PHYSICAL EDUCATION CURRICULUM: A STUDY OF THE CURRENT DELIVERY SYSTEM OF PHYSICAL EDUCATION IN NEWFOUNDLAND AND LABRADOR SCHOOLS

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PHYSICAL EDUCATION CURRICULUM:
A STUDY OF THE CURRENT DELIVERY SYSTEM OF PHYSICAL EDUCATION IN NEWFOUNDLAND AND LABRADOR SCHOOLS

BY

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ABSTRACT

The purpose of the study was to determine if specific school setting factors were affecting the delivery of the Physical Education curriculum in Newfoundland and Labrador schools. This was determined by establishing relationships between the school setting factors and conformity to the Physical Education curriculum.

A stratified random selection of 150 schools from 33 school boards constituted the sample group. From these schools it was established that there were 419 teachers responsible for teaching Physical Education to some portion of the schools' pupil enrollment. Each of these teachers received a questionnaire, via the school's principal, related to the school setting factors and the Physical Education curriculum.

The data analysis, based on the responses of 300 teachers from 120 schools, was conducted at two levels, i) whole curriculum level, i.e. the conformity level of the teacher taking into account the combination of all the school levels in which he is teaching Physical Education and ii) individual school levels, i.e. the conformity level of the teacher at each school level in which he is teaching Physical Education. Using cross tabulations and chi square the following school setting factors were isolated as

affecting the delivery of the Physical Education curriculum (conformity): i) whole curriculum level, (school characteristics) enrollment, school catchment area population, amount of equipment available, and quality of the equipment; (teacher characteristics) sex, degree held, university training in Physical Education, Physical Education inservice/workshop participation, and use of suggested guide books; ii) school levels, primary - (school characteristics) availibility of a classroom/playroom facility; (teacher characteristics) degree held, university training in Physical Education, and use of suggested guide books; elementary - (school characteristics) availability of a gymnasium, availability of a playground, and amount of equipment available; (teacher characteristics) university training in Physical Education, access to the guide publication, and use of suggested guide books; junior high - (teacher characteristic) access to the guide publication; senior high - low response rate restricted conclusive relationships. There were indications of other factors affecting the delivery of the Physical Education curriculum at both the whole curriculum level and the school levels.

The conclusions drawn from the study were; 1. Physical Education is receiving very little emphasis within the educational system of Newfoundland and Labrador, 2. small schools are neglecting Physical Education due to limited

settings, 3. senior high Physical Education curriculum is suffering due to problems of implementation and financing, 4. many teachers feel incompetent with teaching Physical Education, 5. there is a need for Physical Education specialists to be available to all schools, and 6. the availability and quality of equipment and facilities varies from school to school.

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LIST OF ABBREVIATIONS

El - Elementary school level (Grades 4 - 6)

Jr - Junior high school level (Grades 7 - 9)

P.E. - Physical Education

Pr - Primary school level (Grades K - 3)

Sr - Senior high school level (Grades 10 - 12 (Levels I, II, III))

Wh - Whole Curriculum level

CHAPTER I

INTRODUCTION

The history of formal education in Newfoundland and Labrador indicates that there have been a variety of changes in the educational system over this brief time span. The school building, curricula, teacher training, government policies, school size, pupil interest, and other elements have undergone numerous changes. With many influencing factors, such as a dispersed population, economic conditions, and government policies, there were inconsistencies in change when change took place. Therefore, over the years there has developed a variety of school settings throughout the Province. (See Review of Literature, "The History of Physical Education in Newfoundland and Labrador" (p. 6)).

Through the periods of change, Physical Education has been established in the curricula. (See Review of Literature, "The Status of Physical Education in Newfoundland and Labrador" (p. 11)). However, the various curricula set by the Department of Education, Government of Newfoundland and Labrador, does not recognize the dramatic variance between school settings across the Province.

Teachers are responsible for following the specific curricula without regard to their individual school setting (i.e. facilities, equipment, pupil enrollment, resources, etc.). It is suspected the school setting has a significant impact on the programs which can be provided by teachers at the school level. (See Review of Literature, "Review of Literature Related to Physical Education Curricula" (p.20)).

The researcher's training and experience in Physical Education indicates that there are discrepancies between the outlined Physical Education curriculum and the actual Physical Education curriculum which is taught in schools throughout the Province. This study will examine specific characteristics of the school setting to determine if the school setting has an impact on the delivery of the Physical Education curriculum.

Statement of the Problem

Physical Education is now a recognized part of the curricula in Newfoundland and Labrador schools and by law, (The School's Act, 1970), Physical Education must be provided by every school. A structured Physical Education curriculum is provided and promoted by the Department of Education and teachers are responsible for the teaching of

the Department of Education's curricula, (The School's Act, 1970). However, with the various school settings found throughout Newfoundland and Labrador, is the Physical Education curriculum being adhered to? Various studies conducted outside the Province, have shown that school setting does affect the delivery of a Physical Education program as illustrated in the Review of Literature, "Review of Literature Related to Physical Education Curricula".

Does the school setting have any effect upon the delivery of the Physical Education curriculum in Newfoundland and Labrador schools?

If the school setting does have an effect, are there specific characteristics of the school setting which have a greater effect than others? Are these characteristics affecting schools of similar school settings?

Is there a difference in the delivery of the Physical Education curriculum at the various school levels relative to the school setting?

The proposed study will analyse the delivery of the Physical Education curriculum in Newfoundland and Labrador schools in relation to specific characteristics of the school setting and attempt to draw conclusions, based upon relationships, that would aid in answering these general questions.

Analysis of specific questions related to school

setting and the Physical Education curriculum will provide the information needed for determining the relationships between school setting and the delivery of the Physical Education curriculum. The following areas will set the foundation for determining school setting:

1. Characteristics of the teacher - age, sex, teaching experience, professional training, attitude, workload, and views.
2. Characteristics of the school - enrollment, facilities available, equipment available, scheduling of Physical Education, support of staff and other groups, and the catchment area of the school.
3. The Physical Education program taught in relation to the Department of Education's Physical Education curriculum.

With the aid of a questionnaire, specific questions directed toward each component of these three areas will give answers to the following research questions:

1. Is there a relationship between the school characteristics and the teachers' practices in the delivery of the Physical Education curriculum?
2. Is there a relationship between the teacher characteristics and the teachers' practices in the delivery of the Physical Education curriculum?

Hypotheses

i) There is a relationship between the components of school characteristics and the delivery of the Physical Education curriculum in Newfoundland and Labrador schools.

ii) There is a relationship between the components of teacher characteristics and the delivery of the Physical Education curriculum in Newfoundland and Labrador schools.

Null Hypotheses

H_1 There is no relationship between the components of school characteristics and the delivery of the Physical Education curriculum in Newfoundland and Labrador schools.

H_2 There is no relationship between the components of teacher characteristics and the delivery of the Physical Education curriculum in Newfoundland and Labrador schools.

Limitations

1. A low number of teachers were recorded from the school levels of junior high and senior high. This, in turn, distorted the percentages obtained in the cross tabulations due to low numbers in specific cross tabulation cells. Chi square calculations were also affected and were in some cases irrelevant.

2. The Physical Education Curriculum Scale applied at the whole curriculum level hinges upon the Physical Education curriculum scale applied at the school levels. With the low number of teachers from the junior high level and especially the senior high level this has a minor affect upon the Physical Education Curriculum Scale placement at the whole curriculum level.

Definition of Terms

DELIVERY - The actual teaching presentation of the Physical Education curriculum.

PHYSICAL EDUCATION CURRICULUM - The Physical Education curriculum as set by the Department of Education, Government of Newfoundland and Labrador.

PHYSICAL EDUCATION TEACHER - The teacher within the school responsible for teaching Physical Education. Either the teacher who is responsible for teaching Physical Education to only a portion of the school or the teacher who is responsible for teaching Physical Education to the total school's enrollment.

SCHOOL CHARACTERISTICS - For the purpose of the study the following will constitute school characteristics; pupil enrollment, facilities available for Physical Education, quality of the facilities, equipment available for Physical Education, quality of the equipment, scheduling of Physical Education, support given by the staff, school board and other groups, and the catchment area of the schools.

SCHOOL LEVELS - The school levels are as defined by the Department of Education, Government of Newfoundland and Labrador; Primary - Kindergarten to Grade 3, Elementary - Grade 4 to Grade 6, Junior High - Grade 7 to Grade 9, Senior High - Grade 10 to Grade 12 (Level I to Level III).

TEACHER CHARACTERISTICS - For the purpose of the study the following will constitute teacher characteristics; age, sex, teaching experience, professional training, attitude toward Physical Education, workload in Physical Education, use of Physical Education materials, exposure to Physical Education inservices/workshops, and views on Physical Education.

WHOLE CURRICULUM LEVEL - The conformity level of the teacher as determined by the application of the Physical Education curriculum scale taking into account the combination of all the school levels which the teacher is responsible for teaching Physical Education.

CHAPTER II

REVIEW OF LITERATURE

The review of literature has been divided into three sections for the purpose of presentation. The first section "The History of Physical Education in Newfoundland and Labrador", is an overview of the formal educational system in Newfoundland and Labrador with emphasis on Physical Education. The second section, "The Status of Physical Education in Newfoundland and Labrador", is an overview of the Government of Newfoundland and Labrador Department of Education's standpoint with respect to Physical Education as part of the educational system. The third section, "Review of Literature Related to Physical Education Curricula", is a critique of various studies of Physical Education curricula.

i) The History of Physical Education in Newfoundland and Labrador

The formal educational system in Newfoundland and Labrador has come a long way, especially since the creation of the Department of Education in 1920 which established a central government agency to develop and implement policies, regulations, and curricula for educational standards throughout the Province.

The design of school building(s) has undergone dramatic

structural changes from the early 1920's (Rowe, 1976; Warren, 1967). Today, schools are built with more classrooms to accommodate more students and they also include more facilities, such as libraries, science laboratories, administration offices, and gymnasia.

Structural changes in school buildings were promoted from the late 1950's to early 1960's when the Provincial Government made a commitment toward centralization of public services (Duggan, 1970; Rowe, 1964). The centralization theme also directed educational outlooks. 'Large Central and Regional High Schools were built and one of the facilities built as part of the school was a gymnasium or gymnatorium (Rowe, 1976). However, during the mid-1970's, the concept of centralized schools gradually reverted back to the community school concept. The once small (one-to-three room) community schools had to be rebuilt.

Between 1965 and 1983, the number of schools in the Province was reduced from 1,266 to 627 although the student enrollment increased from 144,129 to 147,603 (Department of Education, 1984b; Warren, 1967). A change in the lifestyle and increased public expectations for educational services in Newfoundland and Labrador promoted by the provision of Physical Education in the centralized schools, made construction of the new schools with gymnasia a priority

(Warren, 1978; Fisher, 1972). School buildings increased in size with more and better facilities being made available. Rowe (1976) indicated that in 1975 there were 300 schools which had gymnasia as compared to 10 in 1949.

The gymnasium facility became associated with the building of new schools (Rowe, 1976). However, the availability of gymnasia did not necessarily guarantee the teaching of the Physical Education curriculum, since Physical Education was an unfamiliar subject to most of the teachers.

Traditionally, Newfoundland teachers had little university training and taught only the "3 R's" (Warren, 1967), and one of the most neglected areas of education in Newfoundland was Physical Education and Recreation (Rowe, 1976). With the increase in the number of gymnasia from the 1950's to the 1960's, and a change in educational expectations, teachers were compelled to teach, or attempted to teach, Physical Education.

The Department of Education sensed a need for teachers to be trained in the teaching of Physical Education. In 1958 Memorial University of Newfoundland started a certificate program for teachers of Physical Education. From 1958-1962, twenty-eight teachers received Physical Education certificates from Memorial University. The enrollment and program status steadily increased as the

demand for qualified Physical Education teachers became prevalent. In 1963 the certificate program was changed to a Physical Education diploma program whereby six candidates received Physical Education diplomas. In 1964 the university again changed the status from a diploma to a degree program. Between 1964-1983, 449 candidates have successfully completed the Bachelor of Physical Education program. (School of Physical Education and Athletics, Memorial University of Newfoundland.)

The increase in trained professionals in the field of Physical Education and the increase in the number of gymnasia across Newfoundland and Labrador stimulated growth of Physical Education. The Report of the Royal Commission on Education and Youth (Warren, 1967) made recommendations that Physical Education in the elementary schools be made compulsory and that Physical Education be provided to all high school students (Recommendations 118 and 161). The report also gave a firm view of Physical Education which emphasized the importance of Physical Education in the curriculum.

> The Commission believes that a sound physical education programme should be an important part of the school curriculum, contributing to the total development of the child. Such a programme should provide opportunity for children of all ages to participate in worthwhile activities designed:
> 1. To develop and maintain physical fitness
> 2. To promote the development of fundamental movements and skills, such as walking, catching and alike

3. To improve physical, intellectual, and psychological health through wholesome physical exercise
4. To develop recreational skills
5. To bolster social and moral growth by providing situations in both team sports and individual competitions
6. To foster school spirit, pride, and loyality by participation in extra-mural athletics. (Warren, 1967, p. 159-160.)

Documented statements, Warren (1967), have been significant to the development of Physical Education in Newfoundland and Labrador, but as indicated in a report compiled by Crocker and Riggs (1979) there were only 66% of Primary and Elementary schools, and 92% of Junior High and Senior Highschools offering Physical Education, with only 254 Physical Education specialists. Physical Education, as a recognized part of the total educational system in Newfoundland and Labrador, has advanced and gained recognition but must receive more widespread acceptance before it is fully recognized and accepted as part of the educational system in Newfoundland and Labrador schools.

ii) <u>The Status of Physical Education in Newfoundland and Labrador</u>

The Department of Education has recognized for some time that Physical Education has an important place within the total educational system (Department of Education, 1984a, 1984c, 1975, 1970, 1967, 1962, 1957). The emphasis

that Physical Education should receive is explicitly stated in An Act Respecting the Operation of Schools and Colleges in the Province, 1970 (The Schools Act). Physical Education is stated as a program area which all school boards must organize and carry out (Article 12, section f). Also, within the Act the duties of the teacher are outlined with specific mention of teaching diligently and faithfully all subjects he is required to teach (Article 81, section b). Implicit in these two sections of The Schools Act is the Department of Education's philosophy to include Physical Education as a part of the curriculum to be taught in every school throughout the Province.

Along with the Department of Education's commitment to Physical Education in The Schools Act, the Department of Education has also documented direct statements and viewpoints concerning Physical Education (Department of Education, 1984c, 1975, 1967, 1957). The Department of Education's views on Physical Education are concurrent with the views of others (The Physical Education Council of the Newfoundland Teachers Association, 1983; Gubsen, 1980; Urguhart, 1979; Vancouver School Board, 1966).

The total educational benefits of a sound Physical Education program are recognized by the Department of Education. Currently, the provincial Physical Education

curriculum is organized in a manner which allows for a distinct program outline for each of the four school levels of primary, elementary, junior high, and senior high. These programs are outlined in the Department of Education's publications of "Physical Education Curriculum Guide: Kindergarten - Grade Eleven," (1975) and "Program of Studies Primary, Elementary, Secondary" (1984-1985). (See Appendix D.)

iii) Review of Literature Related to Physical Education Curricula

The delivery of a Physical Education curriculum within a school system can be influenced by many factors. Various studies have shown that the influencing factors are not consistent throughout (Dibbon, 1984; Kneer, 1983; Moody, 1983; Manitoba Department of Education, 1980; University of British Columbia, 1979; Glassford, 1977; Math, 1975; Jacobson, 1973; Vancouver School Board, 1966). A specific school or region may have totally different factors influencing its Physical Education curriculum compared to another school or region. However, studies have shown that there are some similarities.

Various reports and studies have cited the following as factors which may impede the delivery of Physical Education

curricula in school systems; inadequate facilities, inadequate supply of equipment, lack of teacher training in Physical Education, size of the school, negative attitude of teachers toward Physical Education, and workload was too heavy (Dibbon, 1984; Kneer, 1983; Moody, 1983; Bognar, 1980; University of British Columbia, 1979; Rowe, 1976, 1958; Math, 1975; Faculty Council, 1973; Jacobsen, 1973; Wall, 1960). Also, various reports and studies have cited the following as factors which may enhance the delivery of Physical Education curricula in school systems; students' positive attitude toward Physical Education, teachers' positive attitude toward Physical Education, and teachers' satisfaction with facilities (Moody, 1983; Manitoba Department of Education, 1980; University of British Columbia, 1979; Warren, 1978; Glassford, 1977; Math, 1975; Wilson, 1969; Vancouver School Board, 1966).

From the reviewed studies related to Physical Education teachers' job satisfaction and attitudes toward Physical Education, a general outline of influencing variables upon teacher attitude toward Physical Education may be deduced; academic training, availability of equipment, availability of facilities, comfort and convenience of the job, help and support received from staff members, recognition received for work performed, and workload outside of regular teaching

hours (cocurricular activities) (Dibbon, 1984; Moody, 1983; University of British Columbia, 1979; Math, 1975).

From the reviewed studies related to students' attitudes toward Physical Education a general outline of influencing variables upon student's attitude toward Physical Education may be deduced; desirable outcomes expected from participation in Physical Education, enjoyment of Physical Education classes, participation in cocurricular activities, ranking of Physical Education in relation to other school subjects, ranking of time allotment for Physical Education, and self ranking of physical skills abilities (Moody, 1983; University of British Columbia, 1979; Glassford, 1977; Mista, 1968).

Physical Education is an important part of the school's curriculum (Department of Education 1984a, 1984b, 1984c, 1975, 1970, 1967, 1962, 1957; The Physical Education Council of the Newfoundland Teachers Association, 1983; Gubsen, 1980; Urguhart, 1979; Canadian Association of Health, Physical Education and Recreation (CAHPER), 1977; Glassford, 1977; Rowe, 1958, 1957) and it can be influenced by internal and external school factors.

The Canadian Association for Health Physical Education, and Recreation (1977) stated that a good elementary school Physical Education program was needed, and developed the following list of elements required for a

program; daily instruction, maximum active participation, wide range of movement experience, total fitness activities, adequate and appropriate facilities and equipment, principles of child growth and development as its base, opportunities to develop positive attitudes to activities, suitable competition, and qualified, competent teachers.

While this list pertains to Physical Education programs in an elementary school, the list could apply to any type of educational facility. Other studies and reports, which take into account the four school levels, further substantiates the list of elements given by CAHPER (1977) as essentials for a good Physical Education program (Kneer, 1983; Moody, 1983; The School Physical Activities Program Committee, 1983; Manitoba Department of Education, 1980; Let's Go, 1979,4; University of British Columbia, 1979; Department of Education, 1978, 1967, 1962; Faculty Council, 1973; Workman, 1968; Rowe, 1958).

However, other reports and studies contradict the remarks and conclusions cited; such as the necessity for a Physical Education specialist as a component of any Physical Education program. In 1966 the Anglican School Board for St. John's established a Physical Education curriculum and encouraged the teachers of the Primary grades to teach the Physical Education curriculum. Presently, the Department of Education, Newfoundland and Labrador, has established a

provincial Physical Education curriculum which de-emphasizes the role of the Physical Education specialist and relies on the individual classroom teacher for teaching the program. A study by Mista (1969) concluded that inclusion or exclusion of a Physical Education program in a high school curricula, the time spent on Physical Education in school, and the community size, had no significant influence upon students' attitude toward Physical Education. Also, a similar study by Dotson (1972) concluded that the size of the high school had no significant effect upon students' attitude toward Physical Education.

With the review of literature indicating opposing conclusions and philosophies this illustrates that a variety of factors impinging on a school or region may have a major influence on the delivery of a Physical Education curriculum. The school setting can dictate the delivery of a Physical Education curriculum (Kneer, 1983; Bognar, 1980; CAHPER, 1979; Let's Go, 1979; Urguhart, 1979; Workman, 1968; Vancouver School Board, 1966).

Conclusion

The review of literature revealed that schools in many areas found themselves with a variety of factors influencing

their Physical Education curricula. Newfoundland and Labrador is not in a unique situation with regards to the delivery of Physical Education in the school system or with regards to having a variety of school settings. But, are there any relationships between components of a school setting and the actual delivery of a Physical Education curriculum? Any future curriculum developments in Physical Education for Newfoundland and Labrador must take into consideration such relationships, if they exist.

This study, "Physical Education Curriculum: A Study of the Current Delivery System of Physical Education in Newfoundland and Labrador Schools", will seek to determine if there are any relationships between components of school setting and the actual delivery of the current Physical Education curriculum as set by the Department of Education, Newfoundland and Labrador. It can then be determined which components of school setting enhance the delivery of the current Physical Education curriculum in Newfoundland and Labrador schools, and which components impede the delivery of the current Physical Education curriculum.

CHAPTER III

METHODOLOGY

Population Base and Sample Group

PROXIMATE POPULATION - All schools and teachers responsible for teaching Physical Education within the schools from the Province of Newfoundland and Labrador.

SAMPLE GROUP - Each of the 35 school board Superintendents was sent a letter explaining the upcoming study and asking for their consent to have the schools/teachers of their school district included in the population base for selection of a sample group (see Table 1).

Table 1

Population Base

School Boards	Replies	Giving Consent
35	34	33

Once the population base was established, the sample group of 150 schools was selected using the stratified random sampling technique. The schools of every district

were stratified in categories of primary, elementary, junior high, senior high, primary-elementary, primary-elementary-junior high, primary-elementary-junior high-senior high and junior high-senior high. This technique was used to insure that the sample group consisted of teachers from the four school levels, primary, elementary, junior high and senior high and to insure that each district could be represented as the school settings may vary from school to school and district to district.

Table 2

Sample Group Breakdown

Grade Levels or Portions in the Schools	Total No. of Schools in the Province	Total No. of Schools in the Sample Group	Percentage Total No. of Schools
K-6	263	58	22
7-12	147	37	25
K-12	214	55	25
	624	150	*24

* Percentage of schools included in the sample group.

The number of teachers teaching Physical Education at each of the school levels was established by contacting the co-ordinators responsible for Physical Education at each of the school boards involved (see Table 3).

Table 3

Number of Physical Education Teachers

at Each School Level (Sample Group)

School Levels	* No. of Teachers Teaching P.E.
Primary	221
Elementary	154
Junior High	116
Senior High	90
	581

* Some teachers are teaching P. E. at more than one school level.

Table 4

Further Breakdown of Sample Group.

Grade Levels or Portions in School	No. of Schools in the Sample Group
Primary Only	8
Elementary Only	1
Junior High Only	3
Primary & Elementary	49
Primary, Elementary & Junior High	19
Primary, Elementary, Junior High & Senior High (All Grade Schools)	34

Procedure

The study is based on survey design, where the data are collected by questionnaire. The first step was to determine if there was a population base for the selection of a sample

group. Every superintendent of the Province's 35 school boards was sent a letter explaining the proposed study and asked for consent to have the schools, and teachers of these schools, to be included in the population base for random selection of a sample group. A reply form and a stamped, addressed return envelope was enclosed with the letter. The response of 33 of 35 superintendents giving consent established a population base for sample group selection.

Each of the school districts of the population base was then stratified into the school level categories and the sample group of 150 schools was randomly selected.

A questionnaire was to be sent to each teacher of the sample group schools who was responsible for teaching Physical Education. Therefore, the number of teachers responsible for teaching Physical Education in each of these schools had to be determined so that the correct number of questionnaires would be sent to each school. These numbers (teachers teaching Physical Education) were obtained by contacting the Physical Education coordinator, by telephone, of each school district. It was then determined that from the 150 schools of the sample group there were 419 teachers responsible for teaching Physical Education.

The questionnaire to be used for collecting the data was developed. The questionnaire included questions related

to components of school setting and the components of the Physical Education curriculum, Department of Education, Newfoundland and Labrador. Permission was granted by my thesis supervisory committee for the questionnaires to be sent to the sample group schools.

The names of the principals and the addresses for each of the sample group schools was obtained from the Department of Education, Newfoundland and Labrador, publication Directory of Schools Newfoundland and Labrador 1984-85. The survey packages were mailed to the principals. Each survey package included i) a covering letter addressed to the principal (principal's letter), ii) a stamped, addressed return envelope, iii) a covering letter for each teacher responsible for teaching Physical Education in the school (colleague's letter), iv) a questionnaire for each teacher responsible for teaching Physical Education in the school, and v) a specially marked envelope for each questionnaire, (specially marked envelopes were used so that the completed questionnaire could be sealed inside the envelope and kept confidential).

The principals had the responsibilities of distributing to each teacher responsible for teaching Physical Education in the school, one colleague's letter, one questionnaire, and one specially marked envelope. By a specified date, each principal was requested to collect each of the sealed

specially marked envelopes, containing a completed questionnaire, and to mail all the specially marked envelopes collected to the researcher by using the stamped, addressed return envelope.

One week after the mailing of the survey packages, a reminder note was mailed to each principal of the sample group.

Each return envelope received was tallied as one so that a school return percentage could be recorded. Also, each questionnaire received was tallied as one so that a teacher return percentage could be recorded.

The data were recorded and analyzed using the Statistical Package for the Social Sciences ($SPSS_x$) on the VAX Computer System at Memorial University of Newfoundland.

Development of the Questionnaire

Within the review of literature, several questionnaires dealing with Physical Education and school setting factors were reviewed (Dibbon, 1984; Kneer, 1983; Moody, 1983; Manitoba Department of Education, 1980; University of British Columbia, 1979; Glassford, 1977; Math, 1975; Wear, 1955). None of the reviewed questionnaires were suitable for the collection of the data needed for the study.

However, the reviewed questionnaires were helpful for determining wording and arrangement of questions, and selection of school setting factors for the development of the study's questionnaire.

The questionnaire has two major components, i) school setting factors which are broken into school characteristics and teacher characteristics and ii) Physical Education curriculum components which consists of the components of the Physical Education curriculum, Department of Education, Newfoundland and Labrador, for each school level and components which are outside of the curriculum.

The questionnaire was reviewed, critiqued and tested. Five professors of Memorial University of Newfoundland reviewed and critiqued the questionnaire. The questionnaire was then tested using a pilot group consisting of one Physical Education specialist presently in the school system, and six graduate students who were either Physical Education specialists or teachers who, at one time, were responsible for teaching Physical Education. This group responded to and then critiqued the questionnaire. As a result of input from the pilot group, necessary changes and adjustments were made to the questionnaire. The reliability of the questionnaire was not tested.

Questionnaire Design

The questionnaire was designed to collect data pertaining to the school setting and the Physical Education curriculum.

School setting is comprised of school characteristics and teacher characteristics. The school characteristics are; pupil enrollment, school's catchment area population, type of scheduling cycle used, length of a Physical Education period, frequency of Physical Education in a cycle for each school level, facilities available for teaching Physical Education, quality of the facilities, equipment available for teaching Physical Education, quality of the equipment, and the support given by various internal and external persons or groups for the Physical Education program in the school.

The teacher characteristics are; sex, age, teaching experience, degrees held, university attended, grades for which the teacher is responsible for teaching Physical Education, number of classes at the grade level which the teacher is responsible for teaching Physical Education, amount of total teaching time allocated to teaching Physical Education, university training in Physical Education,

personal practices in physical recreational activities outside of school time, access to the Physical Education guide book, participation in Physical Education workshops/inservices, year of the last Physical Education workshop/inservice attended, publications used for teaching Physical Education, attitude toward Physical Education in school, and the teacher's personal views on Physical Education.

The Physical Education curriculum component of the questionnaire is comprised of the Department of Education's, Newfoundland and Labrador, Physical Education curriculum for each school level, primary, elementary, junior high, and senior high, and components of Physical Education which are outside of the Department of Education's curriculum.

Data Analysis Breakdown

The data collected were recorded and analyzed using the Statistical Package for the Social Sciences ($SPSS_x$) on the VAX Computer system at Memorial University of Newfoundland. The following is the breakdown of the data analysis for each of the components of the questionnaire; Physical Education curriculum, school characteristics, and teacher characteristics.

Physical Education Curriculum

The Physical Education Curriculum component of the questionnaire is in a checklist format and is used to determine conformity to the Department of Education's, Newfoundland and Labrador, Physical Education curriculum. There is a separate checklist for each of the four school levels. The respondent is only responsible for responding to the checklist(s) which involves the school level(s) which he is teaching Physical Education. Each checklist contains; i) the specific components of the Physical Education curriculum as outlined by the Department of Education, ii) components of Physical Education which are not part of the Department of Education's curriculum, and iii) space to add other components which may be taught by the respondent within his Physical Education program.

A score of one point is allocated to each specific component of the Newfoundland and Labrador Department of Education's Physical Education curriculum. A score of zero is allocated to each component which is not part of the Department of Education's curriculum. Also, any component indicated in the open space by the respondent as part of his Physical Education program was scored as zero. The sum

total score of the school level, as indicated by the respondent, will then be placed into one of the three curriculum scales to determine conformity to the Physical Education curriculum;

i) conformance (to the curriculum)

ii) partial conformance (to the curriculum)

iii) no conformance (to the curriculum)

The following sum scores will determine the curriculum scale groups for each school level.

1. **Primary Level:** Possible high score of 10.

Conformance - Score 10

Partial Conformance - Score 6-9

No conformance - Score below 6

2. **Elementary Level:** Possible high score of 8, but only required to achieve 5 points (5 of 8 activities) as outlined by the curriculum guide.

Conformance - Score 5-8

Partial conformance - Score 3-4

No conformance - Score below 3

3. **Junior High Level:** Possible high score of 12 but only required to achieve 5 points (5 of 12 activities as outlined by the curriculum guide.

Conformance - Score 5-12

Partial conformance - Score 3-4

No conformance - Score below 3

4. **High School Level:** Physical Education 1100: Possible high score of 9 but only required to achieve 5 points (5 of 9 activities) as outlined by the curriculum guide.

Conformance - Score 5-9

Partial Conformance - Score 3-4

No conformance - Score below 3

Physical Education 2100: Possible high score of 10 but only required to achieve 5 (5 of 10 activities) as outlined by the curriculum guide.

Conformance - Score 5-10

Partial conformance - Score 3-4

No conformance - Score below 3

Physical Education 3100: There are no set activities or number of activities to be covered under Physical Education 3100, therefore a similar scale as Physical Education 2100 will be used with 1 point given for each activity.

Conformance - Score 5 or greater

Partial Conformance - Score 3-4

No conformance - Score below 3

Frequencies were recorded on the curriculum scales of conformance, partial conformance, and no conformance and then tabulated at three groupings; i) Frequencies for the school levels of primary, elementary, junior high, and

each of the three senior high Physical Education courses. ii) Frequencies for each school level, primary, elementary, junior high, (these would be the same frequencies as those in grouping i), and senior high. At the senior high level the teacher has to be classified as "conformance"at each senior high Physical Education course he is teaching to be classified as "conformance" at the senior high level. If he is classified as "partial conformance" at one or more of the senior high Physical Education courses which he is teaching then he is classified as "partial conformance" at the senior high level. However, if he is classified as "no conformance" at one or more of the senior high Physical Education courses which he is teaching then he is classified as "no conformance" at the senior high level. iii) Frequencies to show the teachers "whole" conformity rating, that is, for the combination of levels which the teacher is teaching Physical Education. To be classified as "conformance" on the "whole" curriculum the teacher has to be classified as "conformance" at each level which he is teaching Physical Education. To be classified as "partial conformance" on the "whole" curriculum the teacher has to be classified as "partial conformance" at one or more of the levels which he is teaching Physical Education. However, if he is classified as "no conformance" at one or more of the levels which he is teaching Physical Education then he is

classified as "no conformance" on the "whole" curriculum.

The recorded frequencies of the curriculum scale for groupings (i) (levels) and (iii) (whole) will be referred to under one term, Physical Education curriculum scores. The Physical Education curriculum scores were used as the main factor throughout the data analysis for cross tabulations.

School Characteristics

Enrollment - The raw scores were recorded and the frequencies tabulated on these raw scores. Appropriate intervals were then arranged and groups determined so that the smaller schools did not get entangled with the larger schools. The intervals are (12 to 30), (31 to 60), (61 to 99), (100 to 150), (151 to 199), (200 to 299), (300 to 399), (400 to 499), and (500 to 1100). The scores of 12 and 1100 were the lowest and highest scores recorded. The grouped scores were cross tabulated with school catchment area population (grouped), facilities (availability), teaching experience (grouped), access to Physical Education guide, publications used for teaching Physical Education, and the Physical Education curriculum scores. The significance levels were determined by the calculation of chi square.

School catchment area population - The raw scores were recorded and the frequencies tabulated on these raw scores. Appropriate intervals were then arranged and groups determined so that the smaller population areas did not get entangled with the larger population areas. The intervals are (60 to 249), (250 to 499), (500 to 749), (750 to 999), (1000 to 1999), (2000 to 3999), (4000 to 8999), (9000 to 13,999), and (14,000 to 70,000). The scores of 60 and 70,000 were the lowest and highest scores recorded. The grouped scores were cross tabulated with grouped enrollment, facilities (availability), and the Physical Education curriculum scores. The significance levels were determined by the calculation of chi square.

Scheduling cycle - The type of scheduling cycle used by the school was recorded; 7 day cycle, 6 day cycle, or 5 day cycle. The data turned up a 10 day cycle and an 8 day cycle, these were recorded accordingly. Frequencies of the scheduling cycles and cross tabulations with period length, period frequency, and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Period Length - The lengths of the Physical Education period were recorded for the respective school levels. Frequencies

of the period lengths and cross tabulations with scheduling cycle, period frequency, and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Period Frequency - The frequency of Physical Education per cycle was recorded for the respective school levels. Frequencies of the period frequencies and cross tabulations with period length, scheduling cycle, and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Facilities available and quality of the facilities - Using a facilities' checklist the teacher was requested to check a rating to indicate the quality of the facilities; very adequate, adequate, satisfactory, inadequate, or very inadequate. The checklist also included spaces for a response of "do not use" and "not available". Frequencies of the rating responses, "do not use" and "not available" were recorded for each facility.

The facilities were grouped into not available (responses of "not available" and "do not use") and available (responses with a rating; indicated the facility was available). These two groups, (availability of

facilities), were cross tabulated with grouped enrollment, grouped school catchment area population, and the Physical Education curriculum scores.

The ratings were grouped into three categories; adequate (ratings of "adequate" and "very adequate"), satisfactory (rating of "satisfactory"), and inadequate (ratings of "inadequate" and "very inadequate"). These three rating groups were cross tabulated with the Physical Education curriculum scores. The significance levels were determined by the calculation of chi square.

Equipment available - The teacher was requested to indicate the amount of equipment available for teaching the Physical Education curriculum by selecting a percentage range of (75% to 100%), (50% to 75%), (25% to 50%), or (less than 25%). Frequencies of the equipment available responses and cross tabulations with enrollment and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Quality of equipment - The teacher was requested to indicate the quality of the equipment by selecting a rating of excellent, good, fair, or poor. Frequencies of the ratings were tabulated. The ratings were cross tabulated with equipment available and the Physical Education

curriculum scores. A rating combination of excellent and good, and fair and poor to give two rating groups was cross tabulated with enrollment. The significance levels were determined by the calculation of chi square.

Support given by internal and external persons or groups - The teacher was requested to indicate which persons or groups were supportive of his Physical Education program. A checklist format was used for the responses. The checklist included school board administration, coordinator(s), school administration, other teachers of the school, community members, a open response for "others", and a response for "there is little to no support given". Frequencies of the support responses were tabulated.

Teacher Characteristics

Sex - The sex of the teacher was recorded. Frequencies of the sex and cross tabulations with the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Age - The variable of age is in groupings of (20 to 24), (25 to 29), (30 to 34), (35 to 39), (40 to 44), (45 to 49), and (50+). The teacher was requested to indicate his age

grouping. Frequencies of the age groupings and cross tabulations with teaching experience (grouped) and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Teaching Experience - The teacher was requested to give his total number of years for teaching. Any case where only a partial year was indicated was recorded as one full year. Frequencies were tabulated on the raw scores. The data were then grouped into the intervals (1 to 5 years), (6 to 10 years), (11 to 15 years), (16 to 20 years), (21 to 25 years), and (26+ years). Frequencies of the teaching experience groupings and cross tabulations with age and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Degree(s) held and university(ies) attended - The teacher was requested to give the name of the degree or degrees which he had obtained and the name of the university or universities which he attended. Degree responses were grouped; Bachelor of Physical Education or Bachelor of Physical Education and Education, Bachelor of Education or Bachelor of Arts (Education), Bachelor of Physical Education

and any other (except B.Ed.), Master of Physical Education or Master of Physical Education and any other degree, any other Master's degree, Master of Education and Bachelor of Physical Education, any other degree, and no degree. Frequencies of the degree groupings were tabulated. These groupings were condensed into three groups; Physical Education degree (all groupings where a Physical Education degree is indicated), no Physical Education degree (all groupings where no Physical Education degree is indicated), and no degree (the grouping "no degree"). These three groups were cross tabulated with enrollment and the Physical Education curriculum scores. The significance levels were determined by the calculation of chi square.

University attended responses were grouped; Memorial University of Newfoundland (MUN), any other Canadian university, any other non-Canadian university, MUN and any other Canadian university, and MUN and any other non-Canadian university. Frequencies of the university groupings were tabulated. These groupings were condensed into two groups, MUN (all groupings where MUN is indicated) and other universities (all groupings where MUN is not indicated). These two groups were cross tabulated with the Physical Education curriculum scores. The significance levels were determined by the calculation of chi square.

Grades responsible for teaching Physical Education - By using a checklist of all the grade levels (kindergarten to the three senior high school courses) the teacher was requested to indicate which grade(s) he has the responsibility of teaching Physical Education and the number of classes at the grade level which he has the responsibility of teaching Physical Education. Frequencies were tabulated on the grade levels. The total number of classes which the teacher has the responsibility of teaching Physical Education, workload (Physical Education), was calculated. Workload was calculated by adding together the total number of classes from kindergarten to the three senior high school courses. Frequencies of the workload scores and cross tabulations with degrees held and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Teaching time allocated to teaching Physical Education - The teacher was requested to indicate the total amount of his teaching time which was allocated to teaching Physical Education. Intervals of (85% to 100%), (70% to 84%), (55% to 69%), (40% to 54%), (30% to 39%), (20% to 29%), (10% to 19%), and (less than 10%) were used as the responses from which to indicate the percentage of teaching time allocated

to teaching Physical Education. Frequencies of the percentage intervals and cross tabulations with the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

University training in Physical Education - As an indication of the teacher's university training in Physical Education, he was requested to select the best response from the list; Physical Education degree, over 9 university courses completed in Physical Education, 5 to 9 university courses completed in Physical Education, 1 to 4 university courses completed in Physical Education, completed Education 2191, 3070, or 3090 (these are Education courses related to the teaching of Physical Education offered at MUN), completed the non-credit Physical education course (this was a non-credit course that was part of the Education program at MUN), and no university courses completed in Physical Education. Frequencies of these responses and cross tabulations with the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Personal involvement in physical recreational activities - The teacher was requested to indicate his personal

involvement in physical recreational activities outside of the school. The teacher was requested to respond to the frequency of his involvement by selecting one response of daily, several times a week, several times a month, about once a month, less than once a month, and almost never. Frequencies of these responses and cross tabulations with the attitude scale and the Physical Education curriculum scores were tabulated. The significancelevels were determined by the calculation of chi square.

Access to the publication "Physical Education Guide Kindergarten - Grade Eleven" - The teacher was requested to indicate, by responding "yes" or "no", if he had access to the Department of Education's publication "Physical Education Guide Kindergarten - Grade Eleven". The frequencies of the responses and cross tabulations with enrollment and the Physical Education curriculum scores were tabulated. the significance levels were determined by the calculation of chi square.

Participation in Physical Education inservices/workshops - The inservice/workshop factor is in four parts. The teacher was requested to respond to "yes" or "no" if he had participated in a Physical Education inservice/workshop. If the response of "yes" was indicated then the teacher was

requested to respond to; i) the total number of Physical Education inservices/workshops attended and ii) the date of the last Physical Education inservice/workshop attended. The teacher was then requested to indicate, by responding "yes" or "no", if he was unable to attend an inservice/ workshop offered by his school board due to other teaching duties. Frequencies on all the responses to the inservice/ workshop factor and cross tabulations with degrees held and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Publications used in Physical Education planning - The teacher was requested to indicate which materials, publications, or guide books he used in planning the instructional portion of his Physical Education program. The responses were recorded according to the materials, publications, and guide books indicated. If the Department of Education's guide books were indicated for the appropriate school levels, then the responses were recorded as "yes". If the guide books were not indicated, then the responses were recorded as "no". "Yes" and "no" would indicate if the teacher is using the guide books as set by the Department of Education inplanning the instructional portion of his Physical Education program. The frequencies

of "yes" and "no" and cross tabulations with enrollment and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

Views on Physical Education - The teacher was requested to respond to two open questions on his views of Physical Education. First, he was requested to give two factors which he felt could be helpful in improving his Physical Education program. It was noted during analysis that there were several common factors listed by the teachers. The factors were then categorized into; more instructional time needed, improvement of facilities (especially the gymnasium), accessibility to guide books, smaller classes, more funding, more inservices/workshops, to have a gymnasium, more equipment, more facilities, to have a Physical Education specialist, and to have a Physical Education coordinator. Frequencies to these categories were tabulated. The second open question on the teacher's views of Physical Education is the last question of the questionnaire. The teacher was given the opportunity to comment on how he perceived the Physical Education curriculum, (i.e. difficulties, emphasis, modifications, etc.). There were a variety of comments and they could not be categorized as the previous open question. Each set of

comments was analyzed separately and some quoted for reference purposes.

Attitude toward Physical Education - The attitude factor is intended to access the attitude of the teacher toward Physical Education. The attitude item consists of 10 statements which are related to Physical Education in school. The teacher was requested to respond to each statement by circling a number on a scale of 1 - 5 which best revealed his feelings toward the statement; (1 - Strongly Agree, 2 - Agree, 3 - Undecided, 4 - Disagree, 5 - Strongly Disagree). Using the Likert method of scoring, a score of 5 - 1, (corresponding with the 1 - 5 scale), is given on each positive statement response and a score of 1 - 5, (corresponding with the 1 - 5 scale), is given on each negative statement response. The sum total of the assigned scores, as indicated by the teacher, will indicate the attitude level of the teacher toward Physical Education. Frequencies of the responses to each of the 10 statements and frequencies of the sum total attitude scores were tabulated. Also the attitude scores were correlated with the Physical Education curriculum scores. The sum total attitude scores were grouped into the categories; very negative attitude (sum scores of 10 to 16), negative attitude (sum scores of 17 to 24), neutral attitude (sum

scores of 25 to 35), positive attitude (sum scores of 36 to 43), and very positive attitude (sum scores of 44 to 50). Frequencies of these attitude categories and cross tabulations with the Physical Education curriculum scores were tabulated. The five categories were regrouped into three groups; negative attitude (sum scores of 10 to 24), neutral attitude (sum scores of 25 to 35), and positive attitude (sum scores of 36 to 50). Frequencies of these three groupings and cross tabulations with personal involvement in physical recreational activities and the Physical Education curriculum scores were tabulated. The significance levels were determined by the calculation of chi square.

The reliability of the 10 statement attitude scale was obtained by using a pilot group of 10 graduate students, who responded to the attitude scale. Using the split-halves technique and the Spearman-Brown formula the reliability was calculated at .75. (See Appendix B.)

CHAPTER IV

RESULTS AND DISCUSSIONS

A total of 120 of the 150 schools (80%) responded to the study. This accounted for 300 of the 419 Physical Education teachers (72%) responding to the questionnaire. A breakdown of the 300 Physical Education teachers into the school levels and combinations of the school levels is shown in Table 5.

Physical Education Curriculum

The Physical Education curriculum scale, (conformance, partial conformance, and no conformance), applied to the sample group shows that 34% of the Physical Education teachers are conforming to the Physical Education curriculum, 42% are partially conforming, and 23% are not conforming. That is, the Physical Education teacher must be conforming to the Physical Education curriculum at all the school levels which he is teaching Physical Education in order to be classified as "conformance". If he is partially conforming at a school level he is classified as "partial conformance" and if he falls below partial conformance then

Table 5

Breakdown of the Physical Education Teachers into School Levels

No. of Teachers	School Level
108	Pr
47	El
28	Jr
11	Sr
19	All levels
26	Pr and El
13	Pr, El, and Jr
1	Pr, El, and Sr
12	El, Jr, and Sr
5	El, Jr, and Sr
30	Jr and Sr

he is classified as "no conformance". As the frequencies show there are only 34% of the Physical Education teachers conforming to the Physical Education curriculum.

Table 6 shows the results of the Physical Education curriculum scale as applied at the school levels. Note, some teachers are teaching Physical Education at more than one level and they are tallied at each level they teach Physical Education.

A further breakdown of the senior high school level into the three Physical education courses is illustrated in Table 7.

Table 6

Curriculum Scale Percentages at the School Levels

School Level	Conformance	Partial Conformance	No Conformance
Pr	54	36	10
El	41	30	29
Jr	61	28	11
Sr	56	35	8

The Physical Education curriculum scale frequencies indicate that there are only approximately half of the teachers who are conforming to the Department of Education's Physical Education curriculum at their respective school level and only one third who are conforming at all the school levels which they are teaching Physical Education.

The main focus of the analysis is now on determining if there are any relationships between the school setting (school and teacher characteristics) and conformity to the curriculum (Physical Education curriculum scale.) Can these relationships give possible reasons as to why there is a low percentage of Physical Education teachers conforming to the Physical Education curriculum?

The analysis results will be presented in the format; the characteristic - noteworthy frequencies - relationship of the characteristic with the Physical Education curriculum scale as applied to the whole sample group - relationship of

Table 7

Breakdown of the Senior High Level

With Curriculum Scale Percentages

School Level	Conformance	Partial Conformance	No Conformance
P.E. 1100	50	43	7
P.E. 2100	38	50	12
P.E. 3100	86	7	7

the characteristic with the Physical Education curriculum scale as applied to the school levels.

School Characteristics

Enrollment - The pupil enrollment ranged from 12 to 1400 with the mode at 250, 13 cases. The frequency of 12 was recorded at 150 and 350. The pupil enrollment scores were grouped and cross tabulated with the Physical Education curriculum scores (see Table 8).

As indicated in Table 8 there is a definite decrease in the percentage of teachers conforming to the curriculum as the pupil enrollment decreases. The percentages at the school levels indicate the same trend, however, low number of teachers at certain groupings tend to distort the percentages. Enrollment does not appear to be a major

Table 8

Grouped Enrollment Frequencies and Cross Tabulation Results of the Conforming Groups

Group	Freq.	Conforming (%)				
		Wh*	Pr	El	Jr	Sr
12-30	18	17	46	8	0	-
31-60	41	20	29	26	20	0
61-99	26	24	40	0	20	0
100-150	65	36	60	38	56	20
151-199	35	34	50	29	67	67
200-299	40	35	62	61	67	32
300-399	23	43	71	73	70	20
400-499	14	43	67	100	85	33
> 499	38	50	67	80	80	31

*$p < .05$

factor related to conformity at the primary level with mid-range percentages. Also, enrollment does not appear to be a factor related to conformity at the senior high level with consistently low percentages at all recorded enrollment groupings.

School catchment area population - The school catchment area population (community population) ranged from 60 to 70,000 with the mode at 1000, 16 cases. Frequencies of 15, 11, and 11 were recorded at 500, 250, and 4000 respectively.

The community population scores were grouped and cross tabulated with the Physical Education curriculum scores (see Table 9).

As indicated in Table 9 there is a decrease in the percentage of teachers conforming to the curriculum as the school catchment area population decreases. This relationship falls in line with the relationship indicated with pupil enrollment (Table 8) and pupil enrollment is related to the school catchment area population.

Table 9

Grouped Community Population Frequencies and Cross Tabulation Results of the Conforming Groups

Group	Freq.	Conforming (%)				
		Wh*	Pr	El	Jr	Sr
60-249	22	9	40	-	-	0
250-499	32	31	41	39	50	0
500-749	45	18	39	33	39	20
750-999	24	35	57	-	67	50
1000-1999	58	33	49	48	64	39
2000-3999	30	50	74	80	82	29
4000-8999	45	47	77	50	78	29
9000-13,999	17	53	63	100	63	50
> 13,999	13	46	100	100	50	0

$p < .01$.

The percentages at the senior high level does not indicate the school catchment area population as a factor related to conformity. Again, caution has to be taken with the percentages due to the low frequencies at the population groupings.

Physical Education period length and frequency, and school's scheduling cycle - Table 10 shows the ranges and modes of

the period lengths and frequencies per cycle for each school level.

Table 10

The Ranges and Modes of Period Length and Frequency for Each School Level

School	Period Length (mins.)		Period Frequency (per cycle)	
	Range	Mode	Range	Mode
Pr	15-80	30	infreq.-daily	2
El	20-80	40	1 - daily	2
Jr	30-90	40	1 - daily	2
Sr	40-90	40	infreq.-daily	3

At the primary level 46% of the teachers have 30 minute Physical Education periods and 27% have 40 minute periods. A cross tabulation of period length by period frequency shows that 74% of the 30 minute period group have Physical Education twice per cycle and 65% of the 40 minute period group have Physical Education twice per cycle. For the 30 minute group there is almost a 50/50 split between the scheduling cycle used; 5 day and 6 day cycles. For the 40 minute period group 79% of this group operate under a 6 day cycle and 21% operate under a 5 day cycle.

At the elementary level 59% of the teachers have 40 minute Physical Education periods. Seventy one percent of this group have Physical Education twice a week. Sixty nine

percent operate under a 6 day cycle and 31% operate under a 5 day cycle.

At the junior high level 68% of the teachers have 40 minute Physical Education periods and 19% have 45 minate Physical Education periods. Fifty one percent of the 40 minute period group have Physical Education twice a week and 32% have Physical Education three times a week. Of the 45 minute period group 47% have Physical Education twice a week and 47% have Physical Education three times a week. The vast majority of these groups operate under a 6 day cycle as 88% of all the junior high level teachers indicated that they operated under a 6 day cycle.

At the senior high level 68% of the teachers have 40 minute Physical Education periods and 21% have 45 minute periods. Eighty six percent of each of the 40 minute and 45 minute period groups have Physical Education three times a week. Over 90% of all the senior high level teachers operate under a 6 day cycle.

Three teachers at the primary level indicated that their Physical Education periods were infrequent or none. One teacher at the senior high level indicated the same.

Table 11 shows the cross tabulation percentages of the conforming groups for the period lengths of 30, 40, and 45 minutes.

Table 11

Cross Tabulation Percentages of the Conforming Groups With the Factor "Period Length"

Period Length (mins.)	Conforming (%)			
	Pr	El	Jr	Sr
30	61	29	0	-
40	63	51	68	23
45	40	62	71	36

The results shown in Table 11 indicate that at the primary level a higher percentage of teachers are conforming to the curriculum at the 30 and 40 minute period lengths than at the 45 minute period length. But at the elementary and junior high levels 45 minute period lengths reveal the higher percentages of teachers conforming to the curriculum. The percentages at the senior high level are distorted by low number of responses in the cross tabulation cells.

Period lengths can not be considered as a factor of conformity because the significance levels obtained are too large. However, there are indications that specific period lengths are influencing conformity at the school levels.

The results of frequency of Physical Education per cycle draw the same conclusion as period length. Due to low number of responses in specific cross tabulation cells the

significance levels are too large. However, there are indications that three periods per cycle at the primary level, elementary level, and junior high level are more conducive to conformity than one or two periods per cycle. The senior high level percentages are distorted, however, they show that 40% of the teachers are conforming at one period per cycle, 20% at two periods per cycle, and 28% at three periods per cycle.

The school's scheduling cycle is only meaningful at the primary and elementary levels as the junior high and senior high levels have a high percentage, (90%), of the teachers operating under one scheduling cycle only, the 6 day cycle.

At the primary level 56% of the teachers operate under a 6 day cycle. Of this group, 59% are conforming to the curriculum. Forty two percent of the primary teachers operate under a five day cycle, 49% of this group are conforming to the curriculum.

At the elementary level 58% of the teachers operate under a 6 day cycle, 55% of this group are conforming to the curriculum. Forty two percent of the elementary teachers operate under a 5 day cycle, 22% are conforming to the curriculum.

At both the primary and elementary levels there are indications that the 6 day cycle would be more conducive to conformity than the 5 day cycle.

As a conclusion to this subsection there are indications of a combination of specific period lengths, period frequencies, and scheduling cycles that are conducive to conformity at the school levels. The combinations are; primary level - 30 or 40 minute periods with three per 6 day cycle; elementary level - 45 minute periods with three per 6 day cycle; junior high level - 45 (or 40) minute periods with three per 6 day cycle; senior high level - (distorted by low responses in cross-tabulation cells).

Facilities available and quality of the facilities - The frequencies of the facilities and the ranking (quality) as given by the Physical Education teachers are shown in Table 12.

Further analysis of the three facilities classroom/playroom, gymnasium, and playground, which (in the researcher's opinion) would be reasonable for all schools to have, is of interest. One third of the teachers ranked the classroom/playroom facility as very inadequate to inadequate. Twenty eight percent of the Physical Education teachers are in schools which have no gymnasium and another 14% ranked their gymnasium facility as very inadequate to inadequate. Thirty six percent of the Physical Education teachers are in schools which have no playground facility and another 34% ranked their playground facility as very inadequate to inadequate. These percentages show that over one third of

Table 12

Frequencies of the Facilities and Their Rankings

Facility	Ranking							n
	VA	A	S	I	VI	Do not Use	Not Avail.	
Classroom/ Playroom	21	35	54	50	35	38	26	259
Gymnasium	61	42	63	24	17	-	81	288
Playing Field	12	20	31	39	39	12	113	266
Playground	5	19	35	51	43	19	98	270
Softball Field	8	16	24	23	14	20	165	270
Stadium/ Rink	11	13	15	7	4	22	193	265
Swimming Pool	7	3	6	2	4	18	223	263

Note: V.A. - very adequate A - adequate S - Satisfactory I - inadequate VI - very inadequate

the Physical Education teachers are teaching the Physical Education curriculum in schools where the essential facilities are not available or the facilities are in need of improvements.

Table 13 shows the percentage results of the conforming groups as cross tabulated with the facilities grouped "not available" and "available".

The results shown in Table 13 indicate that the availability of facilities may be a factor related to conformity, however, the significance levels are too large to confirm the results.

Table 13

Cross Tabulation Percentages of the Conforming Groups With Facilities Grouped Not Available and Available

Facility		Conforming (%)				
		Wh*	Pr	El	Jr	Sr
Classroom/ Playroom	N[a]	43	74	43	64	33
	A	32	50	37	63	21
		.2363	.0361*	.3762	N/A	N/A
Gymnasium	N	35	49	21	30	0
	A	34	55	49	65	28
		.2540	.5391	.0030**	N/A	N/A
Playing Field	N	29	52	39	55	28
	A	42	62	48	68	29
		.0837	.4210	.3205	.1791	.9593
Play-ground	N	28	54	35	55	26
	A	49	57	48	71	31
		.0626	.8420	.0291*	N/A	N/A
Soft/base ball field	N	33	50	39	58	24
	A	38	72	47	65	31
		.7052	.0528	.6546	.4292	.7365
Stadium/ rink	N	33	53	36	59	20
	A	39	63	59	73	44
		.2219	.5553	.0803	.3643	.0998
Swimming pool	N	33	53	38	61	22
	A	36	67	70	63	46
		.2173	N/A	N/A	N/A	N/A

Note: N/A indicates that the level of significance is not applicable due to low number of responses in the cross tabulation cells.

[a]N - facility not available A - facility available

* $p < .05$.

** $p < .01$.

The quality (ranking) of the available facilities cross tabulated with the Physical Education curriculum scale gave the same conclusion as the "not available"/"available" cross tabulation. That is, there are indications that the teachers who are teaching Physical Education in facilities of high quality are more likely to conform to the curriculum. Again, the significance levels are too large to confirm that the quality of the facilities is a factor related to conformity. (See Appendix E, Table 36 for results.)

Cross tabulations with facilities grouped "not available" and "available" by pupil enrollment and by school catchment area population show that there is a relationship between the facilities which are available and the pupil enrollment, and the facilities which are available and the school catchment area population. Both pupil enrollment and school catchment area population are indicators to the size of the school. The cross tabulation relationships show that the larger the school the more likely the school will have the facilities available. The smaller schools are more likely to have the facilities of a classroom/playroom, a playing field, and/or a playground. (See Table 14 for the results.)

Since it is the smaller schools that are lacking in availability (or accessibility) of facilities and there are indications that availability of facilities may be a factor

Table 14

Cross Tabulation Percentages of Pupil Enrollment and School Catchment Area Population With Availability of Facilities

Groups	Class room**	Gym**	Play. field**	Play ground	Soft/ base ball field**	Stad/ rink	Pool
	Pupil Enrollment (facility available %)						
12-30	95	56	83	57	20	13	13
31-60	97	56	48	60	38	21	8
61-99	68	38	55	36	9	13	0
100-150	76	70	38	62	15	13	2
151-199	63	67	66	57	37	20	3
200-299	83	75	36	54	38	15	10
300-399	65	100	70	62	38	22	21
400-499	62	100	64	31	57	36	21
> 499	57	95	60	68	46	27	13
	Area Population (facility available %)						
60-249	95	33	68	48	25	5	5
250-499	93	61	53	68	29	7	0
500-749	74	86	44	45	15	8	3
750-999	63	52	29	57	13	14	5
1000-1999	81	59	53	60	35	32	4
2000-3999	67	77	37	62	35	22	11
4000-8999	62	88	57	45	50	23	10
9000-13,999	63	100	94	88	63	50	47
> 13,999	75	85	62	42	18	0	0

* $p < .05$.
** $p < .01$.

of conformity, therefore, it is the smaller schools without the facilities that are more likely not to conform to the Physical Education curriculum. Pupil enrollment and school

catchment area population were already determined as factors related to conformity (see Tables 8 and 9).

Equipment available - The percentage of teachers who indicated that they had less than 25% of the needed equipment was 31%. The other percentage grouping were; 25%-50% equipment, 18%; 50%-75% equipment, 28%; and 75%-100% equipment, 23%. Three quarters of the Physical Education teachers are teaching in schools where there is less than 75% of the equipment available. A cross tabulation between the amount of equipment available and the Physical Education curriculum scores clearly indicates that the amount of equipment available is a factor related to conformity (see Table 15).

Table 15

Cross Tabulation Percentages of the Conforming Groups With the Factor "Equipment Available"

Equipment	Conforming				
	Wh*	Pr	El*	Jr	Sr
75%-100%	45	61	67	72	33
50%-75%	43	64	62	74	36
25%-50%	30	61	48	61	0
< 25%	20	37	7	12	33

* $p < .01$.

The amount of equipment available is not a factor at the primary level except where indicated that there was less than 25% of the equipment available. The researcher postulates that due to the limited equipment needed for the primary curriculum and the emphasis of the curriculum on body movement, balance, spatial awareness, and games which require little to no equipment, this is the reason for the amount of equipment available not having the same impact at the primary level as it does on the other levels.

The factor amount of equipment available is related to enrollment (school size). The lower amounts of equipment available tend to be at the schools with the lower enrollments. (See Appendix E, Table 37.)

Quality of the equipment - The frequency percentages for the teachers' ratings of equipment quality are, excellent - 11%, good - 49%, fair - 25%, and poor - 13%. The cross tabulation of equipment quality and the Physical Education curriculum scale indicates that the quality of the equipment is a factor related to conformity (see Table 16).

A cross tabulation of equipment quality with enrollment shows that the quality rating is related to the enrollment (school size). The smaller schools tend to have lower quality equipment. (See Appendix E, Table 38.) Since it is the smaller schools which tend to have the least amount of equipment available, (Appendix E, Table 37), it would

Table 16

Cross Tabulation Percentages of the Conforming Groups With the Factor "Equipment Quality"

Facility	Conforming (%)				
	Wh*	Pr	El	Jr	Sr
Excellent	30	33	43	73	22
Good	44	66	54	69	28
Fair	20	44	33	46	31
Poor	25	50	6	40	20

* $p < .01$.

therefore follow that the smaller schools have small amounts of low quality equipment. A cross tabulation between equipment quality and amount of equipment available confirms that there is a relationship between the two factors. The schools with the low quality equipment tend to have the lower amounts of equipment (see Table 17).

Support given by internal and external persons and groups - The response frequencies of each support group were; i) support from school board administration, 120, ii) support from coordinators, 129, iii) support from school administration, 177, iv) support from other teachers, 187, v) support from community members, 73; vi) other groups, 14 (students and volunteer coaches were indicated as other

Table 17

Cross Tabulation Percentages of Equipment Quality With Equipment Available*

Equipment Quality	Equipment Available (%)			
	75-100	50-75	25-50	25
Excellent	70	21	6	3
Good	27	41	18	14
Fair	7	19	30	44
Poor	0	3	8	89

* $p < .01$.

groups), and vii) little to no support, 46. The internal school groups, school administration and other teachers, are giving support to a majority of the Physical Education teachers. For the school board level only 43% of the teachers indicated that the coordinators were giving support and only 40% of the teachers indicated that the school board administration was giving support. Fifteen percent of the teachers indicated that they received little to no support. A cross tabulation with enrollment shows that of this group 68% of the teachers are in schools with an enrollment of 150 or less.

Teacher Characteristics

Sex - Frequency of the sex of the teacher shows that 134 are males and 161 are females. Table 18 shows the frequency of teachers characterized by sex as a whole group and at the school levels, and the cross tabulation results of the conforming groups with the factor sex.

Table 18

Frequencies and Cross Tabulation Percentages of the Conforming Groups With the Factor "Sex"

School Levels	Frequency		Conforming (%)	
	Male	Female	Male	Female
Wh	133	158	26	40*
Pr	37	124	60	52
El	71	46	44	39
Jr	81	23	57	78
Sr	53	16	30	19

*$p < .05$.

With the Physical Education curriculum scale applied at the whole curriculum level there is a higher percentage of females conforming to the Physical Education curriculum than males. However, as indicated by the school levels this initial female conforming percentage is not consistent at the school levels. Only at the junior high level does there occur a higher female conforming percentage than the male conforming percentage. Table 18 also indicates that only at

the primary level are there more females teaching Physical Education than males and as the school level advances the number of females teaching Physical Education decreases.

At the whole curriculum level sex appears to be a factor of conformity, however, the high number of female teachers teaching at the primary level only, combined with the high percentage of teachers conforming to the primary curriculum may be distorting the data.

Age - Frequency of the age grouping show that 13% of the teachers are between 20-24 years, 23% between 25-29 years, 33% between 30-34 years, 16% between 35-39 years, 6% between 40-44 years, 2% between 45-49 years, and 2% 50 years or older. Table 19 shows the cross tabulation percentages of the conforming groups with the factor age.

At the whole curriculum level there is an indication that the older teachers are conforming to the Physical Education curriculum more than the younger teachers, however, the level of significance, .2157, is too large to verify this relationship. At the school levels it is only at the primary level where the older teachers tend to conform to the Physical Education curriculum more than the younger teachers. At the elementary level there is a shift

Table 19

Cross Tabulation Percentages of the Conforming Groups With the Factor "Age" (Grouped)

Age (yrs.)	Conforming (%)				
	Wh	Pr	El	Jr.	Sr
20 - 24	18	32	7	42	11
25 - 29	36	52	69	69	30
30 - 34	28	53	38	65	23
35 - 39	40	65	45	53	50
40 - 44	58	80	40	33	-
45 - 49	60	67	0	100	-
over 49	29	60	0	-	-

to the younger teachers conforming more to the Physical Education curriculum. The percentages given for the school levels are distorted due to low numbers of responses in the cross tabulation cells. The junior high and senior high levels are effected more by the lower cross tabulation cell numbers than the primary and elementary levels.

The factor of age can not be considered as a factor related to conformity (level of significance .2157), however there are indications that age may have some influence.

Teaching Experience - Frequency of teaching experience shows that 52% of the teachers have been teaching from one to nine years. The range is one year to 38 years with a high

frequency of 20 occurring at two, three, eight, and twelve years. The grouped teaching experience frequency shows 27% of the teachers between 1 to 5 years, 29% between 6 to 10 years, 23% between 11 to 15 years, 11% between 16 to 20 years, 5% between 21 to 25 years, and 3% 26 years or more. Table 20 shows the cross tabulation percentages for the conforming group with the factor teaching experience.

Table 20

Cross Tabulation Percentages of the Conforming Groups With the Factor "Teaching Experience" (Grouped)

Teaching Exp. (yrs.)	Conforming (%)				
	Wh	Pr	El	Jr	Sr
1 - 5	23	40	39	59	15
6 - 10	38	57	54	65	38
11 - 15	31	55	30	60	29
16 - 20	39	71	38	43	67
21 - 25	64	67	50	67	-
over 25	33	50	0	-	-

Teaching experience can not be considered as a factor of conformity (level of significance .2157), however, there are indications that teaching experience may have some influence. There is a high conformity percentage of the 21 to 25 years group at the whole curriculum level and at the primary level. Also at the primary level a high percentage of the 16 to 20 years group are conforming to the curriculum. At the elementary and junior high levels there

is a gradual shift to the 6 to 15 years groups and then back to the 16 to 20 years group at the senior high level. This trend coincides with the age factor observations, and age and teaching experience are related.

Degrees held - The frequency of specific degrees held by the teachers is shown in Table 21.

Table 21

Frequencies of Specific Degree Groupings

Degree(s) Held	Frequency
B.Ed. or B.A. (Ed.)	164
B.P.E. or B.P.E. & B.Ed.	64
B.P.E & Other	3
M.P.E. or M.P.E. & Other	4
M.Ed. & B.P.E.	4
Other masters	7
Other degrees	3
No degree	26

The teachers grouped into degree categories of Physical Education degree, no Physical Education degree, and no degree is shown in Table 22 with the cross tabulation percentages of the conforming groups.

As the percentages indicate the factor of degree held is a factor related to conformity. At all levels (excluding senior high) the teachers with a Physical Education degree have a higher conformity percentage than the teachers who have no Physical Education degree or no degree. (The low number of responses in specific cross tabulation cells at the

Table 22

Cross Tabulation Percentages of the Conforming Groups With the Factor "Degree Held" (Grouped)

Degree Groups	Conforming (%).				
	Wh*	Pr**	El	Jr	Sr
P.E. Degree	41	84	77	78	15
No P.E. Degree	32	44	18	32	17
No degree	19	37	40	75	33

* $p < .05$.
** $p < .01$.

elementary, junior high and senior high levels have distorted the percentages, especially at the senior high level.)

A cross tabulation of the three groupings for degrees held with enrollment shows that there are indications of the degrees held groupings being related to enrollment. However, due to the low number of responses in specific cross tabulation cells this relationship can not be verified. Thirty two percent of the teachers with a Physical Education degree are teaching in schools where the enrollment is greater than 499. Eighty percent of the teachers with a Physical Education degree are teaching in schools where the enrollment is 200 or greater (this includes the enrollment group of greater than 499) and there are no teachers with a Physical Education degree in

schools where the enrollment is less than 61.

Of the teachers who have no degree and other degrees the percentages as compared to enrollment are; enrollment less than 61, no degree 30%, other degrees 24%; enrollment greater than 200, no degree 19%, other degrees 26%, enrollment greater than 499, no degree 8%, other degrees 5%. It is the larger schools which have the Physical Education specialists teaching Physical Education and the smaller schools which have the non-Physical Education specialists teaching Physical Education. With degrees held by the teacher a factor of conformity it is therefore more likely that the smaller the enrollment, the less of a chance for conformance to the Physical Education curriculum to be occurring.

University attended -- The frequency of the university attended groups show, Memorial University of Newfoundland (MUN) 169, MUN and other Canadian universities 6, MUN and other non-Canadian universities, 1, other Canadian universities 13, and other non-Canadian universities 7. One third of the teachers did not indicate the university they attended. The researcher postulates this high percentage of missing data in that many of the teachers may have assumed that the university attended would be recorded as Memorial University of Newfoundland.

A cross tabulation between university attended and the Physical Education curriculum scores indicates that there is no relationship (see Table 23).

Table 23

Ø Cross Tabulation Percentages of the Conforming Groups With the Factor "University Attended"

University Attended	Conforming (%)				
	Wh	Pr	El	Jr	Sr
MUN	38	58	45	64	35
Others	40	67	50	46	14

Grades responsible for teaching Physical Education - Table 24 shows the number of teachers teaching Physical Education at each grade level and the three senior high level Physical Education courses. At every grade level the highest percentages for the number of classes taught at the grade level was one, two, and three classes (see Table 24).

The number of teachers and the percentages for number of classes indicate that at the primary level many of the teachers must be teaching Physical Education to their own class. This is indicated by the high teacher percentages at 1 class for each grade of K, 1, 2, and 3. As the school level advances the percentage decreases at the 1 class grouping and increases at the 3 class grouping. This shift of percentages is an indication that there is a higher

Table 24

Number of Teachers Teaching Physical Education at Each Grade Level and the Percentage of These Teachers Teaching One, Two, and Three Classes at the Grade Level

Grade	No. of Teachers.	No. of Classes (%)		
		1 class	2 classes	3 classes
K	75	71	20	
1	82	71	20	5
2	87	70	18	8
3	92	70	19	3
4	85	69	18	6
5	83	69	22	4
6	81	68	20	7
7	81	52	19	9
8	76	43	25	15
9	80	51	18	13
PE 1100	57	51	15	26
PE 2100	46	57	11	26
PE 3100	42	52	14	28

Note: Some teachers are teaching Physical Education at more than one grade level.

percentage of teachers at the junior and senior high levels spending more of their teaching time teaching Physical Education as compared to the primary and elementary levels.

A Physical Education workload calculated for each teacher shows a range of 1 class to 36 classes. One hundred and two teachers are teaching Physical Education to only one class and one teacher is teaching Physical Education to 36 classes (see Table 25).

A cross tabulation of workload with the Physical

Table 25

Physical Education Workload Frequencies and Whole Curriculum Level Conforming Percentages

Workload (No. of Classes)	Frequency (No. of Teachers)	Wh Conforming (%)
1	102	3
2	50	34
3	36	17
4	12	50
5	6	50
6	11	27
7	6	33
8	9	67
9	3	0
10	9	33
11	5	20
12	2	0
13	6	17
14	1	100
15	8	63
16	1	100
17	3	67
18	1	0
19	4	25
20	4	25
21	2	50
22	2	50
23	1	0
24	3	0
25	1	0
28	4	50
29	1	0
30	1	0
34	1	0
35	1	0
36	1	100

Education curriculum scores indicated that workload may be a factor related to conformity, but with the high number of empty and low response cross tabulation cells the level of

significance is invalid. The cross tabulation results showed that at the primary level of the teachers teaching Physical Education to only one class 43% were conforming to the curriculum. This percentage steadily increases as workload increases. The teachers at workloads of 11, 14, 15, 16, 17, 19, 22, 29, 34, and 35 were all conforming to the curriculum. At the elementary level of the teachers teaching Physical Education to only one class 23% were conforming to the curriculum. This percentage steadily increases as workload increases. The teachers at workloads of 8, 9, 10, 11, 14, 15, 16, 17, 18, 21, 28, 29, 34, 36 were all conforming to the curriculum. At the junior high level of the teachers teaching Physical Education to only one class 40% were conforming to the curriculum. This percentage steadily increases as workload increases. The teachers at workloads of 5, 10, 15, 16, 18, 20, 21, 22, 23, 28, 29, 30, 34, and 36 were all conforming to the curriculum.

The senior high level percentages are greatly distorted by the total number of respondents, 69, and the large number of cross tabulation cells, 84. Seventeen percent of the teachers teaching Physical Education to only one class were conforming to the curriculum. At workloads of 2, 16, and 36 all of the teachers were conforming to the curriculum.

The cross tabulation percentages at the whole curriculum level does not give the same effect of workload as the school level percentages. The effect of workload on conformity is distorted mainly due to the senior high level distortion (see Table 25).

The researcher postulates that one reason for the indications of workload being a factor related to conformity is that the teachers with the heavier workloads in teaching Physical Education are the Physical Education specialists. Therefore, with the factor of degree held being a factor related to conformity, this would help explain why the results of workload are showing indications of being a factor related to conformity. (see Table 26).

Table 26

Cross Tabulation Frequencies of Workload With Degree Held

Workload (Classes)	Degree Held (No. of Teachers)		
	P.E. Degree	No P.E. Degree	No Degree
1 - 5.	8	157	21
6 - 10	25	10	1
11 - 15	15	4	2
16 - 20	11	0	1
21 - 36	16	2	0

Teaching time allocated to teaching Physical Education - The results of the cross tabulations between allocated time and the Physical Education curriculum scores further establish the conclusions drawn from the workload analysis.

There are indications that the greater the total amount of teaching time spent teaching Physical Education the higher the percentage of conformity, at all levels (see Table 27). Again as in the workload analysis, the factor of degree held is related to the total amount of teaching time allocated to teaching Physical Education.

Table 27

Cross Tabulation Percentages of the Conforming Groups With the Factor "Teaching Time Allocated to Physical Education"

Alloted Time (%)	Freq. (%)	Conforming (%)				
		Wh*	Pr**	El	Jr	Sr
85 - 100	10	43	83	74	82	27
70 - 84	6	32	78	89	89	29
55 - 69	5	31	100	83	71	23
40 - 54	4	46	71	86	78	38
30 - 37	3	22	40	40	71	0
20 - 29	2	0	25	0	0	50
10 - 19	17	37	52	29	31	40
< 10	52	34	47	16	32	29

* $p < .05$.
** $p < .01$.

University training in Physical Education - Frequencies of the categories of university training in Physical Education show that 26% of the teachers have a Physical Education degree, 3% completed over 9 courses in Physical Education, 1% completed 5 to 9 courses in Physical Education, 10%

completed 1 to 4 courses in Physical Education, 15% completed Education 2191, 3070, or 3090, 12% completed the non-credit Physical Education course, and 33% had no courses in Physical Education.

The cross tabulation results indicate that a higher percentage of the teachers who had some Physical Education training were conforming to the curriculum than the teachers who had no Physical Education training (see Table 28).

A grouped university training cross tabulation -- Physical Education degree, all the categories with Physical Education courses indicated, and no courses in Physical Education -- reveals the relationship more explicitly (see Table 29). University training in Physical Education is a factor related to conformity.

Personal involvement in physical recreational activities - The frequencies of the physical recreational activities time categories were; daily, 35; several a week, 86; several a month, 56; once a month, 14; less than once a month, 24; and almost never, 82.

A cross tabulation between personal involvement in physical recreational activities and the attitude scale was irrelevant due to the high percentage of teachers falling in the positive attitude scale.

The cross tabulation with the Physical Education

Table 28

Cross Tabulation Percentages of the Conforming Groups With the Factor "University Training in Physical Education"

University Training	Conforming (%)				
	Wh*	Pr**	El	Jr	Sr
P.E. Degree	42	86	75	78	28
> 9 P.E. Courses	22	50	100	75	25
5 - 9 P.E. Courses	50	50	100	100	33
1 - 4 P.E. Courses	32	65	0	0	0
Ed. P.E. Course	37	61	18	0	-
Non-credit P.E. Course	46	61	29	50	67
No P.E. Course	23	26	15	17	14

* $p < .05$.
** $p < .01$.

Table 29

Cross Tabulation Percentages of the Conforming Groups With the Factor "University Training in Physical Education" (Grouped)

University Training	Conforming (%)				
	Wh**	Pr**	El**	Jr**	Sr
P.E. Degree	42	86	75	78	15
P.E. Courses	38	61	28	50	7
No P.E. Courses	23	26	15	17	43

** $p < .01$.

curriculum scores gave indications of a relationship between personal involvement in physical recreational activities and conformity, however, the significance levels were too large to confirm the relationship. A cross tabulation between personal involvement in physical recreational activities and degrees held (grouped) was tabulated. The results showed that the conforming groups of the categories daily and several a week were mainly comprised of teachers with Physical Education degrees. As the amount of time spent on personal involvement in physical recreational activities decreased so did the number of teachers with Physical Education degrees. This relationship could help to explain the indicated relationship between personal involvement in physical recreational activities and conformity.

Access to the publication "Physical Education Kindergarten - Grade Eleven" - The frequency shows that 223 teachers had access to the guide publication "Physical Education Kindergarten - Grade Eleven" and 67 teachers had no access to the publication. A cross tabulation between access to the publication with enrollment revealed that enrollment (school size) has no bearing on having access to the publication. Of the 67 teachers who indicated that they did not have access to the publication, the enrollments of

(61 to 99) and (greater than 499) each had 10 teachers with no access to the publication and the enrollments of (100 to 150) and (200 to 299) each had 11 teachers.

A cross tabulation between access to the publication and the Physical Education curriculum scores indicates that there may be a relationship. The elementary and junior high levels show a significant relationship and the primary and whole curriculum levels give indications of a relationship. The senior high level percentages are once again distorted (see Table 30).

Table 30

Cross Tabulation Percentages of the Conforming Groups With the Factor "Access to the Guide Publication"

Access	Conforming (%)				
	Wh	Pr	El*	Jr*	Sr
Yes	37	56	46	69	27
No	24	47	17	39	29

* $p < .05$.

Participation in Physical Education inservices/workshops - The frequencies show that 165 teachers had attended Physical Education inservices/workshops and 135 teachers had not. Of the teachers indicating that they had attended Physical

Education inservices/workshops the range for number of inservices/workshops attended is 1 to 25 with 62% of the teachers attending only one inservice/workshop. The range for the most recent inservice/workshop attended was the years 1973 to 1985 with 36% of the teachers attending their last inservice/workshop in 1985. Eighty nine percent of the teachers indicated that they had not missed a Physical Education inservice/workshop due to other teaching duties. A cross tabulation between participation in Physical Education inservices/workshops with the Physical Education curriculum scores shows there is a relationship between the two factors. Those teachers who had the opportunity to participate in Physical Education inservices/workshops show a high conformity percentage (see Table 31).

Table 31

Cross Tabulation Percentages of the Conforming Groups With the Factor "Inservice/Workshop Particpation"

Participation	Conforming (%)				
	Wh*	Pr*	El*	Jr*	Sr*
Yes	38	64	54	71	31
No	28	39	25	38	14

* $P < .01$.

A cross tabulation between participation in Physical Education inservices/workshops with degrees held shows that of the teachers who have participated in an inservice/workshop, 45% have a Physical Education degree, 47% have any other degree, and 8% have no degree. Of the teachers who had not attended an inservice/workshop 6% have a Physical Education degree, 84% have any other degree, and 10% have no degree. These percentages indicate it is the Physical Education specialists who are getting the benefits of attending Physical Education inservices/workshops while other teachers who are teaching Physical Education do not benefit from the inservices/workshops.

Publications used in Physical Education planning - The frequency of the responses for publications used, "yes" - suggested guides used, "no" - suggested guides not used, are yes, 137 teachers and no, 102 teachers. A cross tabulation between publications used with enrollment shows that of the 102 teachers indicating they did not use the guide, 57 are in schools with enrollments of 12 to 150.

A cross tabulation between publications used and the Physical Education curriculum scores shows a relationship between the two factors (see Table 32). Those teachers using the suggested guide books have a higher conformity percentage than those who use other sources for planning

Physical Education classes. The relationship indicates that the suggested guide books are appropriate for meeting the Department of Education's goals of their Physical Education curriculum.

Views on Physical Education - The frequencies of the comments on improvements were; more instructional time needed, 31; improvement of facilities (especially the gymnasium), 46; accessibility to guide books, 22; smaller

Table 32

Cross Tabulation Percentages of the Conforming Groups With the Factor "Using Suggested Guide Books"

Using Guides	Conforming (%)				
	Wh*	Pr*	El*	Jr	Sr
Yes	43	66	56	78	27
No	33	40	32	61	29

* $P < .01$.

classes, 18; more funding, 19; more inservices/workshops, 51; to have a gymnasium, 63; more equipment, 102; more facilities, 39; to have a Physical Education specialist, 64; and to have a Physical Education coordinator, 1. The improvement emphasis would appear to be in four areas, more equipment, to have a gymnasium, to have a Physical Education

specialist, and more inservices/workshops.

The second open question to obtain the teachers' views was directed toward the Physical Education curriculum in terms of difficulties, emphasis, modifications, etc. Two hundred and forty one teachers wrote comments with respect to their situation. Thirteen of the teachers who responded made comments of the curriculum being adequate or that they had no difficulties with the curriculum. It was noted that nine of the 13 were teaching at the primary level only.

Many of the comments centered around the 11 improvement factors listed in the first open question. However, many of the teachers tried to relate the comments more specifically to their school setting. The following comments will indicate the concerns some teachers have about Physical Education.

> "In this school it is practically non-existent due mainly to the size and resource capabilities of the school. With the turn over rate of teachers here, I fear it will continue as such. Yet, with more interest from outside sources, I think it could be improved upon."
>
> "We have no gymnasium in the school nor is there a qualified instructor. Due to this, in the primary area there is no Physical Education program."
>
> "We do not have a Physical Education program. This is a multi-grade school (K-5) in one room, (6-9) in another room, to have an adequate program with so few numbers and varying ages and sizes makes Physical Education difficult."
>
> "Being a small school with no proper gym limits our program somewhat. However, we do try to do the best possible job with the program."

"Our school is bounded by a barren on the back, a gravel road on the front, a house on one side, and a cliff on the other. The inside is comprised of classrooms and washrooms. This situation is hardly conducive to any worthwhile Physical Education program. What I do is more as a reprieve from seatwork for my students than it is for the other values of Physical Education."

"For our school, as already stated, there is a lack of facilities and equipment. This greatly hampers, almost to the point of nullifying, any attempt at a Physical Education program."

"The curriculum is a good one but I feel that I am not adequately prepared to do a good job of teaching it."

"It is very difficult and very frustrating to teach elementary Physical Education with no training. Each year I gain more of a background with respect to activities/games that I can teach. I feel that children in our school are lacking in their overall education because we have no gymnasium and no Physical Education teacher."

"Personally I can not see how you can consider us to have a program. None of our teachers have training and we do not have the facilities to implement the curriculum we are expected to teach."

"Good on paper, but it is a lot more difficult to implement and finance." (senior high school program)

"As a specialist in this field I feel quality Physical Education can be provided for each child with program enrichment and variation at the various grade/ age levels, especially K-8. The upper end of junior high sees the need for greater motivational factors, children tend to become sport specific, this often leads to non-participation."

"I feel that provincially the Physical Education curriculum is sadly lacking in the primary/elementary area. Not enough emphasis is placed on early childhood motor development. Areas in movement, such as creative dance, are not given enough importance. Also there is little consistency in the programs island wide."

These comments are representative of the comments made by the teachers. The majority of the teachers are having difficulties with teaching the Physical Education curriculum and specific factors of their school setting are linked to their difficulties.

Attitude toward Physical Education - The frequencies of the total attitude scores show that there is a range of 11 to 50 with the mode at 44, 39 cases. However, 95% of the teachers fall within the scores of 36 to 50. This indicates that a large majority of the teachers have a positive attitude toward Physical Education.

With the high percentage of teachers being rated as positive to very positive attitudes toward Physical Education the correlation and cross tabulations therefore become irrelevant for the purpose of the study. Table 33 shows the frequencies of the attitude scale scores.

Table 33

Attitude Scale Frequencies

Attitude	Frequency
Very Negative	1
Negative	1
Neutral	13
Positive	143
Very Positive	141

Analysis Summary

The purpose of the study was to determine if there were any relationships between school characteristics and teacher characteristics --(school setting)-- with respect to the delivery of the Physical Education curriculum (conformity). The data were analyzed to reveal possible relationships of school characteristics and teacher characteristics with the delivery of the Physical Education curriculum at two levels i) at a whole curriculum level and ii) at each school level.

Determining relationships at the whole curriculum level was the main focus of the study, however, these relationships hinged upon the relationships at the school levels. Unfortunately, the low number of teachers responding from the senior high level had an effect on the whole curriculum level relationships and conclusions that could be drawn. But, relationships (and indications of relationships) could still be disclosed.

The obtained chi squares calculated from each school setting factor when cross tabulated with the Physical Education curriculum scale at the whole curriculum level are shown in Table 34. From the analysis and discussion of each factor plus Table 34, it can be clearly seen which school characteristics and which teacher characteristics are

factors related to conformity with respect to the Physical Education curriculum. The school characteristics of enrollment, school catchment area population, equipment available, and equipment quality are factors of conformity. The teacher characteristics of sex, degrees held, university training in Physical Education, Physical Education inservice/workshop participation, and use of suggested guide books are factors of conformity.

The cross tabulations also showed several other factors that may be influencing conformity. They are the school characteristics of Physical Education period length, Physical Education period frequency, scheduling cycle used, availability of facilities, and quality of the facilities; the teacher characteristics of age, teaching experience, Physical Education workload, teaching time allocated to teaching Physical Education, personal involvement in physical recreational activities, and access to the guide publication.

Primary - School characteristics of availability of the facility classroom/playroom; teacher characteristics of degrees held, univeristy training in Physical Education, and use of suggested guide books. Other indicated factors were; the school characteristics of Physical Education period length, Physical Education period frequency, scheduling

Table 34

Obtained Chi Squares for the School Setting Factors Cross Tabulated With the Physical Education Curriculum Scale (Whole Curriculum Level)

Characteristics	Chi^2 Obtained	df	Level of Significance
School Characteristics			
Enrollment	28.07	16	.0310*
School catchment area	47.59	16	.0001**
Scheduling cycle	N/A	N/A	N/A
Period length	N/A	N/A	N/A
Period frequency	N/A	N/A	N/A
Facilities (avail.)			
Class/playroom	2.88	2	.2363
Gymnasium	2.74	2	.2540
Playing field	4.96	2	.0837
Playground	5.54	2	.0626
Soft/baseball field	.69	2	.7052
Stadium/rink	3.01	2	.2219
Swimming pool	3.05	2	.2173
Facilities (quality)			
Class/playroom	5.72	4	.2203
Gymnsaium	7.30	4	.1206
Playing field	1.78	4	.7761
Playground	2.51	4	.4442
Soft/baseball field	3.72	4	.9049
Stadium rink	1.03	4	.0732
Swimming pool	8.55	4	.0732
Equipment (avail.)	42.41	6	.0000**
Equipment (quality)	38.58	6	.0000**

(Continued)

Table 34 - Continued

Teacher Characteristics			
	()		
Sex	8.18	2	.0167*
Age	15.49	12	.2157
Teaching experience	13.45	10	.1994
Degrees held	9.66	4	.0460*
University attended	7.38	4	.1168
Workload	N/A	N/A	N/A
Time allocated	23.81	14	N/A
University training	13.54	4	.0089**
Involv. in phy. recreat. activities	16.07	10	.0975
Access to guide publication	3.71	2	.1561
Inservice participation	12.64	2	.0018**
Suggested guides used	13.05	2	.0015**
Attitude	N/A	N/A	N/A

* $p < .05$.
** $p < .01$.

cycle used, and availability of facilities; the teacher characteristics of age, Physical Education workload, time allocated to teaching Physical Education, personal involvement in physical recreational activities, and access to the guide publication.

Elementary - School characteristics of availability of the facilities gymnasium and playground, and equipment available; teacher characteristics of university training, access to the guide publication, and use of suggested guide

books. Other indicated factors were; the school characteristics of Physical Education period length and Physical Education period frequency; the teacher characteristics of age, Physical Education workload, time allocated to teaching Physical Education, and personal involvement in physical recreational activities.

Junior High - Teacher characteristics of access to the guide publication. Other indicated factors were; the school characteristics of Physical Education period frequency and the scheduling cycle used; the teacher characteristics of Physical Education workload, time allocated to teaching Physical Education, and personal involvement in physical recreational activities.

Senior High - Relationships or indications of relationships could not be determined due to the low number of teachers responding from the senior high level. (See Table 35 for the obtained chi squares calculated from each school setting factor when cross tabulated with the Physical Education curriculum scale at the school levels.)

As a final conclusion of the data analysis the null hypotheses will have to be rejected, in part, at the .05 level of significance. That is, there are some school

characteristics and some teacher characteristics which are related to the delivery of the Physical Education curriculum in Newfoundland and Labrador.

Table 35

Obtained Chi Squares for the School Setting Factors Cross Tabulated With the Physical Education Curriculum Scale (School Level)

Characteristics	School Level	Chi^2 Obtained	df	Level of Significance
School Characteristics				
Enrollment		N/A	N/A	N/A
School catchment area		N/A	N/A	N/A
Scheduling cycle		N/A	N/A	N/A
Period length		N/A	N/A	N/A
Period frequency		N/A	N/A	N/A
Facilities (avail.)				
Class/playroom	Pr	6.64	2	.0361
	El	1.95	2	.3762
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Gymnasium	Pr	1.23	2	.5391
	El	11.59	2	.0030**
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Playing field	Pr	1.773	2	.4210
	El	2.27	2	.3205
	Jr	3.43	2	.1791
	Sr	.08	2	.9593
Playground	Pr	.34	2	.8420
	El	7.07	2	.0291*
	Jr	N/A	N/A	N/A
	Sr	.68	2	.7095
Soft/baseball field	Pr	.34	2	.8420
	El	.84	2	.6546
	Jr	1.69	2	.4292
	Sr	.61	2	.7365

(Continued)

Table 35 - Continued

Stadium/rink	Pr	1.17	2	.5553
	El	5.04	2	.0803
	Jr	2.01	2	.3643
	Sr	4.60	2	.0998
Swimming pool		N/A	N/A	N/A
Facilities (quality)				
Class/playroom	Pr	5.47	4	.2420
	El	4.77	4	.3111
	Jr	7.69	4	.1036
	Sr	N/A	N/A	N/A
Gymnsaium	Pr	3.18	4	.5268
	El	3.84	4	.4268
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Playing field		N/A	N/A	N/A
Playground	Pr	2.49	4	.6546
	El	N/A	N/A	N/A
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Soft/baseball field		N/A	N/A	N/A
Stadium/rink		N/A	N/A	N/A
Swimming pool		N/A	N/A	N/A
Equipment (avail.)	Pr	N/A	N/A	N/A
	El	50.92	6	.0000**
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Equipment (quality)		N/A	N/A	N/A
Teacher Characteristics				
Sex	Pr	.99	2	.6088
	El	2.45	2	.2931
	Jr	5.04	2	.0803
	Sr	N/A	N/A	N/A
Age		N/A	N/A	N/A
Teaching experience		N/A	N/A	N/A
Time allocated		N/A	N/A	N/A
University training	Pr	34.82	4	.0000**
	El	38.00	4	.0000**
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Involv. in phy. recreat. activities		N/A	N/A	N/A

Continued

Access to guide publication	Pr	3.81	2	.1486
	El	7.29	2	.0261*
	Jr	7.95	2	.0188*
	Sr	N/A	N/A	N/A
Inservice participation	Pr	9.58	2	.0083**
	El	16.82	2	.0002**
	Jr	13.19	2	.0014**
	Sr	N/A	N/A	N/A
Suggested guides	Pr	11.86	2	.0027**
	El	10.73	2	.0047**
	Jr	N/A	N/A	N/A
	Sr	N/A	N/A	N/A
Attitude		N/A	N/A	N/A

Note: N/A indicates results are not applicable due to low number of responses or clustering in cross tabulation cells.

* $p < .05$.
** $p < .01$.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to determine if school setting had any affect upon the delivery of the Physical Education curriculum (conformity) in Newfoundland and Labrador schools. For the study school setting comprised of school characteristics (pupil enrollment, facilities available for Physical Education, quality of the facilities, equipment available for Physical Education, quality of the equipment, scheduling of Physical Education, support given by the staff, school board, and other groups, and the school's catchment area population) and teacher characteristics (age, sex, teaching experience, professional training, attitude toward Physical Education, Physical Education workload, use of Physical Education materials, exposure to Physical Education inservices/workshops, and views on Physical Education). The researcher hypothesized that school characteristics and teacher characteristics affected the delivery of the Physical Education curriculum in Newfoundland and Labrador schools.

Thirty three superintendents gave consent to have the

schools and teachers of their districts constitute the population base. The schools of the 33 school boards were stratified into school level groupings. A sample group of 150 schools was randomly selected. From these 150 schools it was determined, by contacting the Physical Education coordinators of the participating school boards, that there were 419 teachers, in total, responsible for teaching Physical Education. That is, 419 teachers who were either Physical Education specialists teaching Physical Education to all or a portion of the school's pupil enrollment, or classroom teachers teaching Physical Education to all or a portion of the school's pupil enrollment.

Questionnaires, which were designed to collect information on the school setting factors and the Physical Education curriculum, were sent to the principals of the sample group schools. The principals had the responsibility of distributing the questionnaires to every teacher in his school who was responsible for teaching Physical Education. Also, the principals had the responsibility of returning, by a specified date, all the completed questionnaires.

One hundred and twenty schools replied to the study with 300 teachers completing the questionnaires. The data collected were recorded and analyzed using the Statistical Package for the Social Studies ($SPSS_x$) on the VAX Computer System at Memorial University of Newfoundland. The analysis

consisted of recording frequencies of the responses and cross tabulations of the school setting factors with a Physical Education curriculum scale. Significance levels were determined by the calculation of chi square. The Physical Education curriculum scale has three categories, conformance to the Physical Education curriculum, partial conformance to the Physical Education curriculum, and no conformance to the Physical Education curriculum. The categorization of the teachers was determined by the teachers' responses to the Physical Education curriculum question for their school level(s).

The Physical Education curriculum scale was applied at two levels, (i) the whole curriculum level, that is the conformity level of the teacher taking into account the combination of all the school levels he is responsible for teaching Physical Education, and (ii) the individual school levels, that is the conformity level of the teacher at each school level he is teaching Physical Education.

From the analysis it was determined that there were some school characteristics and some teacher characteristics that were affecting the delivery of the Physical Education curriculum. The null hypotheses were rejected in part at the .05 level of significance. At the whole curriculum level the school characteristics of enrollment, school catchment area population, equipment available, and

equipment quality were related to the delivery of the Physical Education curriculum, (factors of conformity to the Physical Education curriculum). The teacher characteristics of sex, degree held, university training in Physical Education, participation in Physical Education inservices/ workshops, and use of suggested guide books were related to the delivery of the Physical Education curriculum, (factors of conformity to the Physical Education curriculum). There were also indications of other school characteristics and teacher characteristics influencing conformity. The school characteristics are; Physical Education period length, Physical Education period frequency, scheduling cycle used, availibility of facilities, and quality of the facilities; the teacher characteristics are; age, teaching experience, Physical Education workload, teaching time allocated to teaching Physical Education, personal involvement in physical recreational activities, and access to the guide publication.

At the individual school levels it was determined that the influencing school setting factors were not the same at each level. A low number of teachers responding from the senior high level made it impossible to determine any relationships at the senior high level between school setting factors and the delivery of the Physical Education curriculum. The following are the school levels with their

influencing school setting factors. Primary - the school characteristic of availibility of the facility classroom/playroom; the teacher characteristics of degree held, university training in Physical Education, and use of suggested guide books. Other indicated factors were the school characteristics of Physical Education period length, Physical Education period frequency, scheduling cycle used, and availibility of facilities; the teacher characteristics of age, Physical Education workload, time allocated to teaching Physical Education, personal involvement in physical recreational activities, and access to the guide publication. Elementary - the school characteristics of availibility of the facilities gymnasium and playground, and equipment available; the teacher characteristics of university training, access to the guide publication, and use of suggested guide books. Other indicated factors were the school characteristics of Physical Education period length and Physical Education period frequency; the teacher characteristics of age, Physical Education workload, time allocated to teaching Physical Education, and personal involvement in physical recreational activities. Junior High - the teacher characteristic of access to the guide publication. Other indicated factors were the school characteristics of Physical Education period frequency and the scheduling cycle used; the teacher characteristics of

Physical Education workload, time allocated to teaching Physical Education, and personal involvement in physical recreational activities.

Conclusions

The researcher realizes that conclusions and generalizations based upon one study can be very shallow, but the reseacher has been left with several impressions that stem from the statistical analysis of the data and the general comments which were made by the teachers. From the study the researcher has drawn the following conclusions:

1. Physical Education, as an integral part of the schools' curriculum, is receiving very little emphasis within the educational system of Newfoundland and Labrador.

2. The teachers of the small schools are placing little to no emphasis on the Physical Education curriculum due to the schools' lack of adequate facilities and equipment, the teachers' lack of knowledge and experience in the area of Physical Education, and the workload and organizational problems encountered in multi-graded classrooms.

3. The teachers of the senior high Physical Education courses appear to be having problems with implementing and financing the senior high Physical Education curriculum.

4. Many teachers feel incompetent with teaching Physical Education due to their lack of inservice training and university training in the area of Physical Education.

5. There is a need for Physical Education specialists to be available to all schools, either as the schools' Physical Education teacher or as the Physical Education consultant for several schools.

6. The availability of facilities and equipment, and the quality of the facilities and equipment varies from school to school.

Recommendations

Based upon the conclusions drawn from the study the researcher recommends that:

1. Every school board in Newfoundland and Labrador assess the Physical Education curriculum offered in every school of their district in terms of making Physical Education a viable part of the students' curriculum.

2. A further study of Physical Education in small schools be conducted to determine what their needs are in relation to the present Physical Education curriculum.

3. A further study of Physical Education at the senior high level be conducted in terms of the implementation, financing, and practicality of the present Physical Education curriculum in the various school settings.

4. The Faculty of Education, Memorial University of Newfoundland, implement, within its degree programs, compulsory courses related to teaching Physical Education.

5. Every school board conduct, at least once a year, a Physical Education inservice/workshop for all of their teachers who are responsible for teaching Physical Education.

6. The coordinators responsible for Physical Education become more involved in coordinating Physical Education in their districts, especially for the small schools.

7. The Department of Education, Government of Newfoundland and Labrador, set and maintain a standard for Physical Education equipment and facilities for the schools of the Province with consideration given to the schools' needs, pupil enrollment, and community resources.

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APPENDIX A

THE QUESTIONNAIRE

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
DEPARTMENT OF CURRICULUM AND INSTRUCTION

PHYSICAL EDUCATION IN NEWFOUNDLAND AND LABRADOR SCHOOLS

PLEASE READ CAREFULLY BEFORE STARTING. The following questionnaire is designed to obtain your responses pertaining to the Physical Education Curriculum and your school's setting. Read each item carefully and respond by i) placing a check mark by the appropriate response or ii) making a written comment. **Do Not Place Your Name or the School's Name on the Questionnaire.** When completed, place the questionnaire in the envelope marked "Physical Education Curriculum Study" and return the sealed envelope to your principal.

1.1) ___ Male 2) ___ Female

2. AGE: 1) ___ 20-24 2) ___ 25-29 3) ___ 30-34 4) ___ 35-39 5) ___ 40-44 6) ___ 45-49 7) ___ 50+

3. Number of Years Teaching Experience: _____

4. Degree(s) Held (Name the University or College): _____

5. Approx. pupil enrollment of the school you presently teach in: _____

6. Approx. population of the community(ies) your school serves: _____

7. Indicate the grades and the number of classes at each grade level for which you are responsible for teaching Physical Education to:

GRADE	# of Classes	GRADE	# of Classes
a) ___ K	___	i) ___ 8	___
b) ___ 1	___	j) ___ 9	___
c) ___ 2	___	Senior High:	
d) ___ 3	___	k) ___ P.E. 1100	___
e) ___ 4	___	l) ___ P.E. 2100	___
f) ___ 5	___	m) ___ P.E. 3100	___
g) ___ 6	___		
h) ___ 7	___		

8. The percentage of your teaching time allocated to teaching Physical Education:

1) ___ 85%-100% 2) ___ 70%-84% 3) ___ 55%-69% 4) ___ 40%-54%
5) ___ 30%-39% 6) ___ 20%-29% 7) ___ 10%-19% 8) ___ Less than 10%

9. Which one of the following would best apply to your University training in Physical Education:

1) ___ Physical Education Degree
2) ___ Over 9 University Courses Completed in Physical Education
3) ___ 5-9 University Courses Completed in Physical Education
4) ___ 1-4 University Courses Completed in Physical Education
5) ___ Completed Education 2191, 3070 or 3090
6) ___ Completed Non-Credit Physical Education Course
7) ___ No University Courses completed in Physical Education

10. How often do you personally become involved in physical recreational activities outside of the school?

1) ___ Daily 2) ___ Several times a week 3) ___ Several times a month
4) ___ About once a month 5) ___ Less than Once a Month 6) ___ Almost Never

11. Indicate the school's scheduling: 1)_ 7 day cycle 2)_ 6 day cycle 3)_ 5 day/weekly cycle

12. Indicate the approximate length of your Physical Education period(s) and the frequency of Physical Education per week/cycle per class:

	Prim	Elem	Jr. High	Sr. High
Period Length:	_____	_____	_____	_____
Frequency:	_____	_____	_____	_____

13. Do you have access to a copy of the Department of Education's publication "Physical Education Guide Kindergarten - Grade Eleven"?

1)_____ Yes 2)_____ No

14. Have you participated in a Physical Education inservice/workshop?

1)___ YES 2)___ NO. If Yes, indicate how many and the year the most recent inservice took place: _____

15. Has your school board offered a Physical Education inservice/workshop which you were unable to attend because of other teaching duties?

1)___ YES 2)___ NO

16. Rank the publications/materials which you use in planning the instructional portion of your Physical Education program. (Most Frequently Used) _____

_____

_____

_____

_____ (Least Used)

17. How would you rate each of the school's facilities for the teaching of your Physical Education program:

	Very Adequate	Adequate	Satisfactory	Inadeq.	Very Inadeq.	Do Not Use	Not Avail.
a) Classroom/Playroom	___	___	___	___	___	___	___
b) Gymnasium	___	___	___	___	___	___	___
c) Level Playing Field	___	___	___	___	___	___	___
d) Playground	___	___	___	___	___	___	___
e) Softball/baseball field	___	___	___	___	___	___	___
f) Stadium/rink	___	___	___	___	___	___	___
g) Swimming Pool	___	___	___	___	___	___	___
h) Others (Please Specify)							
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___

18. For the instructional portion of your Physical Education program, estimate the amount of equipment you have available to meet the needs of the program:

1)___ 75% - 100% 3)___ 25% - 50%
2)___ 50% - 75% 4)___ Less than 25%

19. The quality of the available equipment is: 1)__ Excellent 2)__ Good 3)__ Fair 4)__ Poor

20. List two factors which you feel could be helpful in improving your Physical Education program:

i) _____

ii) _____

21. Please respond to the following statements by circling the appropriate point on the scale. (SA - Strongly Agree A - Agree U - Undecided D - Disagree SD - Strongly Disagree)

	SA	A	U	D	SD
a) The time spent teaching a physical education class could be more profitably spent in other ways	1	2	3	4	5
b) Physical Education in school does not receive the emphasis that it should	1	2	3	4	5
c) It is possible to make Physical Education a valuable subject by proper selection of activities	1	2	3	4	5
d) Physical Education classes provide very little which will be of value outside the class	1	2	3	4	5
e) Participation in Physical Education class activities tends to develop a wholesome interest in the functioning of one's body	1	2	3	4	5
f) No beneficial results come from participation in Physical Education activities	1	2	3	4	5
g) As far as improving physical health is concerned a Physical Education class is a waste of time	1	2	3	4	5
h) Physical Education classes provide values which are useful in other aspects of daily living	1	2	3	4	5
i) Physical Education should be required of all who are physically able to participate	1	2	3	4	5
j) The skills learned in a Physical Education class add much value to a person's life	1	2	3	4	5

22. This question is divided in Primary (K-3), Elementary (4-6), Junior High (7-9) and Senior High. Only respond to the section(s) which involves the grade(s) you teach Physical Education to.

DIRECTIONS: Indicate the areas covered in the instructional portion of your Physical Education program. If a specific area is part of your program but taught by someone else (i.e. resource person) then place the letter "R" beside the response.

A. For teachers of Primary Education only (K-3):

a) ___ Agility (stopping, starting, changing direction)
b) ___ Balance Activities
c) ___ Spatial concepts (personal space, group space, awareness of space between individual and moving/nonmoving objects)
d) ___ Rhythmic Movement (fast/slow/even/uneven movements and beats)
e) ___ Rope Jumping Skills
f) ___ Locomotor Skills (running, sliding, hopping)
g) ___ Psychomotor Activities (muscular co-ordination)
h) ___ Cooperative Games
i) ___ Competitive Games
j) ___ Body Awareness Activities (twisting, bending, rolling, shaking)
k) ___ High Organizational Games (Soccer, Floor Hockey, Softball)
l) ___ Low Organizational Games (tag, relay races, circle games)
m) ___ Others (Please specify) _____

B. For teachers of Elementary Physical Education only (4-6):

a) ___ Elementary Gymnastics
b) ___ Apparatus Gymnastics
c) ___ Dance
d) ___ Soccer
e) ___ Volleyball
f) ___ Basketball
g) ___ Track & Field
h) ___ Badminton
i) ___ Softball
j) ___ Floor Hockey
k) ___ Ice Hockey
l) ___ Field Hockey
m) ___ Lacrosse
n) ___ Wrestling
o) ___ Orienteering
p) ___ Others (Please specify)
_____
_____

C. For teachers of Junior High Physical Education only (7-9):

a)___ Elementary Gymnastics
b)___ Apparatus Gymnastics
c)___ Dance
d)___ Soccer
e)___ Volleyball
f)___ Basketball
g)___ Track & Field
h)___ Badminton
i)___ Softball
j)___ Floor Hockey
k)___ Ice Hockey
l)___ Field Hockey
m)___ Lacrosse
n)___ Wrestling
o)___ Orienteering
p)___ Others (Please specify)

_____

D. For teachers of Senior High Physical Education only. Place a check mark across from the activities to indicate which Physical Education course(s) you teach the activity under.

	P.E. 1100	P.E. 2100	P.E. 3100
a) Aquatics	a)___	a)___	a)___
b) Archery	b)___	b)___	b)___
c) Badminton	c)___	c)___	c)___
d) Basketball	d)___	d)___	d)___
e) X-Country Skiing	e)___	e)___	e)___
f) Field Hockey	f)___	f)___	f)___
g) Floor Hockey	g)___	g)___	g)___
h) Ice Hockey	h)___	h)___	h)___
i) Gymnastics	i)___	i)___	i)___
j) Lacrosse	j)___	j)___	j)___
k) Orienteering	k)___	k)___	k)___
l) Soccer	l)___	l)___	l)___
m) Softball	m)___	m)___	m)___
n) Table Tennis	n)___	n)___	n)___
o) Team Handball	o)___	o)___	o)___
p) Tennis	p)___	p)___	p)___
q) Track & Field	q)___	q)___	q)___
r) Volleyball	r)___	r)___	r)___
s) Winter Camping	s)___	s)___	s)___
t) Wrestling	t)___	t)___	t)___
u) Others (Please specify)	u)___	u)___	u)___

_____

23. Which of the following groups do you find to be supportive of your Physical Education Program:

a) ___ School Board Administration
b) ___ Co-ordinator (s)
c) ___ School Administration
d) ___ Other teachers of the school
e) ___ Community Members
f) ___ Others (Please specify:) _____
g) ___ There is little to no support given.

24. Comment on how you perceive the Physical Education curriculum. (i.e. difficulties, emphasis, modifications, etc.)

_____

_____

_____

_____

_____

_____

_____

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Curriculum and Instruction

Telex: 016-4101
Tel.: (709) 737-7600

April 16, 1985

Dear Principal:

I am presently enrolled in the School of Graduate Studies at Memorial University of Newfoundland studying for the degree Master of Education (Curriculum and Instruction). As part of the degree program, I am required to select an area for research and based on the research, submit a thesis to the School of Graduate Studies.

My chosen research area is Physical Education and my thesis is entitled "Physical Education Curriculum: A Study of the Current Delivery System of Physical Education in Newfoundland Schools". The purpose of the study is to determine the delivery of the Physical Education curriculum within the various school settings across the Province, and to determine if the present Physical Education curriculum is meeting the needs of each school.

Through the consent of your school district's Superintendent, your school was included in the population base for the purpose of random selection. Your school, along with 149 others, has been selected to constitute the study group. With your co-operation the necessary information pertaining to the study can be promptly collected.

I am asking for your co-operation by helping me in the following ways:

1. Your school board's Physical Education Co-ordinator has indicated that there are members of your staff responsible for teaching Physical Education in your school either on a regular or irregular schedule. Please forward to each of these teachers one copy of the colleague's letter, one copy of the questionnaire and one return envelope marked "Physical Education Curriculum Study.".

2. Ask each teacher to respond to the questionnaire and return the completed questionnaire, in the sealed return envelope, to you by March ??.

3. Place all return envelopes containing the completed questionnaire into the stamped, addressed envelope provided and mail to me by March ??

Your co-operation is essential to the study. Thank you for your time.

Yours very truly,

Roger Melendy

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Curriculum and Instruction

Telex: 016-4101
Tel.: (709) 737-7600

April 16, 1985

Dear Colleague:

I am presently enrolled in the School of Graduate Studies at Memorial University of Newfoundland studying for the degree Master of Education (Curriculum and Instruction). As part of the degree program, I am required to select an area for research and based on the research, submit a thesis to the School of Graduate Studies.

My chosen research area is Physical Education and my thesis is entitled "Physical Education Curriculum: A Study of the Current Delivery System of Physical Education in Newfoundland and Labrador Schools." The purpose of the study is to determine the delivery of the Physical Education curriculum within the various school settings across the Province, and to determine if the present Physical Education curriculum is meeting the needs of each school.

Enclosed is a questionnaire designed to gather the necessary information pertaining to the study. I know that you are busy and the questionnaire may appear to be lengthy, but because of the design nature of the items, the total time needed to complete the questionnaire will only be a few minutes. If you could take these few minutes and respond to the questionnaire it would be greatly appreciated by me, and it will help to give a better picture of Physical Education within our Province. Please complete the questionnaire and then place the questionnaire in the envelope marked "Physical Education Curriculum Study". Seal the envelope and return the sealed envelope to your Principal by April 26, 1985. Your Principal is responsible for mailing all the sealed envelopes containing the questionnaires to me.

The information which you reveal will be used by me for group tabulations, and can not be directly associated with you. Confidentiality in this respect is guaranteed. All completed questionnaire forms will be destroyed upon completion of the study.

Your co-operation is essential to the study. Thank you for your time.

Yours very truly,

Roger Melendy

APPENDIX B

THE SPLIT-HALF TECHNIQUE AND SPEARMAN-BROWN FORMULA TO DETERMINE THE RELIABILITY OF THE ATTITUDE SCALE USED IN THE QUESTIONNAIRE

PERSON	A	B	$A-\bar{A}$	$B-\bar{B}$	$(A-\bar{A})^2$	$(B-\bar{B})^2$	$(A-\bar{A})(B-\bar{B})$
1	21	20	-.4	-2.8	.16	7.84	1.12
2	22	25	.6	2.2	.36	4.84	1.32
3	18	20	-3.4	-2.8	11.56	7.84	9.52
4	21	25	-.4	2.2	.16	4.84	-.88
5	22	24	.6	1.2	.36	1.44	.72
6	21	20	-.4	-2.8	.16	7.84	1.12
7	24	24	2.6	1.2	6.76	1.44	3.12
8	22	23	.6	.2	.36	.04	.12
9	22	24	.6	1.2	.36	1.44	.72
10	21	23	-.4	.2	.16	.04	.08
10	214	228	0	0	20.4	37.6	16.8

A = The odd numbered statements

B = The even numbered statements

Covariance Between A and B:

$$C_{AB} = \sum_{i=1}^{10} \frac{(A-\bar{A})(B-\bar{B})}{N-1}$$

$$\frac{16.8}{9}$$

$$r_{AB} = \frac{C_{AB}}{\sqrt{s^2 s^2}}$$

$$\frac{\frac{16.8}{9}}{\sqrt{\frac{20.4}{9} \times \frac{37.6}{9}}} = \frac{16.8}{\sqrt{20.4 \times 37.6}}$$

$$\frac{16.8}{27.69} = .606$$

Spearman-Brown Formuala

$$\frac{\text{2 times the correlation between the halves}}{\text{1 plus the correlation between the halves}}$$

$$\frac{2 \times .606}{1 + .606} = \frac{1.212}{1.606}$$

The split half reliability is .75

APPENDIX C

LETTER TO SUPERINTENDENTS

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Curriculum and Instruction

Telex: 016-4101
Tel.: (709) 737-7600

December 5, 1984

TO: Superintendents, School Boards of Newfoundland and Labrador
FROM: Roger Melendy, Candidate for Degree of Master of Education
SUBJECT: Consent for Proposed Questionnaire Study

I am a graduate student at Memorial University and I am presently studying for the degree of Master of Education (Curriculum and Instruction). Presently I am planning my thesis for submission to the School of Graduate Studies for August, 1985. The proposed thesis is entitled "Physical Education Curriculum: A Study of the Current Delivery System of Physical Education in Newfoundland and Labrador schools."

The purpose of the study is twofold:

(i) to determine the delivery of the Physical Education curriculum as for the individual teacher in his/her setting;

(ii) to determine if the present Physical Education curriculum as outlined by the Department of Education is meeting the needs of each school as deemed by its setting.

The data for the proposed study will be collected through the use of a questionnaire. Items on the questionnaire will encompass questions on (i) teachers' knowledge, training, and experience in Physical Education (ii) teachers' implementation of the Physical Education curriculum (iii) available facilities and (iv) teachers' innovative ideas for their Physical Education program.

The planned study group is to be a random sample of teachers who are responsible for teaching Physical Education from across the province. In order for me to determine a final population group for the random selection process of a study group I will need your cooperation. I am asking for your cooperation by granting me consent (on behalf of your district) to have the teachers of Physical Education employed by your School Board to be included in the population group for random selection.

When I receive your consent I will then form the population group and randomly select the study group. The raw data collected from the study group will be kept confidential and destroyed after group tabulations.

Enclosed is a reply form for you to complete and return in the stamped, addressed envelope. Your consent is very important to the advancement of my research and would be greatly appreciated.

Thank You

Roger Melendy

REPLY FORM

SCHOOL BOARD: _____

Please complete the reply form and return in the stamped, addressed envelope provided. A prompt reply would be appreciated.

Please place a check mark by the appropriate instruction(s).

___ On behalf of the district I give consent for the teachers of the district to be included in the population group for random selection.

___ A copy of a report of the grouped tabulations for the district's resource library would be appreciated.

Signature: _____

APPENDIX D

DEPARTMENT OF EDUCATION, NEWFOUNDLAND AND LABRADOR, PHYSICAL EDUCATION CURRICULUM -- PRIMARY, ELEMENTARY, JUNIOR HIGH, SENIOR HIGH

Primary

The main goal in the primary program is to develop a foundation of general psychomotor skills.

Aside from the psychomotor approach, primary Physical Education must also develop students' physiological (i.e., physical fitness and health) understanding of their bodies.

The program selected for the primary grades is designed to be taught by the classroom teacher. Consequently, any primary school which does not employ a physical education specialist can have the classroom teachers teach the program. It is advisable that the classroom teachers be given some training in the program, either through a university course (Education 3070, Memorial University) or through workshops.

(Department of Education, 1984 (1) p.14)

Content

Agility (stopping, starting, changing direction)

Balance activities

Spatial concepts (personal space, group space, awareness of space between individual and moving/nonmoving objects)

Rhythmic Movement (Fast/slow/even/uneven movements and beats)

Rope jumping skills

Locomotor activities (running, sliding, hopping)

Psychomotor activities (muscular co-ordination)

Co-operative games

Body awareness (twisting, bending, rolling, shaking)

Low organizational games (tag, relay races, circle games)

Teachers' Guides

Physical Education Curriculum Guide: Kindergarten - Grade Eleven.

*"Physical Education for Elementary Schools" (Kindergarten, Grade One, Grade Two, Grade Three)

(* Also referred to as the Battlecreek program or the Van Holst program.)

Elementary

In the elementary Physical Education program, there are three categories of physical activities. First, there are the activities that are game or competition oriented.

Secondly, there are activities that have as their main goal the enjoyment and aesthetic appreciation of movement.

Thirdly, there are activities that are used mainly for physical fitness development.

(Department of Education, 1984 (1), p. 25)

Content

A minimum of five of eight activities must be completed. (One area of gymnastics is compulsory.)

Elementary gymnastics

Apparatus gymnastics

Dance

Soccer

Volleyball

Basketball

Track and Field

Badminton

Teachers' Guidebooks

Personal Well Being

Physical Activity Outlines (available from Physical Education Consultant)

Junior High

Students at the junior high level will be introduced to a wide variety of sports, with emphasis being placed on psychomotor skill development in each sport.

The junior high school program will continue to emphasize and expand each student's development as a sportsperson.

(Department of Education, 1984 (1), p. 44)

Content

A minimum of five of twelve activities must be completed.

Apparatus gymnastics

Elementary gymnastics

Dance

Soccer

Volleyball

Basketball

Track and Field

Badminton

Field Hockey

Lacrosse

Wrestling

Orienteering

Teachers' Guidebooks

Physical Activity Outlines (available from the Physical Education consultant)

Physical Education Evaluation Booklet

Physical Education Curriculum Guide

Senior High

Physical Education 1100

There are two major objectives in this course. The first is to teach students the meaning and importance of physical fitness. The second objective is to develop psychomotor skills in at least five different physical activities.

(Department of Education, 1984 (1), p. 66)

Content

A minimum of five of nine activities must be completed.

Archery

Orienteering

Soccer

Volleyball

Basketball

Team Handball

Wrestling

Gymnastics

Table Tennis

Teachers' Guidebooks

Physical Activity Outlines

Physical Fitness: A Way of Life

Physical Education 2100

This course will emphasize physical fitness and psychomotor skill development through a variety of physical activities. There is a core unit on physical conditioning, and, in addition, the course must present at least five physical activities.

(Department of Education, 1984 (1), p. 67)

Content

A minimum of five of ten activities must be completed.

Cross-country skiing

Winter camping

Hockey

Soccer

Lacrosse

Volleyball

Tennis

Badminton

Aquatics

Track and Field

* It is possible to add to this list those activities which were not covered in Physical Education 1100.

Teachers' Guidebooks

Physical Activity Outlines

Level I Coaching Manual

Physical Education 3100

This course introduces students to a variety of physical recreational activities that may be enjoyed throughout adult life. There will also be continued development of some of the skills introduced in previous courses. The course also deals with sport and recreation leadership and the mechanical principles of movement.

(Department of Education, 1984 (1), p. 67)

Content

No specific outline of activities.

Teachers' Guidebooks

Physical Activity Outlines

Leadership booklet

Sport Skills: A Conceptual Approach to Meaningful Movement

Physical Education and Sport for the Secondary School Student

Level I Coaching Manual

APPENDIX E

SUPPLEMENTARY TABLES

Table 36

Cross Tabulation Percentages of the Conforming Groups With the Factor "Facility Quality"

Facility		Conforming (%)				
		Wh*	Pr*	El*	Jr	Sr
Classroom/ playroom	I[a]	31	47	25	33	40
	S	29	59	50	69	9
	A	29	42	44	75	23
		.2203	.2420	.3111	N/A	N/A
Gymnasium	I	20	42	40	52	14
	S	37	56	46	69	10
	A	37	59	57	69	15
		.1206	.5268	.0218*	N/A	N/A
Playing field	I	38	59	46	62	26
	S	50	73	50	20	11
	A	47	60	54	75	0
		.7761	N/A	N/A	N/A	N/A
Playground	I	38	56	43	67	28
	S	41	53	43	77	17
	A	50	69	64	78	50
		.6424	.6456	N/A	N/A	N/A
Soft/base ball field	I	30	64	20	53	36
	S	38	78	55	91	10
	A	50	77	75	63	46
		.4442	N/A	N/A	N/A	N/A
Stadium/ rink	I	36	86	57	100	40
	S	33	40	25	67	38
	A	44	58	73	64	50
		N/A	N/A	N/A	N/A	N/A
Swimming	I	0	50	50	50	25
	S	50	100	67	60	50
	A	50	60	80	71	60
		N/A	N/A	N/A	N/A	N/A

Note: N/A indicates that the level of significance is not applicable due to low number of responses in the cross tabulation cells.

[a] I - ranking of inadequate S - ranking of satisfactory
A - ranking of adequate

* $p < .05$.

Table 37

Cross Tabulation Percentages of Equipment Available With Enrollment*

Enrollment	Equipment Available (%)			
	75-100	50-75	25-50	25
12-30	5	22	17	56
31-60	5	18	22	55
61-99	16	24	20	40
100-150	13	21	24	42
151-199	9	37	20	34
200-299	30	35	13	22
300-399	39	35	22	4
400-499	3	50	7	7
> 499	61	29	7	3

* $p < .01$.

Table 38

Cross Tabulation Percentages of Equipment Quality With Enrollment*

Enrollment	Excellent & Good (%)	Fair & Poor (%)
12-30	39	61
31-60	43	57
61-99	65	35
100-150	42	58
151-199	71	29
200-299	68	32
300-399	83	17
400-499	79	21
> 499	90	10

* $p < .01$.

Table 39

Curriculum Question Response Frequencies

Dept. of Ed. Curriculum		Taught, part of the curr.	Not taught but part of the curr.	Taught, but not part of the curr.
Primary Level				
Agility		148	15	
Balance		132	31	
Spatial		137	26	
Rhyth. move		135	28	
Rope jump.		131	31	
Locomotor skills		153	10	
Psychomotor skills		126	35	
Coop. games		151	11	
Competitive games				121
Body aware.		141	22	
Hi. organ. games				61
Low organ. games		149	14	
Other				8
Elementary and Junior High Levels				
Elem gym.	El	59	59	
	Jr	45	59	
App. gym	El	25	94	
	Jr	32	73	
Dance	El	24	95	
	Jr	9	95	

(Continued)

Table 39 - Continued

Soccer	El	87	33		
	Jr	92	13		
Volleyball	El	76	44		
	Jr	96	9		
Basketball	El	81	39		
	Jr	87	18		
Track & Field	El	54	66		
	Jr	43	62		
Badminton	El	52	68		
	Jr	82	23		
Softball	El			62	
	Jr			66	
Floor Hockey	El			85	
	Jr			71	
Ice Hockey	El			9	
	Jr			7	
Field Hockey	El			2	
	Jr	7	93		
Lacrosse	El			6	
	Jr	14	86		
Wrestling	El			6	
	Jr	14	86		
Orienteer.	El			21	
	Jr	15	82		
Other	El			28	
	Jr			35	
Senior High (P.E. 1100, 2100, 3100)					
Aquatics	11			2	
	21	4	46		
	31	2			
Archery	11	27	31		
	21	7		12	
	31	22			

(Continued)

Table 39 - Continued

Badminton	11				32
	21	39		11	
	31	31			
Basketball	11	52		7	
	21	6			27
	31	11			
X-Coun.ski	11				10
	21	19		31	
	31	20			
Field Hoc.	11				1
	21				5
	31	2			
Floor Hoc.	11				14
	21				13
	31	5			
Ice Hoc.	11				2
	21	1		48	
	31				
Gymnastics	11				2
	21	5			9
	31	4			
Lacrosse	11				
	21	12		38	
	31	1			
Orienteer.	11	21		37	
	21	10			8
	31	12			
Soccer	11	40		18	
	21	30		16	
	31	8			
Softball	11				11
	21				12
	31	32			
Table tennis	11	23		34	
	21	5			10
	31	4			

(Continued)

Table 39 - Continued

Team handball	11	18	41	
	21	3		4
	31	4		
Tennis	11			
	21	6	44	
	31	3		
Track & Field	11	3		10
	21	13	37	
	31			
Volleyball	11	50	8	
	21	40	6	
	31	11		
Winter camping	11			2
	21	5	45	
	31	12		
Wrestling	11	4	52	
	21	2		1
	31	29		

Note: At the senior high level several activities are part of the curriculum at both 1100 and 2100. Also, there is the option for the teacher to teach any activity not completed in 1100 under the course 2100. If these activities were indicated as been taught in both 1100 and 2100 then it was recorded under 2100 as being "taught, but not part of the curr.".