.

teachers, seven of them from Division I, were of the opinion that the contents of the question did not apply to their programs.

Discussion with Teachers:

Teachers who found the question did not apply were chiefly from Division I. Certain teachers commented:

> I want to prepare my children for Junior High School games and to make the nation more fit.
>
> The objectives of the Program of Studies just don't apply [Grade 1]. Yes, I can manipulate my environment to a point. I'm affected by scheduling of rooms and equipment like everyone else.
>
> I think my program is consistent with Early Childhood. I don't know about the Program of Studies.

Question 2. To what extent is the school identifying problems in Physical Education and seeking their solution?

Results:

It was the opinion of thirty-five teachers that problems were being identified and their solutions sought. Eleven were of the opinion that the question did not apply to them.

Discussion with Teachers:

A large proportion of the teachers were in agreement with the question to some degree, however a number of teachers had reservations.

> Ultimately the principal must define the problem!
>
> If I wanted to do something. I think I could do it.
>
> I just don't push too hard. Jobs are not all that easy to come by and I have other priorities anyhow.
>
> Oh yes! I'm able to manipulate my environment, but I'm not ambitious!
>
> . . . there's little chance to seek a solution. I have no control or say as one teacher.
>
> I don't know enough about P.E. to identify problems let alone seek their solution.

SUMMARY

The chapter has dealt with the results and discussion concerning six areas of inquiry. Space out of doors noted the cooperation between the Edmonton Department of Parks and Recreation and the School Board to produce space for school usage. Space indoors was concerned with school building regulations and the schools' use of time for Physical Education. Equipment and supplies dealt with the school establishment in relation to minimum amounts suggested by the authorities. Extracurricular activities and program activities provided information about the current programs in schools. The interview schedule gave forty-eight teachers an opportunity to express their opinions regarding nine sections which dealt with organization, the nature of the program, gymnastics, games, dance, instructional staff, physical facilities, evaluation of students and a general evaluation.

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Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

It was the purpose of the study to identify the general characteristics of the physical education facilities, equipment, supplies and programs of the elementary schools of the Edmonton Public School Board. It was not meant to present a precise analysis but to reflect tendencies and interrelationships by obtaining a reasonably comprehensive description of the teachers' programs and their environments.

The Provincial Program of Studies and Curriculum Guide provided the basis for comparison of the conditions to be found in the schools, supplemented by information found in schools' building regulations. Publications of the City of Edmonton's Parks and Recreation Department contained information about the design and construction of school sites.

A sample of twenty-six schools was selected and a schedule, which consisted of a series of check lists and a questionnaire, was completed for each school, by the investigator. The schedule required information of a general nature as well as specific details of the facilities, equipment and supplies. Details about the teachers' qualifications, length of class period and frequency were completed by the teacher. The results of the first schedule were expressed in the form of tables and discussed in Chapter IV under such headings as space indoors, space outdoors, time allocation, equipment and supplies, and extracurricular and instructional activities. Details of the

activities engaged in by the schools were shown by means of histograms and an indication of the frequency of usage was included.

Forty-eight teachers were chosen randomly from those who were responsible for Physical Education classes in the schools of the sample. The teachers were interviewed using a questionnaire and discussion procedure in order to ascertain opinions of their programs. The questionnaire was based on that found in Evaluative Criteria published by the National Study of Secondary School Evaluation, D. C., 1963 and the construction is discussed in Chapter III. The schedule itself forms Appendix B and was composed of nine sections: organisation of the program, nature of the program, gymnastics, dance, games, physical facilities, instructional staff, evaluation of students and general evaluation. Each section consisted of a series of questions, to each one of which, the teacher was asked to respond using a rating scale. An opportunity was given to the teacher for clarification and further discussion. Remarks made by teachers were included in the report in Chapter IV. The results of the interview schedule were expressed in the form of numerical tables which presented the total number of opinions for each one of the five parts of the rating scale. The teacher sample has been divided into the groups of Division I, Division II, Specialist and Non-Specialist and combined with the rating scale results. A series of histogram tables was included as Appendix F to show the responses by Division I and Division II teachers as well as those of the whole sample.

CONCLUSIONS

The major conclusions that this survey will support are presented under three general headings in this section. These conclusions were based on information received through the first schedule from twenty-six schools and 143 teachers and from the interview schedule answered by 48 teachers. While they are true of this sample, these conclusions may not necessarily reflect conclusions for the total population.

Physical Facilities

1. All teachers said that they had ample facilities for field activities, though some reserve was expressed over the large size of goals and soccer fields. The proximity of most schools to rinks was an admirable feature although few schools were able to use them for instructional periods. They were used extensively for recreational purposes. The agreement between the City Parks and Recreation Department and the School Board in the planning of outdoor areas provided the best facilities possible for the greatest school usage.

2. The average time spent by each class every week in Physical Education was approximately seventy minutes. The amount of activity-space available was quite sufficient to take care of these requirements. Ninety minutes is the minimum time required by the Program of Studies and is possible with the present facilities. A projection of the number of teaching stations needed for a time allocation of ninety minutes was shown in Table 9, B situation.

3. A survey of the amount of wall space available for the playing of ball rebound games and practices showed that the majority of

schools had little wall space available. About one half of all wall targets were not usable because of obstructions.

4. The survey showed ample supplies available in adequate storage areas for the most part. Many schools had stocks in excess of that required by the Program of Studies. Most teachers expressed satisfaction with this. There were exceptions, mentioned by Division I teachers, such as the lack of rhythm instruments for dance, the cumbersome nature of the climber and mats and the shortage of supplies such as bats and skipping ropes for very small children.

Organisation of the Program

A number of paradoxes became evident from the results of the teachers' interviews.

1. Teachers were sure that all the objectives of Physical Education were being adhered to yet planned only to accomplish those concerned with motor skills and socially acceptable behaviour. Few teachers planned specific objectives for the lesson except when they were using a battery of lessons prepared by a supervisor. They preferred the flexibility needed to present an enjoyable period to the class. Teachers said they were concerned with physical fitness yet said they were unable to take deliberate steps to accomplish this goal.

Almost all teachers were sure that they had adequate training, albeit to a limited extent. Nevertheless the returns dealing with teacher qualifications, noted in Table 3, showed that half of all teachers from the sample of schools had no qualifications in Physical Education.

2. It could be concluded from the discussion with teachers on the changing of clothing for Physical Education, that almost all were in agreement that this should be done. Only fourteen classes of 207 from the sample regularly changed their clothing.

3. Teachers agreed that the hiring of more specialists in Physical Education should be undertaken, to act as resource personnel as well as classroom teachers.

4. Two thirds of the teachers interviewed felt that more time was needed in which to plan and organise the lesson. All the teachers in Division II said the time allocation for Physical Education should be increased.

Nature of the Program

1. The Program of Studies suggests three areas of activity. Two thirds of the teachers said they had programs which contained these areas or that they were in full agreement with their inclusion. However approximately one half of all the classes in the sample had no dance whatsoever. One quarter of all teachers said that dance had no part in their program; most dance programs about which information was proffered were concerned with aspects at an introductory level. It may be concluded that dance is not considered important.

2. Teachers said they were most concerned with the teaching of skills which directly contributed to major games.

3. Teachers reported that only fourteen schools had swimming programs and that most of these were of a voluntary nature.

RECOMMENDATIONS

An examination of the conclusions suggests that improvements might be made in many areas related to the instruction of Physical Education. The recommendations are based on the results of this survey and related literature and are noted under two headings, recommendations for immediate implementation and recommendations for further study.

Recommendations for Immediate Implementation

1. It is the present School Board policy to have all teachers teach their own class Physical Education. This study has shown that Division I teachers felt they were competent in this area. Teaching their own Physical Education allows them greater flexibility in integrating their programs. However, Division II teachers have shown less interest and expertise in elementary school Physical Education, possibly because of the greater departmentalization which takes place in grades four to six.

It is therefore recommended that Division I teachers continue to teach their own Physical Education. In large schools a specialist teacher should be employed to teach Division II classes and to serve as a resource person to teachers in Division I.

In schools where teachers are known to have special qualifications and interests in Physical Education, and where it is not possible to have them teach Physical Education, special provision should be made to have them coordinate the total school Physical Education program and to give assistance to other teachers.

2. Although many teachers said that they felt they had sufficient qualifications, it is recommended that attention be given to ways of improving the teachers' knowledge of elementary school Physical Education. Consideration should also be given to encouraging teachers to attend inservice sessions in order to improve their programs.

3. Whereas the present aim of teacher preparation appears to be directed at a change in attitude towards Physical Education, it would seem that this aim is not being achieved. Programs involved with the education of teachers should be examined thoroughly. Due consideration should be given to ways of changing attitudes and methods of implementing curriculum change in elementary school Physical Education.

4. It is recommended that more work be done by those involved in elementary school Physical Education to convince teachers, parents and the general public of the importance of Physical Education in the education of the child. In this way teachers may feel that Physical Education is worthy of their full consideration and so devote more time and energy to the preparation of their programs.

5. In schools which have less than the minimum time allocation it should be increased to at least ninety minutes per week. There is evidence to show that the time allocation, in most schools, can be increased to 100 minutes per week without undue strain on the physical facilities. It should be noted that many authorities, including the Provincial Guide, require Physical Education classes to be a daily occurrence.

6. Children should be encouraged to work in the minimum amount of clothing. The policy of having children change their clothes for

all physical activity should be strongly pursued. The problem can be dealt with, in part, by an increase in the time allocation and the designation of special changing areas where changing rooms do not exist. Children should be trained to change efficiently.

7. There should be an increase in the number of teachers and consultants who have special qualifications in dance.

8. The authorities should undertake the responsibility for teaching aquatics and skating at all grade levels. At present these activities are introduced primarily as recreation and very little teaching takes place.

9. It is recommended that teachers give more attention to the use of modified equipment, rules and playing areas in the teaching of games. Some emphasis should be given to the inclusion of basketball type activities since few skills and activities related to basketball were included in the programs outlined by the teachers.

Recommendations for Future Studies

1. It is recommended that research be instituted regarding the organisation of Physical Education in schools. There is a need for research that would evaluate programs offered under different types of instructional organisation. The development of evaluative criteria would have an effect on other factors such as facilities, teacher education and supervisory assistance.

2. There is an urgent need for further research into the best methods of presentation of inservice courses especially in view of the innovative nature of the program.

3. It is recommended that research be undertaken into programs

for girls at Division II level. It is felt that Physical Education activities more suitable to the sex should be encouraged as well as performances in team games.

4. It is recommended that a study be instituted to identify the qualifications of teachers of Physical Education in relation to the needs of the school system. School administrators should encourage their teachers to seek additional training in Physical Education.

APPENDICES

APPENDIX A

THE FIRST SCHEDULE

A SURVEY OF
PHYSICAL EDUCATION PROGRAMS IN ELEMENTARY SCHOOLS
OF THE EDMONTON PUBLIC SCHOOL BOARD, MARCH 1974

GENERAL INFORMATION

Name of School	Principal
Address	School District

Total Enrolment, Sept. 1973. Circle numbers. Below 100 101-150 151-200 201-250
251-300 301-350 351-400 401-450 451-500 501-550 551-600 601-650 651-700

Circle. Cross. Check and Underline ⊗ ✓

No. of Teachers on Staff. Full and Part time ○
No. of those Teachers teaching P.E. X
No. of Aides and/or Parents involved in instructional P.E. ✓
No. of Rooms:- underline

4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19
20 21 22 23 24 25 26 27
28 29 30

PHYSICAL EDUCATION FACILITIES

No. of teaching stations in regular use:
Single-purpose gym (p.e. only) ☐
Multi-purpose gym (planned and built for many activities) ☐
Auditorium ☐
Stage ☐
Classroom ☐
Other Activity Areas (please specify)

No. of wall and floor markings:
Basketball courts ☐
Badminton courts ☐
Volleyball courts ☐
Floor circles. Large Small ☐
Wall Targets ☐
Others ☐

Specifications of the teaching stations noted above: estimate please.

	T-S 1	T-S 2	T-S 3	T-S 4
Length of playing surface in feet				
Width of playing surface in feet				
Minimum ceiling height				
No. of unobstructed walls (No doors or windows, etc.)				
Type of Floor (Hdwd. Sprung. Tile. etc.)				
Size of attached Storage Room				
Size of Instructor's Room if any				
Size of Changing Rooms (used solely for purpose)				
No. of Lockers in C.R. if any				
No. of Shower Heads in C.R. if any				
Permanent or Roll-away Bleachers				
If no C.R.'s where do children change?				

PHYSICAL EDUCATION FACILITIES (continued)

Does the School have its own outdoor playing fields? ☐ on site? ☐

or shared with _____

Approx. acreage or dimensions of playing fields. _____

Are these facilities available?

Soccer goals	☐	Soccer/Football goals	☐		
Field Hockey goals	☐	Baseball backstops	☐	Long Jump Pit	☐
High Jump Pit	☐	Permanent running track	☐	Others	☐

Does the School have an outdoor hard surface play area for p.e. activities? ☐

Is permanent outdoor play equipment available on site? ☐

Chinning Bars	☐	Sand Boxes	☐	Balance Beams	☐
Adventure Playground	☐	Climbing apparatus	☐	Other	☐

Does the School make use of a swimming pool? ☐ on site? ☐

Is a pool in relatively close proximity? Yes? ☐ No? ☐

Indoor	☐	Outdoor	☐	Permanent	☐
Portable	☐	Dimensions _____		Depths _____	
No. of diving boards	☐				

Does the School have its own ice rink? ☐ on site? ☐

Does the School make use of a City or Private rink? ☐ regularly ☐

seasonally ☐

Indoor	☐	Outdoor	☐	Artificial ice	☐
Natural ice	☐	Artificial lighting	☐	Dimensions _____	

EQUIPMENT

Gymnasium Equipment. Check where applicable; add where necessary. Include the number if more than one.

Gym mats		Planks		H.J. Crossbars	
Balance Benches with hooks		Parallel Ropes		Stilts	
without hooks		Hexagonal Box		Individual Mats	
Mat Truck		Pommel Horse			
Box Horse		Rebound (Beat) Board			
Spring Board		Field Liner			
Climbing App. Fixed, One Bay		Gym Standards			
Two Bays		Volleyball Nets			
Wall Bars, Y-Frame		Badminton Nets			
Climbing App. Portable. Wooden		Basketball Backboards			
Metal		and Rings			
Climbing Ropes		Inflator			
Box and Planks		Borden-Hockey Goals			
Storming Stand		H.J. Standards			

Supplies. Please state number in regular use. i.e. not in dead storage.

Balls: Soccer		Starting Pistol		Shuffleboard Cues	
Volley		Relay Batons		Shuffleboard Discs	
Basket		Whistles		Tambourines	
6" Utility		Badminton Birds		Drums	
8" Utility		Bean Bags		Maracas	
3" Bounce		Floor Hockey Pucks		Bells	
Tennis		Hockey Pucks		Cymbals	
Cosom (Plastic)		Indoor Hockey Sticks		Chime Bars	
Tether		(Plastic)		Triangles	
Fast		Badminton Racquets		Castanets	
Soft		Hoops 36"		Jungles Sticks	
Bats: Baseball		30"		Records	
Padder		24"		Listen and Move (Green)	
Masks		18"		Listen and Move (Blue)	
Gloves		Skittles		Electronic Sounds	
Skipping Ropes 9'		Road Markers			
22'		Bowling Pins			
Measuring Tapes 50'		Canes - Wands			
100'		Wooden Blocks			
Stop Watches		Poles			

Texts: available in the School to which P.E. Teachers have access.

P.E. in the Primary School.		A Handbook for Modern		Junior Division P.E.	
Teaching Gymastics.		Educational Dance.		Games Activities for Girls.	
		Creative Dance in the Primary School.			

List others available:

EXTRACURRICULAR ACTIVITIES. Please note any games, sports and outdoor activities which have been planned, scheduled and supervised by members of the Staff. If details are not immediately to hand, just use check mark. These activities would be normally outside school instructional hours.

Activity	Grades involved	Length of Season	No. of Participants Boys	Girls	Activity	Grades involved	Length of Season	No. of Participants Boys	Girls
Team Games: Type or Version:					Skating				
Basketball					Ski				
Volleyball					Aquatics				
Badminton					Track and Field				
Broomball					Cross Country				
Floor Hockey					Orienteering				
Ice Hockey					Wrestling				
Rugby					Curling				
Football					Canoeing				
Soccer					Hiking				
Lacrosse					Camping				
Tennis					Climbing				
Table Tennis					Snowshoe				
Fast/Baseball					Dance - any form				
Shinny									
Percy Ball									
Bucketball									

4

INSTRUCTIONAL STAFF AND PROGRAM.

Teacher's Name

To be completed by the Teacher of Physical Education. Check the activities which best describe your yearly program. Add others if these are inappropriate. Indicate by check mark when an activity is Seldom, Moderately or Frequently used.

Instructional P.E.	Class(es)			Class(es)			Class(es)			Class(es)		
Program activities	S	M	F	S	M	F	S	M	F	S	M	F
Gymnastics:												
Formal												
Olympic												
Tumbling												
Apparatus												
Wrestling												
Aquatics												
Educ. Gymnastics												
Movement leading												
to Dance												
to Gymnastics												
to Games												
Dance:												
Folk												
Square												
Social												
Modern												
Creative												
Dance-Drama												
Mimetics												
Rhythmics												
Carnivals: Sports Days												
Story play												
Calisthenics												
Fitness Tests												
Self-Tests												
Throwing and Catching Games												
Chasing Games												
Singing Games												
Ball Games and Contests												
Balance Bench Activities												
Stunts & Pyramids												
Skating												
Track and Field												
Cross Country												
Orienteering												
Canoeing												
Camping												
Hiking												
Skiing												
Snowshoe												
Lead-up or modified games to:												
Soccer												
Football												
Volleyball												
Badminton												
Tennis												
Handball (Europe)												
Broomball												
Shinny												
Percy Ball												
Bucketball												
Floor Hockey												
Ice Hockey												
Field Hockey												
Baseball												
Lacrosse												

P.E. Class(es) Title(s)	Qualifications: University Degrees: B.P.E., B.Ed.; Major/Minor in P.E., Etc.; Diplomas, Etc.; Other Universities Courses, Training Colleges, Inservice Courses, Clinics, Workshops. Note year if possible.	Age. Please check	Years of training for Salary Purposes	Total years of Teaching Exp.	Check if involved with Extra-Curricular Activity	Is there a School Coordinator of P.E.?	Length of P.E. Period	Number of Periods per Week	Av. time spent in changing clothes	No. of Students in each class	
		Below 25				Yes				Boys	Girls
		26-35				No					
		36-45									
		46 above									
											Totals

APPENDIX B

THE INTERVIEW SCHEDULE AND GUIDE

SCHEDULE GUIDE

After introducing yourself to the subject, mention the first schedule which was answered by the teacher to help establish the initial connection and the common ground. Present an outline of what is being attempted in the survey.

Try to be seated not more than four feet away from the subject for distance is important. The greater the distance the more detached and formal the interview.

Volunteer information freely about the general aspects of elementary school physical education, the role of the teacher and the importance of teacher attitudes in program development.

Tell the subject that you would like to record the interview on the tape recorder because it will be impossible to write down, immediately, everything that is said. Tell the subject that a shortened, anonymous transcript will be produced from the recording to allow confirmation of the rating given to each question and, more particularly, to précis the additional information for inclusion in the study.

Inform the subject that every endeavour is to be made to keep interruptions to a minimum and that the tape recorder will be shut off when they occur.

Tell the teacher that you would like to read an introduction to the interview and that this is an attempt to standardize the interviews as much as possible.

Introduction to the Interview. (To be stated to the teacher.)

Before the questions are asked I feel that I should tell you something about my study. There is a demand that the elementary school concern itself with the teaching of basic fundamentals while evolving programs which cater to individual differences. The teacher of physical education is involved no less than any other teacher. I am endeavouring to discover how different people go about this task by soliciting opinions from you. You have been good enough, already, to give me some indication of your background and the environment in which you work. I would like to remind you that your personal opinions and ratings are requested in answer to the specific questions regarding your program, but should you wish to remark on the wider aspects of program content, process, organization and outcomes, please feel free to do so. Indeed the specific questions may present points on which you may wish to enlarge.

Here is the rating scale. (Hand over printed card containing scale.) I intend to remain unemotional in my reaction to your remarks, since my facial expression and body gestures could influence your response.

AN INTERVIEW SCHEDULE OF ITEMS

The schedule has nine sections:

A. Organization of the Program.
B. Nature of the Total Program.
C. Instructional Activities: Gymnastics.
D. Instructional Activities: Dance.
E. Instructional Activities: Games.
F. Instructional Staff.
G. Physical Facilities and Equipment.
H. Evaluation of Students.
I. General Evaluation.

Each section has a schedule of items which consists of provisions and conditions or characteristics found in schools. Some may not be found in, or are even applicable to, every school. They are meant to portray a program, a situation and certain procedures.

The schedule has three uses:

1. To give a structure to the Interview.
2. To provide a focus for discussion, an opportunity to clarify terms and meanings and to identify levels of opinion.
3. To allow the teacher to express a degree of provision or condition by means of the "rating scale."

E. Provision or condition is made/used extensively.
S. " " " " " " to a moderate extent.
L. " " " " very limited or missing but needed.
M. " " " " missing but its need is questioned.
N. " " " " not desirable and does not apply.

A. ORGANIZATION OF THE PROGRAM.

To what extent or to what degree:

( ) 1. Do objectives of the nature quoted in the Program of Studies appear in your program?

When planning do you think of them?
Motor skills? Physical fitness? Emotional control (sharing, cooperating)? Socially acceptable behaviour?
Desirable knowledges and attitudes?
Are these objectives as stated, realistic aims?

( ) 2. Is the physical education program integrated with other school subjects?

Music? Drama? Language? Art?
Social studies? Science? Industrial skills? (Outdoor activity skills)
Readiness skills in kindergarten?

( ) 3. Is consideration given to individual differences when assigning a child to the P.E. class or group?

Age? Ability or disability? Sex?

( ) 4. Are teachers able to design cooperatively the continuity and progressive nature of the instructional program in the School?

Instructional and intramural: extra-curricular?
Is cooperation between teachers necessary to coordinate instructional programs?

( ) 5. Is consideration given to the teacher's schedule to plan and organize P.E. lessons?

To check equipment? To evaluate previous work?
To arrange and set up apparatus?
To acquire percussion and musical instruments?

( ) 6. Is the P.E. program under the direction of an instructor who has adequate training for the post?

What are your qualifications in gymnastics, games and dance?
What are your personal skills in them and in individual activities?
What are your personal skills in outdoor activities. Do they matter?
What do you consider adequate training?

( ) 7. Is the time allocation adequate to take care of the children's needs?

What would be an ideal situation?
What might be a practical, immediate compromise to fulfill their needs? Compare with Program of Studies requirements.

( ) 8. Are children able to change from their outdoor clothing into more suitable attire for activity?

How essential is changing -- from the practical point of view?
- from the hygienic point of view?

( ) 9. Does class size allow satisfactory learning situations to be presented?

Can you make judgements regarding the space (3 dimensions) and numbers, size of individuals, speed of their movement, effect of length of period of movement and the nature and quality of the activity you desire them to attempt?

( ) 10. Are efforts made to note the progress of students for future references in planning?

Do you record work done in a specific activity or area by the class, or by groups or by individuals? How do you know what has been done?

( ) 11. Is provision made for students who are low in skills, who may have perceptual-motor problems or who may have inadequate background in P.E. to receive special instruction?

Are there any adaptive or remedial programs?

( ) 12. Is consideration given in the teacher's schedule for planning, organizing and supervising extramural activities?

How important is the presentation of these activities? How are they chosen?

General probe.

What do you think of the suggestion that specialists in elementary school physical education should be hired?

B. NATURE OF THE TOTAL PROGRAM

Would you give a resume of your year's program?

To what extent or to what degree:

( ) 1. Are activities directed at clearly formulated objectives?

Do you plan for specific objectives in each lesson or group of lessons? Unit? Monthly?
To what texts (if any) do you refer?

( ) 2. Does the program provide the child with experiences in gymnastics, games and dance as a basis for the year's work?

What kind of scheduling takes care of this? Weekly? Block?

( ) 3. Are vigorous activities provided which contribute to total fitness?

How important is this aspect to you? What are you doing about it?
With what factors are you primarily concerned?

( ) 4. Are activities provided which promote the acquisition of motor skills?

Are you concerned with promoting fundamental skills?
Are you concerned with refining mature patterns of those skills?
Are you concerned with the acquisition of specific skills in specific games?

( ) 5. Are experiences possible in outdoor education?

To what extent do you consider these necessary?

( ) 6. Does the teacher find the problem solving approach a practical proposition in the environment?

What approach do you use? Direct? Indirect? Limited?
What advantages does the problem solving approach have?
What are the difficulties (if any) in the use of this approach?

( ) 7. Does the program cater to individual differences, needs and interests?

Is it possible that consideration can be given at this time?
How is attention given to these?

( ) 8. Is the student allowed to proceed at his own best pace?

How do you see yourself - as director? as adviser?
What forms of motivation are present?

( ) 9. Are regular opportunities provided for children to work with a variety of equipment and apparatus?

What arrangements do you make to see that this occurs?
Who decides what equipment, apparatus or supplies are available in the school? - in the lesson?

( ) 10. Is a sequence of progressively planned lessons offered throughout the year?

How is progression guaranteed?
What kind of lesson outlines (plans) are most successful or practical in gymnastics, games and dance?

( ) 11. Are activities provided which promote the acquisition of socially acceptable behaviour?

What is socially acceptable behaviour?
How essential is it that we identify and set up objectives?

C. INSTRUCTIONAL ACTIVITIES: GYMNASTICS

Would you briefly describe your gymnastics program and the way you present it?

To what extent or to what degree:

( ) 1. Does the gymnastics lesson provide skills and movement patterns fundamental to all human movement?

What do you think is the place of Educational Gymnastics in P.E.?

( ) 2. Is opportunity given for the children to apply the concepts in a variety of situations in each lesson or group of lessons?

Such concepts might be in ways of locomotion, of transferring weight, of quality of expression (effort factors) and so on.

( ) 3. Are opportunities given to explore, experiment, select and to complete sequences of movement patterns?

Should these steps be present, in whole or in part?
How important is it to develop sequences?

( ) 4. Are wide themes developed from the child's natural activities?

In the K-2 years the child's activity could be centred around running, jumping, rolling and throwing for example. Do you develop more?

( ) 5. Are wide themes developed around the effort factors of time, weight, space and flow?

Do you prefer to base your themes around these factors (direct, flexible, sudden, sustained, etc.)? Or do you prefer body parts, their functions and control?

( ) 6. Are opportunities given to children so that they may recognize, understand and adapt to space both general and personal?

These could include using all the space available to best advantage, changing direction, levels and speed, choosing pathways and patterns.
Relations, with people and to objects, are affected.

( ) 7. Are wide themes developed on the floor, and then with small and large apparatus?

How essential is the progress from floor to apparatus?

( ) 8. Are opportunities given to develop work involving partners and groups?

How important is this aspect in your program? What do you wish to achieve?

D. INSTRUCTIONAL ACTIVITIES: DANCE

Would you briefly describe the year's program in dance?

To what extent or to what degree:

( ) 1. Are the dance lessons based on experiences which are of immediate concern to the students?

For example, are they suitable to age and experience and relevant to the work in the classroom and at home?

( ) 2. Does the program give opportunities to express ideas and feelings through movement?

How are these accomplished?

( ) 3. Are imagination, creativity and technical ability encouraged in the program?

( ) 4. Are opportunities given to the class to dance without accompaniment, with music and by making their own rhythms?

What sources of noise making do you have? Percussive? Musical?
Where are they stored?
What are the sources of your recordings?

( ) 5. Is the program concerned with language and its usage?

Do you link words and actions; expressions with actions? Do you clarify the nature and quality of action by clarifying word meanings and vice versa?

( ) 6. Does the program offer opportunities to experiment with forms of non-verbal communication?

i.e. Expressions of feelings, ideas, thoughts, etc. through the use of effort qualities to and with partners, in and through groups.

E. INSTRUCTIONAL ACTIVITIES: GAMES

Would you briefly describe your games program?

To what extent or to what degree:

( ) 1. Is emphasis placed on learning the fundamental skil tactics required for developing participation in maj games?

How essential is it that all children have experience and develop expertise in major games?

( ) 2. Are opportunities given for the children to have experience in individual activities such as swimming, and track and field?

How important are these activities in the total program?
What part do they play in the child's life?
Are there opportunities to be active in them outside school?

( ) 3. Are situations structured which allow children to play games of their own inven play variations of games they already know and to solve s in connection with them?

How essential at the child is aware of the basic structure of gam how they can e altered to suit occasions and peopl hrough rules, gets, scoring methods and boundaries?

( ) 4. Are strategies and tactics of team playing practiced?

Can very young children be introduced to these aspects?
Is anything to be gained by low-skill level children working in these areas? Working alongside, sharing and cooperating?

( ) 5. Is the program concerned with the practise of foot work and body work?

i.e. the efficiency and effectiveness of such things as starting, stopping and changing direction in relation to people and objects and what is to be done with them.

( ) 6. Are the games periods concerned with the skills of handling balls, bats, pucks and sticks in relation to targ boundaries and people?

F. INSTRUCTIONAL STAFF

To what extent or to what degree:

( ) 1. Does the teacher keep informed of the current developments in the professional field and in their educational implications?

E.g. What is the School Board's policy re p.e. assignments?
What are its effects?
Are there other policies?
How suitable is the education (p.e.) of the average B.P.E. or B.Ed. major?
Does School Board policy affect university courses or vice versa?
What is the role of the classroom teacher in curriculum development?

( ) 2. Does the teacher maintain active participation in in-service physical education through formal study and other professional activity?

What is available? Practical? Possible? What should be available?
Any plans for this year? Next year?
Any involvement in senior sports governing bodies? Participant: administrator?

( ) 3. Does the teacher maintain an active interest in professional advancement, including participation in educational organizations?

Do you have membership in local, provincial or national teachers' organisations? In P.E. teachers' organizations? In curriculum councils or committees?

F. INSTRUCTIONAL STAFF

To what extent or to what degree:

( ) 1. Does the teacher keep informed of the current developments in the professional field and in their educational implications?

E.g. What is the School Board's policy re p.e. assignments?
What are its effects?
Are there other policies?
How suitable is the education (p.e.) of the average B.P.E. or B.Ed. major?
Does School Board policy affect university courses or vice versa?
What is the role of the classroom teacher in curriculum development?

( ) 2. Does the teacher maintain active participation in in-service physical education through formal study and other professional activity?

What is available? Practical? Possible? What should be available?
Any plans for this year? Next year?
Any involvement in senior sports governing bodies? Participant: administrator?

( ) 3. Does the teacher maintain an active interest in professional advancement, including participation in educational organizations?

Do you have membership in local, provincial or national teachers' organisations? In P.E. teachers' organizations? In curriculum councils or committees?

G. PHYSICAL FACILITIES AND EQUIPMENT.

General Probes

Would you care to remark on any or all of the following?

1. Community use of the facilities.

2. Adequate space for conducting your program. —Indoors. —Outdoors.

3. Provision of wall space.

4. Provision of (a) adequate storage space.

(b) adequate changing rooms (showers? lockers?).

(c) teachers' changing rooms.

H. EVALUATION OF STUDENTS.

To what extent or to what degree:

( ) 1. Is evaluation an integral part of the total program?

( ) 2. Is evaluation of student progress based on teacher observation?

( ) 3. Do students assist in evaluating and recording their own performance?

( ) 4. Are fitness tests used at regular intervals?

( ) 5. Are tests and awards which have been developed locally used?

( ) 6. Are individual evaluations included in the child's home report?

I. GENERAL EVALUATION.

( ) 1. To what extent is the P.E. Program consistent with the philosophy, objectives and functions as stated in the P. of S.?

( ) 2. To what extent is the school identifying problems in P.E. and seeking their solution?

APPENDIX C

LETTER OF PERMISSION

EDMONTON PUBLIC SCHOOLS

10010 - 107A Avenue
Edmonton, Alberta

March 12, 1974

Mr. W. A. Kiffiak
Administrative Assistant
Division of Field Experiences
University of Alberta
EDMONTON, Alberta

Dear Mr. Kiffiak

Re: RESEARCH REQUEST - John B. Bell

The above project has received approval on a permissive basis following examination by our department and consultation with Miss Marion Irwin, Supervisor Physical Education. The approval is subject to the following conditions:

(1) That the information on pages 1, 2 and 3 of the questionnaire be obtained by the requestor himself. I do not think that principals should be asked to take time to count Physical Education equipment or to measure the specifications of Physical Education teaching stations.

(2) The requestor should review the data which is available from our Physical Education department on Wick's, "Federal Sports Facilities Survey."

(3) On page 1 the question "Number of aids and/or parents involved in instructional Physical Education" must be deleted as it is contrary to Alberta Teachers' Association policy.

(4) To make the questionnaire more applicable to our system, under the equipment section, the item concerning climbing apparatus should have "3 bays" added.

(5) We feel it is unnecessary to collect information from all elementary schools in our system and that the study must be restricted to the sample of 26 school outlined below.

(6) The number of interviews with elementary teachers should be kept to a minimum because of the full teaching loads carried by our elementary teaching staff.

(7) We do not feel that it is necessary to include all teachers in the sample schools in the study. We think a sample of teachers in each school should be sufficient.

The following schools may be included in the study subject to the approval of the principal of each participating school. Because of the number of schools in the study the principals have not been contacted. Mr. John Bell should now contact the principals of the schools below to obtain final approval and to make the arrangements for conducting the project.

T. Powers, Principal, Belgravia Elementary (435-5560)
S. M. McLean, Principal, Belvedere Elementary (476-2022)
A. Youngberg, Principal, Braemar Elementary (466-5530)
J. Hobson, Principal, Brookside Elementary (434-0464)
L. A. Fossum, Principal, Cromdale Elementary (477-1788)
K. Seale, Principal, Elmwood Elementary (489-6749)
R. J. Holmes, Principal, Forest Heights Elementary (466-0312)
J. W. Brown, Principal, Gold Bar Elementary (466-4116)
M. Greenslade, Principal, Grandview Heights Elementary (434-1502)
J. Buski, Principal, Kensington Elementary (455-1836)
L. K. Lynn, Principal, Lendrum Elementary (434-3588)
M. L. Pedde, Principal, Hazeldean Elementary (433-7583)
A. Skuba, Principal, Mayfield Elementary (489-5100)
N. Kozak, Principal, McDougall Elementary & Junior High (422-6610)
Mrs. J. F. Russell, Principal, McLeod Elementary (478-2927)
L. Olsen, Principal, Parkdale Elementary & Junior High (477-7443)
H. Callender, Principal, Prince Charles Elementary (455-5533)
N. Cuthbertson, Principal, Sherbrooke Elementary & Junior High (455-2879)
L. Ramsey, Principal, Thorncliffe Elementary (487-2061)
J. Kischuk, Principal, Waverley Elementary (469-6682)
C. Climenhaga, Principal, Allendale Elementary & Junior High (434-6756)
G. Percy, Principal, Brightview Elementary (484-6631)
A. R. Penny, Principal, James Gibbons Elementary (489-8020)
Mrs. O. Stretton, Principal, Newton Elementary (477-1990)
G. Skirrow, Principal, Riverdale Elementary (422-6543)
G. Taylor, Principal, McCauley Elementary & Junior High (422-4362)

I would appreciate receiving a copy of the results of the study as soon as they are available.

Sincerely

Tom Blowers, Ph.D.
Director of Research
Research & Evaluation

TAB/ks
c.c. Dr. S. G. Robbins
John B. Bell
Miss Marion Irwin
All above principals

APPENDIX D

EXCERPT FROM THE PROVINCIAL GUIDE: FACILITIES AND EQUIPMENT

FACILITIES AND EQUIPMENT

(Excerpts from: Department of Education, Province of Alberta. Elementary Physical Education: A Guide (18).)

A. Indoor Facilities

The following information suggests physical education facilities for an elementary school. A one-station gymnasium is recommended for an elementary school of one to twelve rooms. A two-station gymnasium is recommended for an elementary school in excess of twelve rooms. The recommendations are based on an enrollment that produces eight Division One classes and seven Division Two classes with the allotted instructional time of one hundred minutes per week for Division One and ninety minutes per week for Division Two.

1. One-Station Facility

The recommended minimum size for a one-station gymnasium is 60' x 48' (2,880 square feet). This is the actual floor size and does not include a stage.

a) Ceiling height—the recommended ceiling height is twenty feet.

. . . . . .

c) Walls—unbroken wall space to a minimum height of twelve feet is recommended. The walls from the floor to the twelve foot level should be constructed so that they may be used as an instructional aid. Doors should be located so that they minimize the loss of useable wall space.

. . . . . .

g) Storage—a minimum of 200 square feet of storage is desirable for a one-station gymnasium. This area does not include chair storage which should be completely separated from gym storage. Gymnastic mats are best stored flat on mat carts. Additional storage space for flat mat storage and chairs is ideally found under the stage, where this facility is included as part of the gymnasium. Gymnasium storage must have direct access to the gym proper and at the same time be conveniently located for use in the outdoor program.

h) Installed equipment—floor plates for gymnasium standards, wall brackets, fixed climbing apparatus, and ropes, electrical outlets, clocks, jacks for public address outlets, and consoles, all require careful consideration in planning, purchase and installation. The trend toward greater use of climbing apparatus requires a careful study of the use of "fixed" versus "portable" as it can be best incorporated for use in the available spaces.

i) Instructors' Offices—one hundred and twenty feet of office

space is recommended for the male instructors and a similar area for the female instructors. The areas should include shower and wash basin facilities.

j) Student Shower and Dressing Areas—the curriculum demands strenuous, active participation by the students. In the interest of their personal health and development it is recommended that dressing rooms and shower areas be included as part of the gymnasium plant. Two areas, one for males and the other for females, each of four hundred square feet are recommended. These areas should each be equipped with showers and lockers to carry a peak load of forty students. Totes, one per student using the area, are also recommended.

. . . . . .

B. Outdoor Facilities

1. Areas

The school grounds (playing fields) should comprise an area of at least five acres for the first one hundred pupils plus an additional acre for each one hundred pupils or major fraction thereof. The entire area should be planned to best meet the physical recreation needs of the community.

2. Surface

The major portion of the area should be developed as level turfed area with provision made for easy and adequate watering. Extensive tarmac areas are recommended for crush areas and for wet day play, with a suggested minimum of tarmac fifty square feet per student.

3. Field Equipment

a) Areas should be provided and equipped with apparatus for climbing, swinging, and creative play.

b) Soccer, football, bordenball pitches, and goals should be planned and laid out for both regulation and non-regulation playing needs. . . .

c) Ball fields of regulation and non-regulation size should be included in the planned playing fields. . . .

d) Track and field areas should be included in the over-all plan with provision for a north-south turfed track, long jump pits paralleling the property lines, and high jump areas, jumping toward but not at fixed barriers.

e) Ball rebound boards should be provided in marginal areas that are removed from lines of vehicular traffic.

f) Tether ball posts or standards should be provided in marginal areas or in small, otherwise useless spaces.

g) Posts or standards should be provided in marginal areas for

games such as: newcombe, pingminton, volleyball, etc.

h) Rinks for skating or boarded for hockey should be included to accommodate the winter program. Dual purpose tarmac areas are well suited for this purpose. Night lighting may be necessary.

. . . . . .

C. Equipment

1. Indoor Equipment

Item	Description	Quantity
a) Gymnastic Equipment		
Gymnastic Mats	Four feet wide—six feet long Known products—hair felt, resilibond, resilatex, resilite, ensolite	8
Mat truck	Four wheel flat	1
Balance Benches	11 feet long, 12 inches high, top—10 inches wide, bottom beam—3 inches wide, bench hooks (rubber or leather covered) on one end of the top.	6
Box Horse	Length—53" to 60", Height—48", Top width—14", Sections—4: Top—19", 2nd section—10", 3rd section—10", 4th section —9". Windows in ends and side to attach plank or bench	1
Spring Board		1
Climbing Apparatus	Fixed to wall or portable	1
Climbing Ropes	Suspended from ceiling beams. 3 strands, first grade manila 1 1/4"—with 1" pattern thimble spliced one end, into 1/2" x 3" round welded ring, other end seized. Length measured from top of thimble to end of seized end.	4

The following supplementary equipment is recommended in order to provide variety and stimulate interest in gymnastics.

Boxes and Plank	2,1

Storming Board	Inclined plane on a 2" x 4" frame	1
Hexagonal Box	Six-sided box. 5/8" plywood top on a 2" x 4" frame	1
Parallel Ropes	Anchored to two walls and stretched across a corner of the gym	2

b) Games Equipment

Gymnasium standards	as per
Volleyball nets	floor plan
Badminton nets	requirements.
Inflator with gauge	1

c) Dance Equipment

Console or record player	four speed	1

2. Outdoor Equipment

a) Gymnastic Equipment

Area equipped with apparatus for hanging, climbing, swinging, and creative play.

b) Games Equipment

Soccer goals	minimum or 4
Backstops	minimum of 4
Long Jump pits and toe boards	minimum of 2
High Jump pits	minimum of 2
Bordenball-Hockey goals	minimum of 4
High Jump standards	2 sets
Metal crossbars	2
Volleyball posts	minimum of 3
Tether Ball posts	minimum of 2
Ball rebound boards	minimum of 2
Boarded rink	as planned
Field liner	1
Stilts	4 pair

D. Supplies

a) Games and Gymnastic Supplies

Item	Number
Soccer balls	15 per station
Volleyballs	6 per station
6" utility balls	36 per station
8" utility balls	10 per station
3" bounce balls	12 per station
Tennis balls	12 per station
Cosom (Plastic) balls	12 per station
Tether balls	minimum of 2
Fastballs	18 per station
Bats	12 per station
Fastball masks	4 per station
Fastball gloves	4 per station
Skipping ropes— 9'	36 per station
—22'	12 per station
Field marking	4 sacks per year
Sand	As required
Measuring tapes—100'	1 per station
— 50'	2 per station
Whistles	6 per station
Marking sets	1 per station
Bean bags	36 per station
Floor Hockey pucks	2 per station
Hoops—36"	8 per station
—30"	20 per station
—24"	8 per station
—18"	8 per station
Skittles	8 per station
Team identification	4 colors—9 per set
Quoits	36 per station
Bowling pins	20 per station
Garden canes	12 per station
Gamester bats	36 per station
Ash poles	4 per station
Shuffleboard discs	As required
Shuffleboard cues	As required

b) Dance Supplies

Percussion Instruments	36 per station
Made up from a selection of the following:	
*Tambourines	10
*Drums (tambour)	6
Maracas	6 pair
Bells	6

Cymbal	1
Cymbals (pair)	6 pair
Chime Bar	1 set
Triangles	6
*Beaters	3 soft
*Beaters	3 hard
Castenets	4 pair
Jungle sticks	2

*Must be of good quality because they receive the most use.

Records:

Listen and Move (Green Label) F.D.S. 605 King St. W., Toronto	set of four records
Listen and Move (Blue Label) F.D.S.	set of eight records
Electronic Sounds —Inglebrecht (La Nursery), F.D.S.	1 record

APPENDIX E

FREQUENCY OF ACTIVITY. KINDERGARTEN AND GRADE SIX

Table 1 Frequency of Activity: Kindergarten, Section I

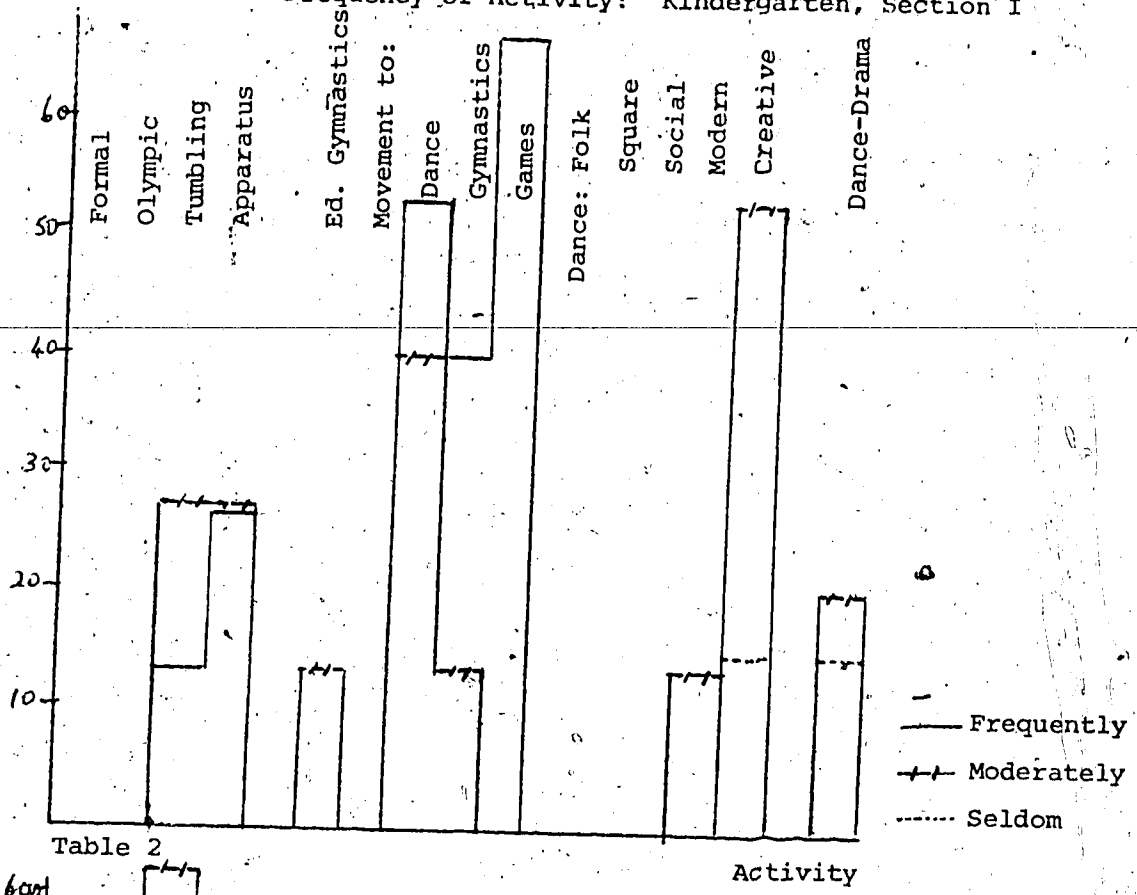


Table 2 Frequency of Activity: Grade VI, Section I

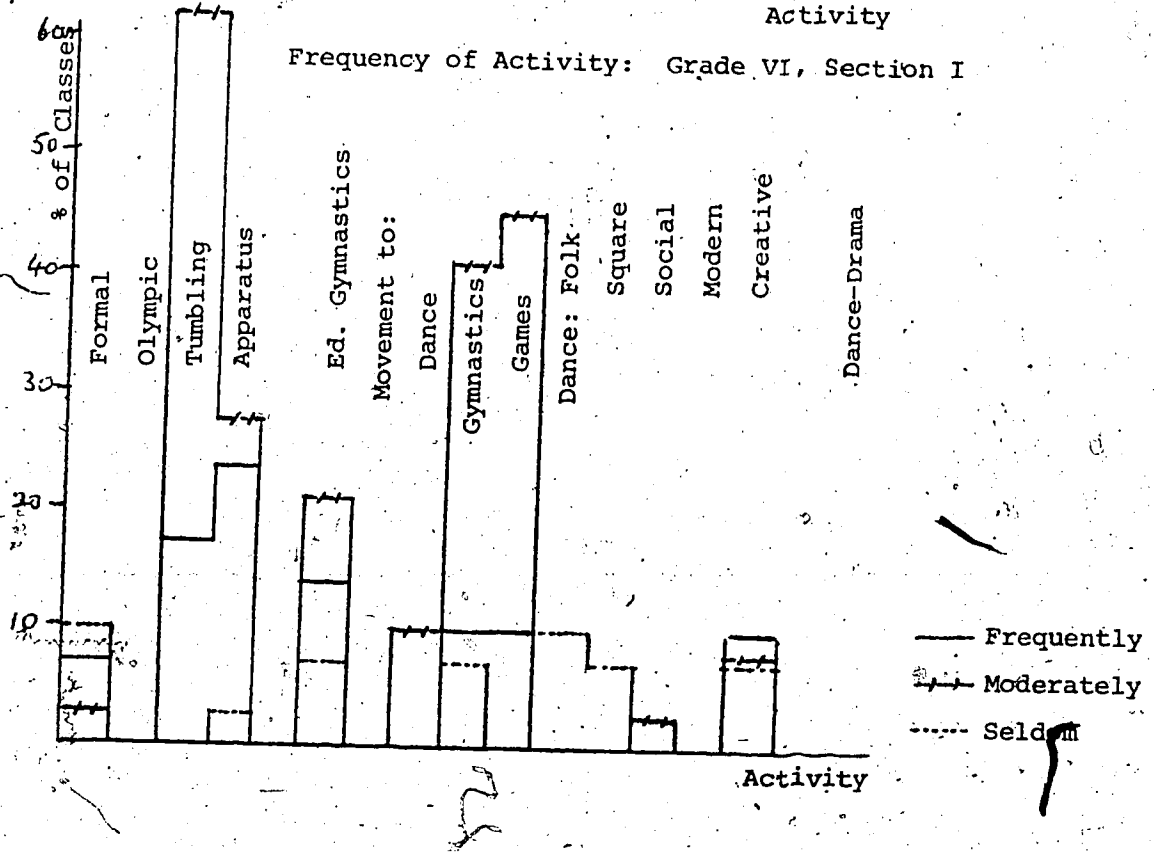


Table 3 Frequency of Activity: Kindergarten, Section II

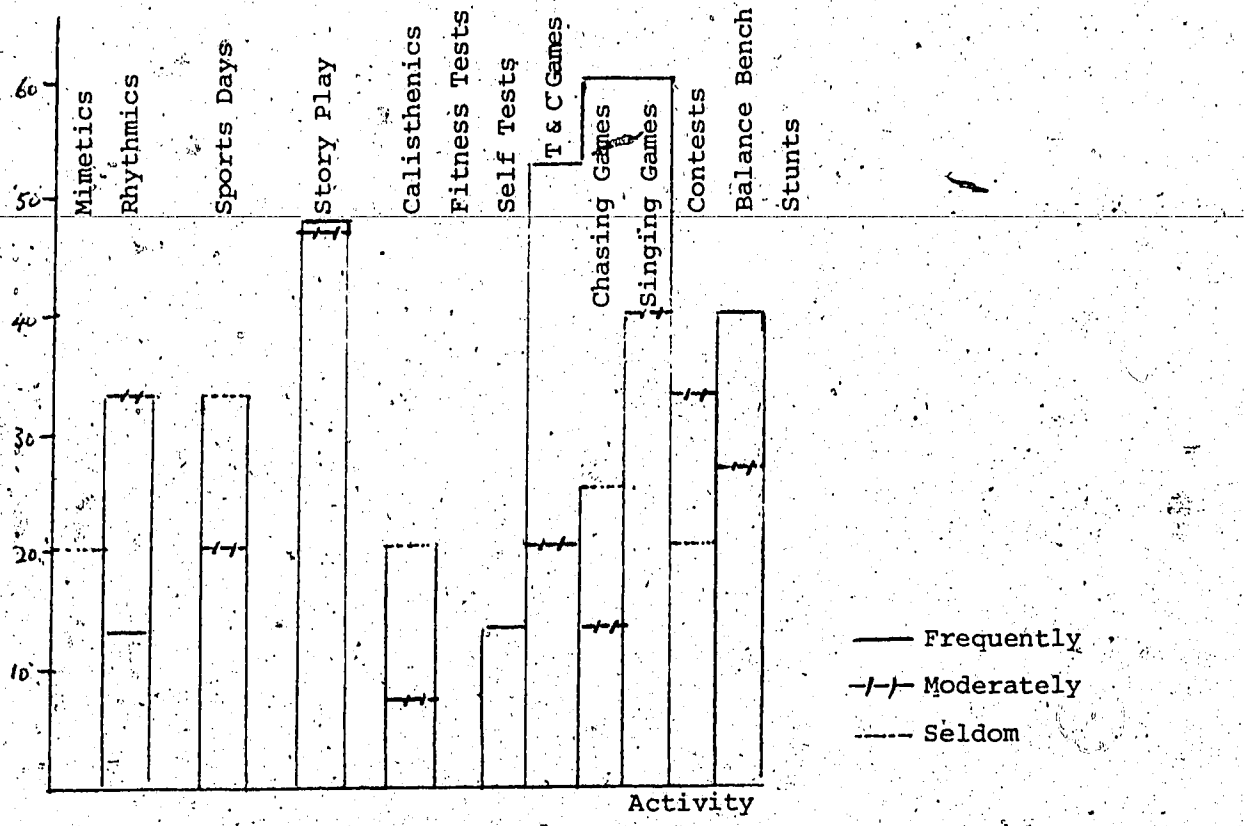


Table 4 Frequency of Activity: Grade VI, Section II

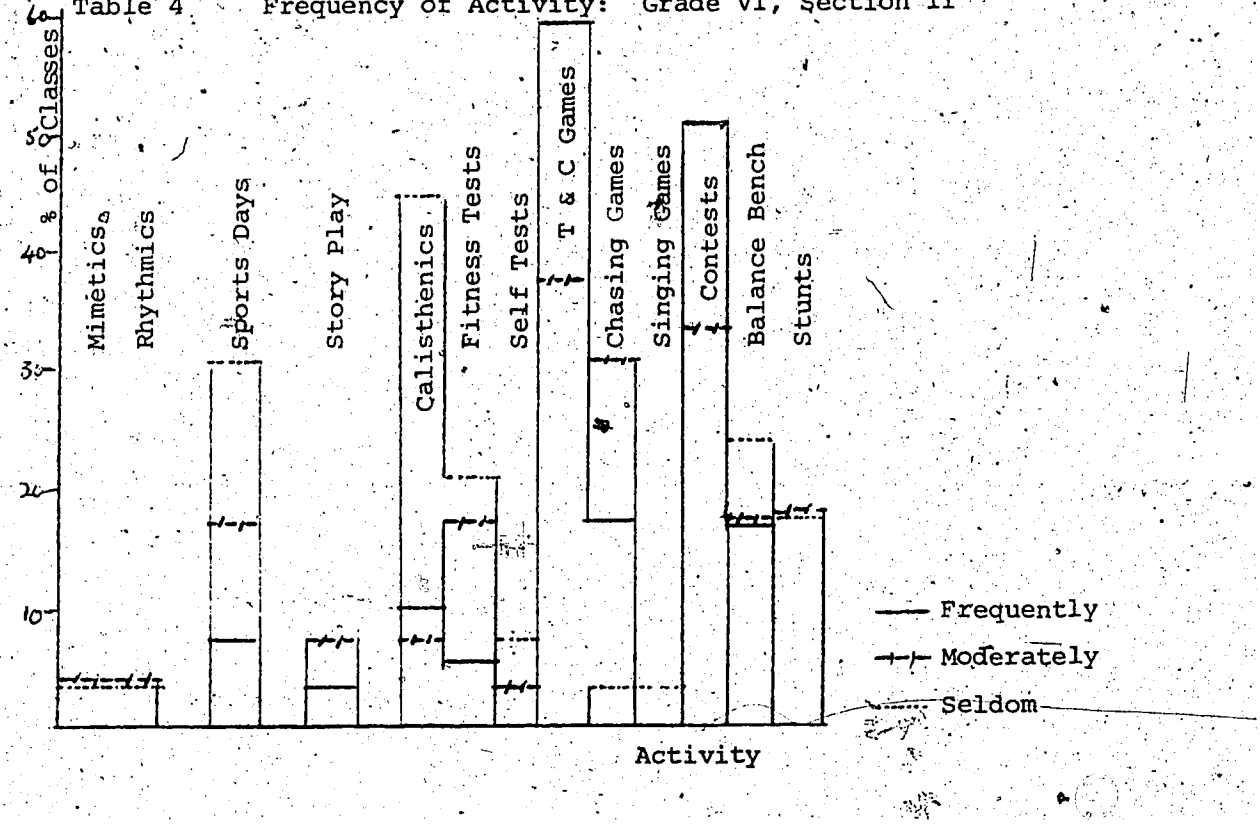


Table 5 Frequency of Activity: Kindergarten, Section III

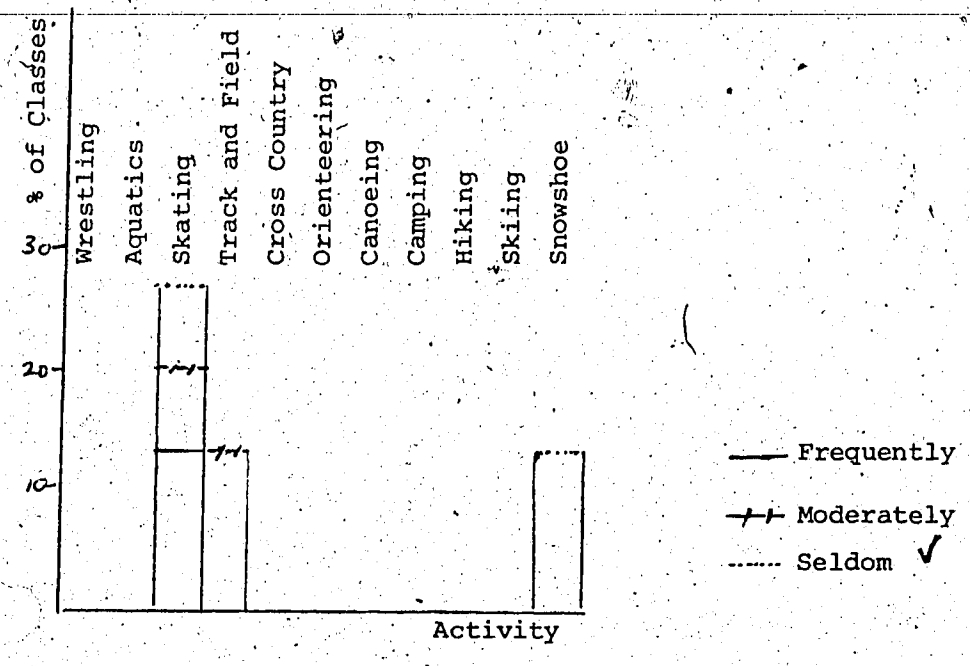


Table 6 Frequency of Activity: Grade VI, Section III

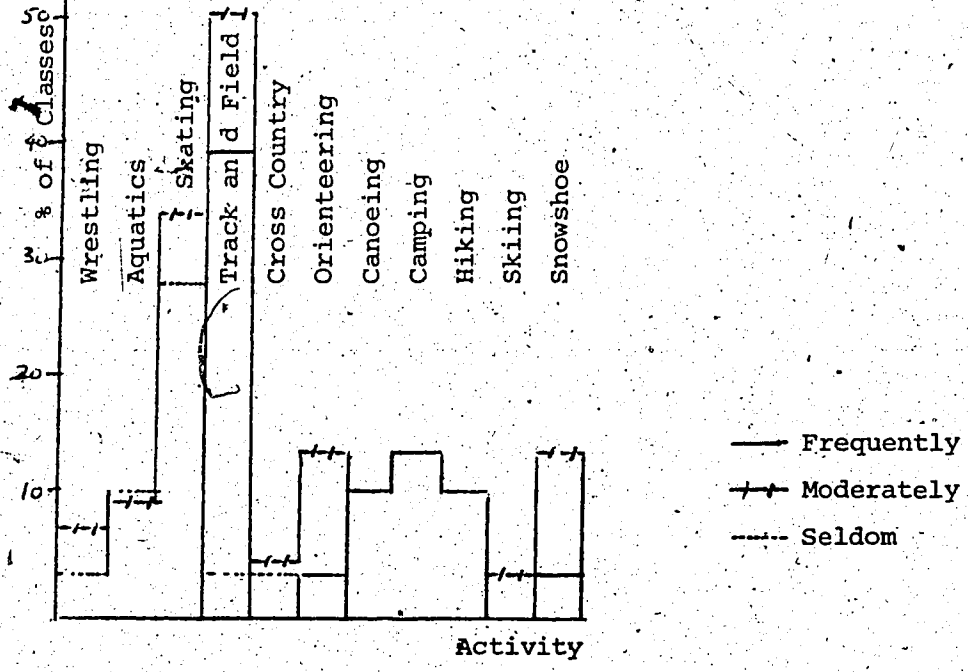


Table 7 Frequency of Activity: Kindergarten, Section IV

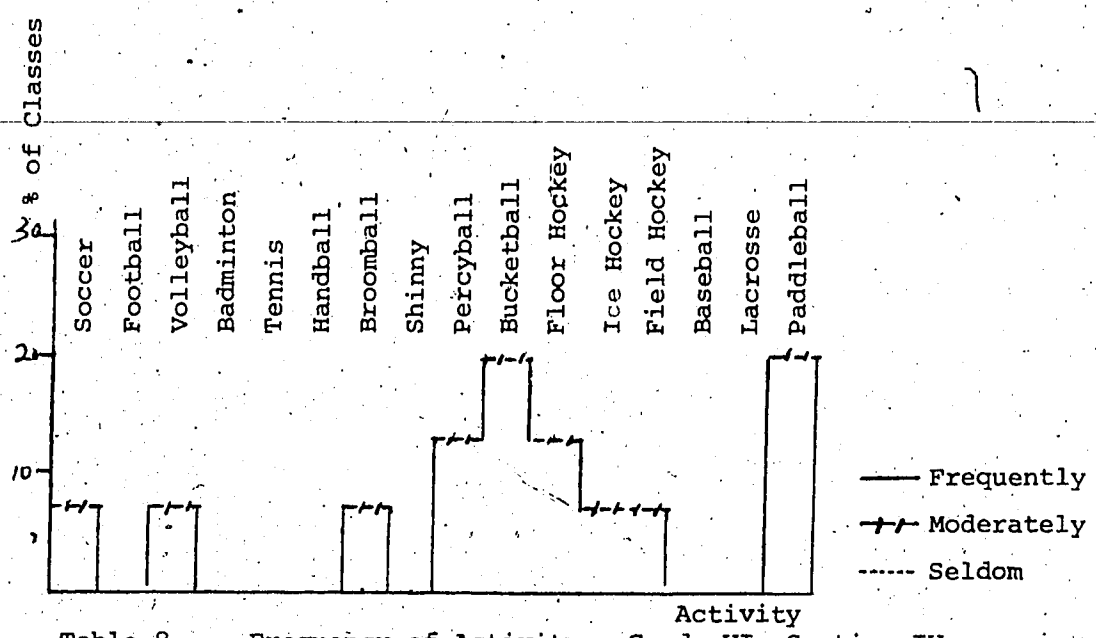
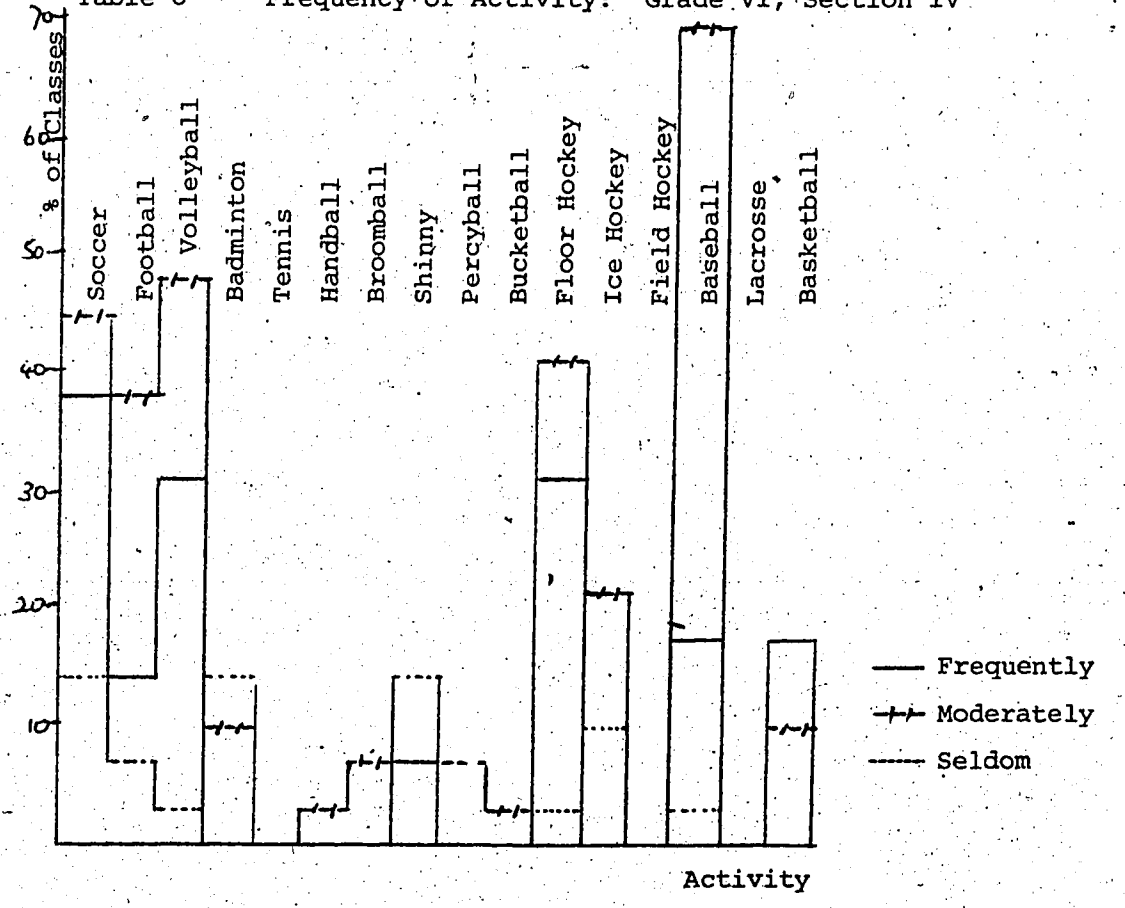


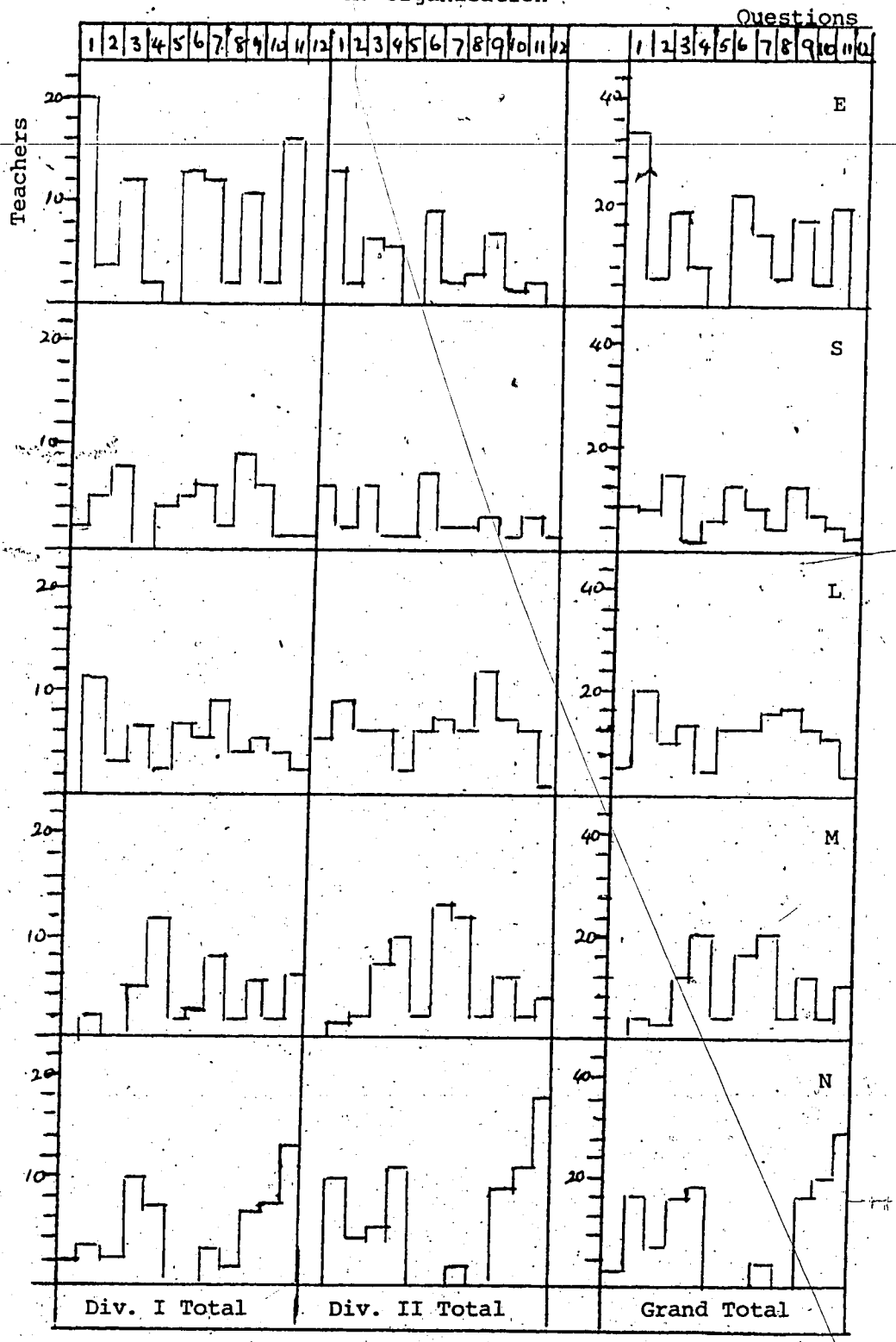
Table 8 Frequency of Activity: Grade VI, Section IV



APPENDIX F

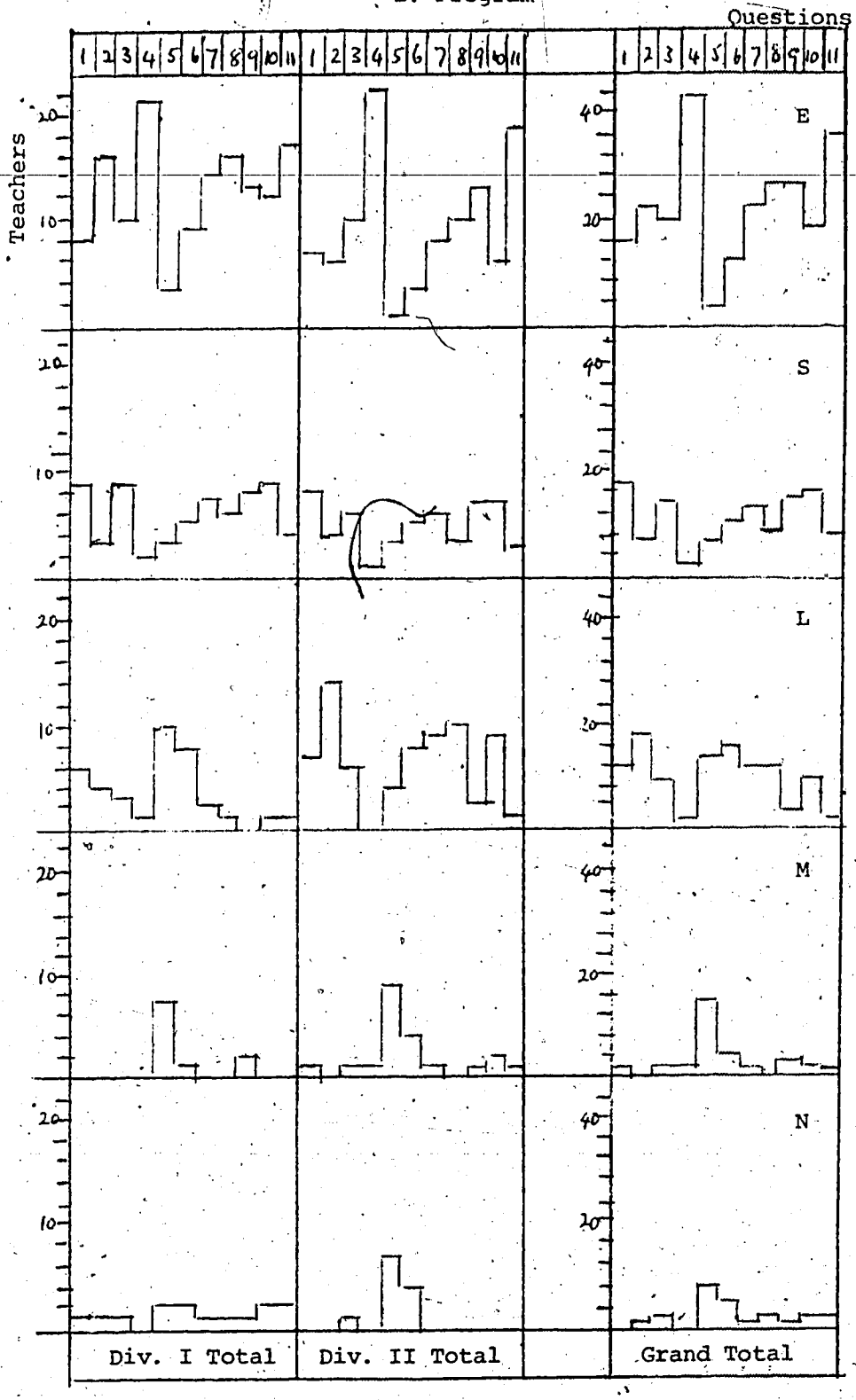
FREQUENCY OF TEACHERS' RESPONSES

Frequency of Teachers' Responses
A. Organisation



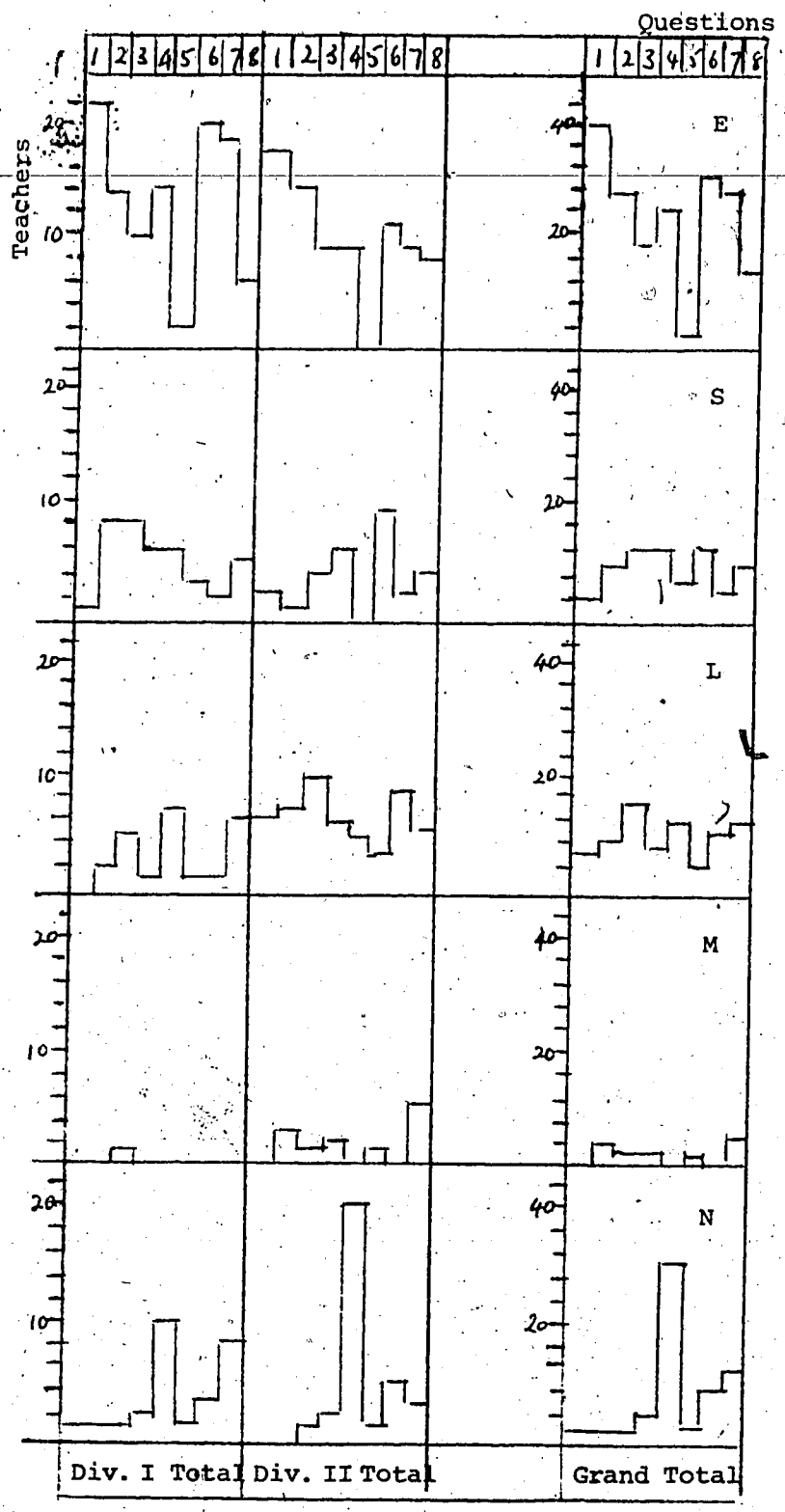
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable

Frequency of Teachers' Responses
B. Program



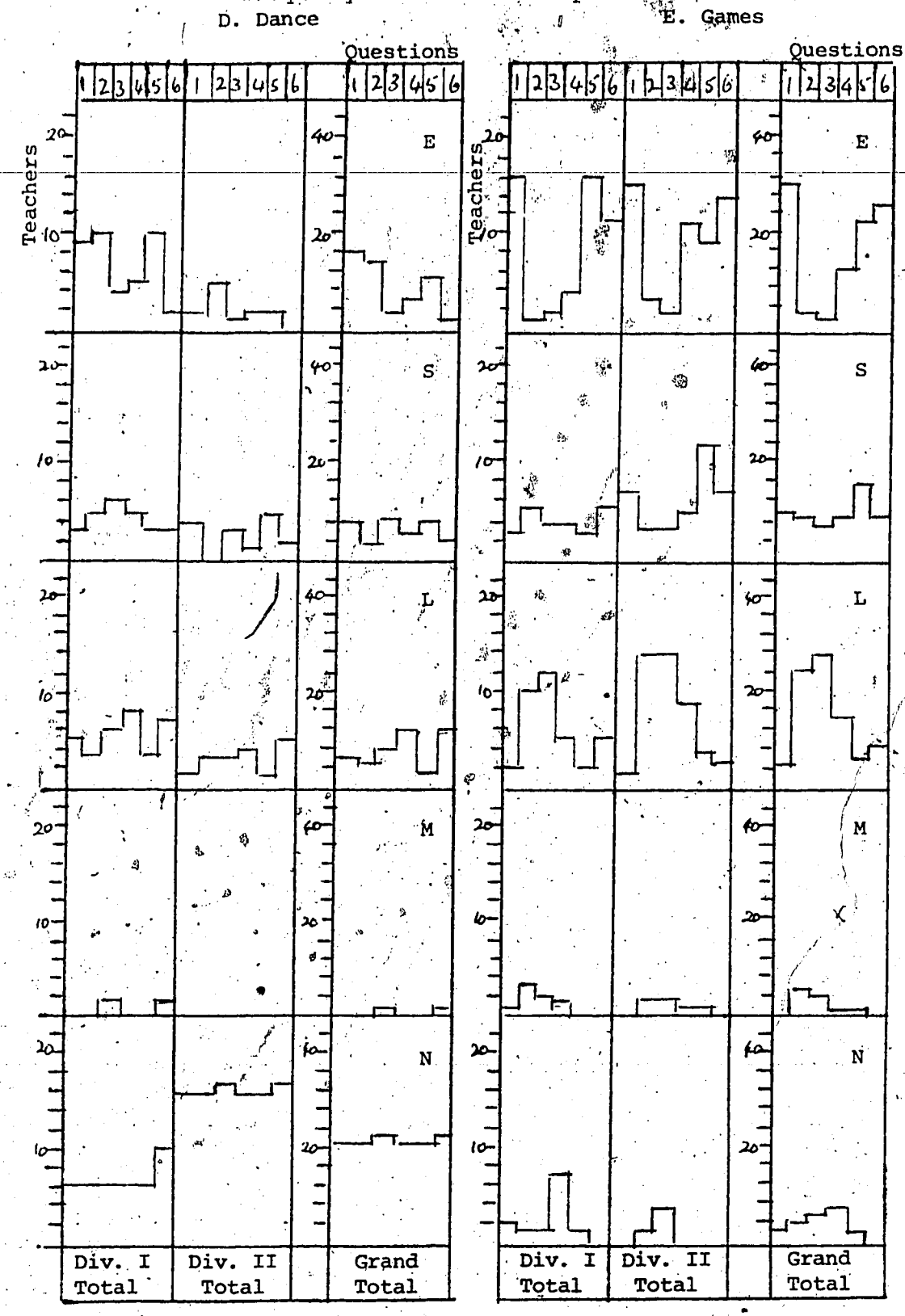
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable

Frequency of Teachers' Responses
C. Gymnastics



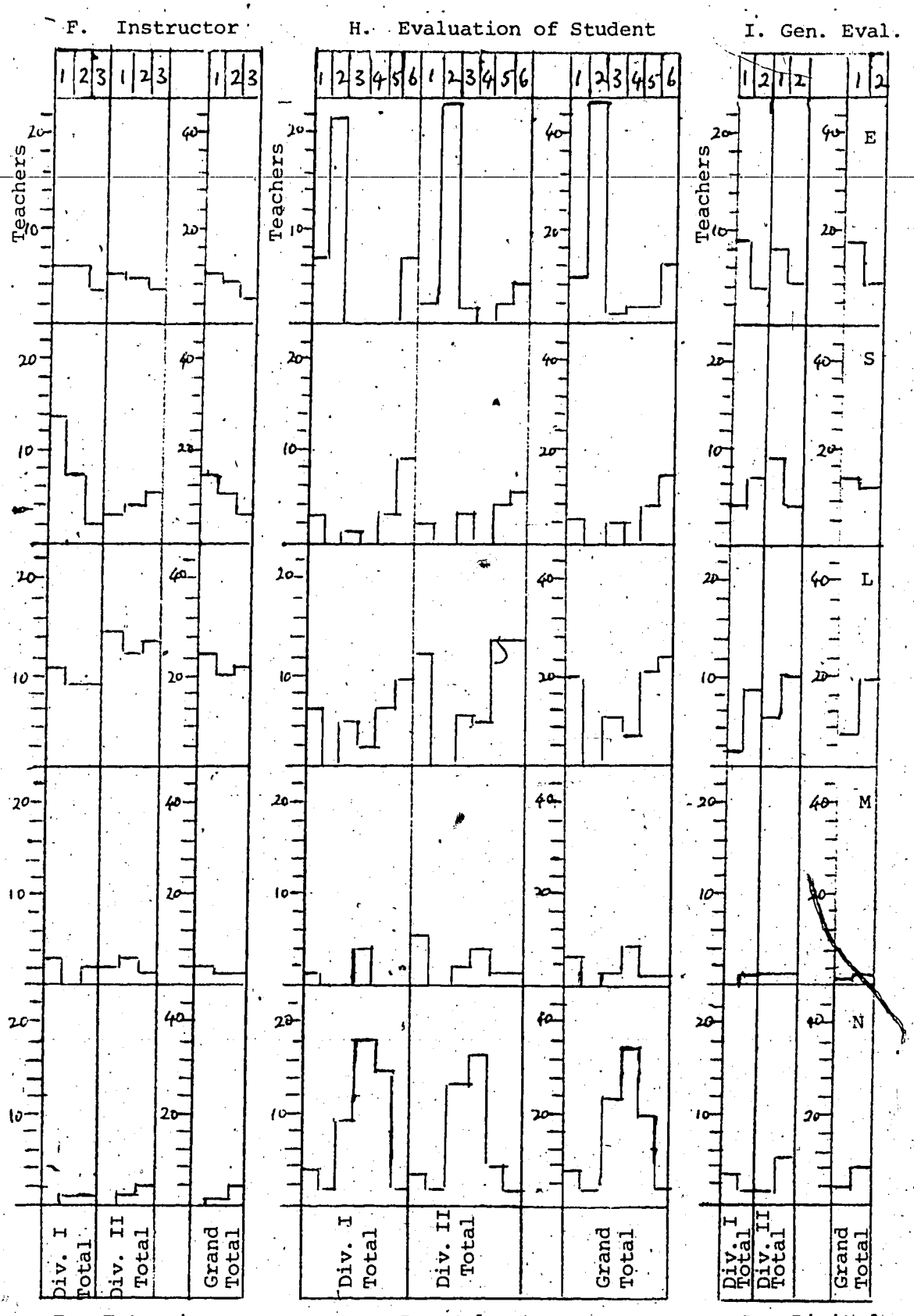
E - Extensive S - Moderate L - Limited
M - Missing N - Not applicable

Frequency of Teachers' Responses



E - Extensive
S - Moderate
L - Limited
M - Missing
N - Not applicable

Frequency of Teachers' Responses



E - Extensive
M - Missing
S - Moderate
N - Not applicable
L - Limited