STUDENT ATTITUDES TOWARD ORGANIZATIONAL ASPECTS OF SECONDARY SCHOOL PHYSICAL EDUCATION PROGRAMS

by

VIRGINIA ELLEN HURST

B.P.H.E., University of Toronto, 1969
B.Ed., University of Toronto, 1970

A THESIS SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

IN THE FACULTY

of

EDUCATION

ACCEPTED
FACULTY OF GRADUATE STUDIES
[redacted]
DEAN
DATE 21 Sept 84

We accept this thesis as conforming
to the required standard

[redacted]
Dr. H. David Turkington

[redacted]
Dr. John J. Jackson

[redacted]
Dr. Rey A. Carr

UNIVERSITY OF VICTORIA
June 1984

Supervisor: Dr. H. David Turkington

Abstract

The purpose of this study was to determine the attitudes of male and female secondary school students toward various organizational aspects of physical education programs and to recommend organizational structures which would take into consideration the expressed attitudes of high, medium, and low achievers in school physical education programs.

A total of 60 subjects, including equal numbers of male and female high, medium, and low achievers in physical education were selected at random from the grade 9 student population at eight secondary schools in the Greater Victoria School District, British Columbia. The subjects were interviewed individually using a questionnaire designed by the researcher to determine their attitudes toward five major aspects of physical education program organization: timetabling considerations, program decisions and responsibilities, competition, student/teacher interaction, and evaluation and reporting.

The students' responses to the questionnaire were subjected to a chi-square analysis to determine if there were significant differences ($p < .05$) between the attitudes of male and female high, medium, and low achievers toward those aspects of physical education program organization. Comments made by the students during the interviews were recorded on tape and analyzed separately by the researcher.

Statistically significant differences were found between the attitudes of (a) male and female medium achievers, (b) male and female low achievers, (c) males and females, and among (d) high, medium and

low achievers.

Male and female medium achievers differed in their preferences for the type of teaching style used in physical education classes, while male and female low achievers preferred different criteria for the frequency of changes in class teams.

The greatest number of statistically significant differences in attitudes occurred between male and female subjects with regard to the following aspects of program organization: the level of difficulty of the activity skills taught in physical education class, the instructional method(s) preferred, the selection and changing of class teams, the preferred amount of class time devoted to competition without an emphasis on winning, the desire to discuss a problem in physical education class with a friend, the perceived emphasis placed by classmates on winning in physical education class, and the degree of hesitation to participate in physical education class activities experienced because of possible teasing from the other students.

High, medium, and low achievers differed significantly only in their attitude toward the option of learning and practising activity skills with the whole class following the teacher at the same time. The subjects' achievement level in physical education, therefore, distinguished very little between their attitudes toward the organization of physical education programs.

Recommendations for the organization of secondary school physical education programs included the individualization of activity programs to meet the needs of students at all skill levels and a greater involvement of grade 9 students in a variety of decisions related to physical education program policies, content, organization, and

evaluation. Separate physical education classes for students at different ability or achievement levels were considered to be unnecessary.

Examiners:

[redacted]

Dr. H. David Purkington

[redacted]

Dr. John J. Jackson

[redacted]

Dr. Rey A. Carr

Table of Contents

Page

List of Tables

Table Page

Table Page

Table | Page

Table | Page

Acknowledgments

Many people have supported and assisted me with this research study, and to these individuals I wish to express my warmest appreciation:

to Dr. David Turkington, my advisor, whose guidance, patience, encouragement, and understanding have been an invaluable source of confidence and inspiration to me throughout the course of my graduate program;

to Dr. John Jackson, of my supervisory committee, whose advice and expectation of excellence contributed to the development of this study and the preparation of this manuscript;

to Dr. Rey Carr, also of my supervisory committee, whose enthusiasm for peer counselling and willingness to share his expertise influenced the direction of this study and the development of my own counselling skills;

to Dr. Walter Muir, whose advice and assistance with the design of the interview questionnaire and the computer analysis of the results made a significant contribution to this study;

to the secondary school principals who supported this research study and granted permission for their students to be interviewed;

to the physical education teachers and other staff members at the schools involved in this study who cooperated and assisted with the conduct of this research;

to the students who were the subjects in this research study for the enthusiasm, intelligence, and honesty with which they responded to the interview questionnaire. Their interest in the study and their comments and suggestions made the hours of interviewing a truly delightful and rewarding experience.

Chapter I

Introduction

Educators have recognized that student attitudes influence the individual's readiness and willingness to learn and thus play an important role in teaching (Campbell, 1969; Seaman, 1970). According to Likert (1932), attitudes are not considered to be rigid. They tend to move within a certain range and may be altered as a result of a person's experience and knowledge (Drinkwater, 1960). Once attitudes have been well-formed, however, they tend to resist change (Edgington, 1968). One of the major objectives of teaching, therefore, is the early development and subsequent maintenance of positive attitudes toward learning.

The literature has indicated that the acquisition of positive attitudes is also an important part of the learning process in physical education. Recent physical education curriculum guidelines (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978; Saskatchewan Department of Education, 1980) all stressed that school physical education programs should foster positive student attitudes toward physical education and the development of a personal lifestyle of vigorous physical activity. M.G. Scott (1960) called for further research to determine how factors such as the method of class instruction and the freedom of the individual to make activity choices and to set personal goals might affect student attitudes.

Campbell (1969) stated that the degree of success and personal satisfaction people experience in relation to certain tasks is an important factor in determining their attitudes toward those tasks.

Carr (1945) suggested that the attitudes of students influenced their success in physical education and should, therefore, be evaluated early in the school year to enable the teacher to help the students adjust to the physical education program.

According to Lapp (1933), however, it is possible for physical educators, perhaps to a greater extent than teachers of many other subjects in the school curriculum, to design their programs to consider the likes, dislikes, and expectations of the students. Lewis (1974) declared that in order for "real" learning to occur, program objectives and student objectives must be congruent. Teachers must not design physical education programs based solely on what they think are relevant activities for the students nor should they assume that the needs and interests of students of the same sex and grade level are the same. Hass (1974) believed that the student was a valuable but neglected resource in curriculum planning and that the development of student planning skills was an important outcome of education. He recommended that students be encouraged to evaluate their present curriculum, and he considered their ideas and reactions of major and unique importance.

In 1979, an assessment of physical education in British Columbia was conducted in order to obtain accurate and current information about aspects of instructional practices and program considerations, including the measurement of student attitudes toward physical education (Carre, 1980). The results and recommendations of that assessment formed the basis for the British Columbia Secondary Physical Education Curriculum and Resource Guides and influenced the development of the

secondary school physical education program described by Carre, Carroll, Cousins, Gillrie, and McBride (1981). R.M. Scott (1982) declared that an attitude component should be included whenever a complete curricular assessment of a physical education program is undertaken.

Many studies have involved various methods of measuring student attitudes toward both physical education and physical activity. Adams (1963) showed how the Thurstone-Chave scale and the Likert scale could be used to measure attitudes toward physical education. In addition, several attitude inventories have been developed using a single scale or a combination of different scale techniques. The Likert scale has been particularly popular with researchers in the field of attitude measurement. Kenyon (1968) and Simon and Smoll (1974) investigated attitudes toward physical activity, while Wear (1951, 1955), Kappes (1954), Kneer (Barrow & McGee, 1971, pp. 435-439), Edgington (1968), and Butcher (1982) devised inventories to measure student attitudes toward physical education. Moore (1941) and R.M. Scott (1982) used interview techniques to gather all or part of their data.

According to Butcher (1982), previous studies had shown that most individuals supported the values of physical activity and physical education but little research had been done to determine if physical education programs were actually realizing those values and meeting the needs of the students. Butcher's study was designed, therefore, to measure student satisfaction with various aspects of physical education programs. The results of that investigation indicated the need for further research into the relationship between student attitudes toward school physical education programs and specific aspects of program organization.

Seaman (1970) discovered that physically handicapped children who took part in a regular physical education program had significantly more favourable attitudes toward physical education than did handicapped children who participated in an adapted program. Christensen (1981) found that there were no significant differences in attitude, motor skill, or physical fitness between student low achievers in a regular physical education program and student low achievers in an alternative physical education program. It was suggested that teachers assess their physical education programs at regular intervals and use the results of those assessments to adapt their regular programs to meet the needs and interests of all students.

Student attitudes, then, have been recognized as important both to education in general and to physical education in particular. Attitudes have been measured in a variety of ways, and researchers have attempted to determine factors which contribute to the development and maintenance of positive attitudes toward physical education. Recent studies have indicated that the organizational structure of the regular physical education program may influence the attitudes of student participants. Before making changes in program organization, however, it would be advisable for teachers to know the students' reactions to the present class situation and to consider their recommendations. It would also be helpful for teachers to know if certain groups of students within the class had particular needs which could be identified and fulfilled through various aspects of the program design. Since many physical education programs now offer at least some coeducational activities, and most classes are composed of students with a wide

range of athletic interests and abilities, this study, therefore, has focussed on investigating the relationship between the attitudes toward physical education program organization of both male and female students at different achievement levels.

Purpose

The purpose of this study was to determine the attitudes of male and female secondary school students toward various organizational aspects of physical education programs and to recommend organizational structures which would take into consideration the expressed attitudes of high, medium, and low achievers in school physical education programs.

Definitions

The following definitions were used in this study.

1. Physical education referred only to the activities students had in their regular physical education classes. This definition did not include extracurricular programs such as intramural, interschool, or club activities which might occur before or after school or at lunch time.

2. Attitude involved "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p. 810). The definition given by Kenyon (1968) was also useful. It included the concept that an attitude was "a complex, but relatively stable behavioral disposition reflecting both direction and intensity of feeling toward a particular object" (p. 567).

3. Opinion was considered to be "a verbal expression of attitude" (Thurstone & Chave, 1929, p. 7).

4. Organizational aspects of physical education programs were limited to five general areas of program organization which the literature indicated might exert an important influence on students' attitudes toward physical education. Those five aspects were (a) time-tabling considerations, (b) program decisions and responsibilities, (c) competition, (d) student/teacher interaction, and (e) evaluation and reporting. The components of those five general areas were indicated by the questions contained in each section of the interview questionnaire (see Appendix A).

5. High achievers were grade 9 students whose final, year-end grade 8 physical education mark placed them in the upper third of the grade 8 students at their school as of June 1983.

6. Medium achievers were grade 9 students whose final, year-end grade 8 physical education mark placed them in the middle third of the grade 8 students at their school as of June 1983.

7. Low achievers were grade 9 students whose final, year-end grade 8 physical education mark placed them in the lower third of the grade 8 students at their school as of June 1983.

Hypotheses

The attitudes referred to in each hypothesis below were considered to be reflected by the responses of the grade 9 subjects to the items on the interview questionnaire in Appendix A which dealt with the following five organizational aspects of school physical education

programs: timetabling considerations, program decisions and responsibilities, competition, student/teacher interaction, and evaluation and reporting.

The following null hypotheses were tested at the .05 level of significance:

1. There will be no significant differences between the attitudes of female high, medium, and low achievers.

2. There will be no significant differences between the attitudes of male high, medium, and low achievers.

3. There will be no significant differences between the attitudes of male and female high achievers.

4. There will be no significant differences between the attitudes of male and female medium achievers.

5. There will be no significant differences between the attitudes of male and female low achievers.

6. There will be no significant differences between the attitudes of males and females.

7. There will be no significant differences between the attitudes of high, medium, and low achievers.

Delimitations

1. All research study interviews were conducted with grade 9 students from eight secondary schools in the Greater Victoria School District.

2. The number of interviews was limited to 60 because of the time-consuming nature of the interview process.

3. The subjects' grade 8 final mark in physical education as of June 1983 was selected as the criterion for determining the high, medium, and low achievement groups.

4. The focus of the interview questionnaire restricted the subjects to an expression of their attitudes toward the specific organizational aspects of school physical education programs outlined in the questionnaire.

Limitations

1. While the subjects' expressed opinions were used to measure their attitudes, it was recognized that their opinions and actions could not be regarded as an infallible guide to their attitudes (Thurstone & Chave, 1929).

2. The content validity of the interview questionnaire was dependent on the judgment of the panel of experts selected by the researcher.

3. The skill of the interviewer and the interaction between the interviewer and the subjects might have influenced the attitudes expressed by the subjects.

4. The degree of motivation shown by the subjects in answering the questionnaire might have influenced their responses.

5. The criteria used to determine the subjects' physical education grades varied both within and among the schools involved in the study and might have affected the placement of the subjects in the appropriate achievement level.

6. Factors such as the students' previous experiences in physical

education, the methods of instruction at each school, and the attitudes toward physical education of parents, teachers, and fellow students might have influenced the students' attitudes toward the organizational aspects of school physical education programs.

Chapter II

Review of Related Literature

The research literature related to this study has been classified in this chapter under the following headings: techniques of attitude measurement, attitudes toward physical activity, attitudes toward physical education, and organizational aspects of physical education programs.

Techniques of Attitude Measurement

The measurement of attitudes has generally involved the use of either questionnaire or interview techniques or a combination of both methods. The content and wording of the items included and the scale of measurement employed are important considerations for the researcher (Sax, 1968). The limitations of any technique to measure attitudes, however, must be acknowledged (Drinkwater, 1960). Even if the subject feels encouraged to respond honestly, expressed opinions may not be actual attitudes. Researchers must also recognize that there may be a discrepancy between the attitudes and the actual behaviour of subjects.

Adams (1963) described the two principal methods for constructing attitude scales that were developed first by Thurstone and Chave and later by Likert. Adams concluded that while both scales gave practically the same results, the Likert scale was easier and less time-consuming for the researcher to use.

The Likert scale which involves the rating of statements on a 5-point scale ranging from "strongly agree" to "strongly disagree,"

has been used widely, and while it is technically an ordinal scale, in actual practice it is often treated as an interval scale. Each choice along the scale may be assigned a value, and the individual's attitude score is considered the sum of those values. Mean scores for individuals and/or groups may then be calculated and compared.

Adaptations of the Likert scale have appeared frequently in the literature. Wear (1951, 1955) developed an inventory to measure the attitudes of college men toward physical education as an activity course and also constructed two equivalent forms of a physical education attitude scale in order to facilitate the measurement of attitude change occurring as a result of a specific treatment. Wear divided the items on the equivalent forms into four categories representing the physiological-physical, mental-emotional, social, and general outcomes or objectives of physical education. Both studies used a 5-point Likert scale to score the responses.

Kappes (1954) devised an attitude inventory which used a Likert 5-point scale to determine the attitudes of college women toward physical education and student services of the physical education department. A high correlation was found between the enjoyment of specific activities and the students' self-estimated skill in those activities. Kneer (Barrow & McGee, 1971, pp. 435-439) adapted the Wear Attitude Inventory for use with high school girls. The 5-point Likert scale was retained but each statement was revised and clarified to make it appropriate for students at a grade 8 reading level and above.

Drinkwater (1960) developed two equivalent forms of an attitude

inventory to measure the attitude of high school girls toward physical education as a career for women and calculated mean scores using the Likert scale technique. Edgington (1968) developed an inventory to measure the attitudes of high school freshman boys toward physical education and modified the Likert technique to create a 6-point scale. This scale eliminated the possibility of a neutral choice which Edgington considered high school freshman boys might choose too freely.

Kenyon (1968) developed six scales that used the semantic differential technique of attitude measurement based on the meaning an individual gives to a certain word or issue. In this technique, the word or issue is written above a series of scales. Each scale is a continuum with an adjective at each end. The intensity of an individual's attitude toward the word or issue in question is measured by the position of a checkmark along the bipolar continuum for each pair of adjectives. Kenyon's instruments have been adapted by Simon and Smoll (1974) and Carre (1980).

Moore (1941) used individual and group interview techniques to study the attitudes of college women toward physical activity as a means of recreation and recorded their responses on a scaled questionnaire. As much as possible, the questions were allowed to rise out of the discussions between the interviewer and the subjects, and the subjects did not see the questionnaire itself. Moore maintained that the better understanding of the responses and the added data obtained by this method more than compensated for the fewer number of individuals that could be interviewed.

Keogh (1963) conducted a group interview with subjects whose

attitudes were extremes of high or low and used a questionnaire to structure their responses. R.M. Scott (1982) used the individual interview technique to lend a humanizing aspect to the study and to develop profiles of the male and female subjects with the highest and lowest scores on the Wear Attitude Inventory.

Attitudes Toward Physical Activity

The six scales developed by Kenyon (1968) to assess attitudes toward physical activity have been used as the basis for several further studies. Kenyon divided the concept of physical activity into six dimensions which were identified as social experience, health and fitness, the pursuit of vertigo, aesthetic experience, catharsis, and ascetic experience. Simon and Smoll (1974) used the Kenyon model to construct an instrument for assessing children's attitudes toward physical activity and demonstrated that the six subdomains were necessary to ensure an accurate composite measure of those attitudes.

Smoll, Schutz, and Keeney (1976) studied the relationships among children's attitudes, involvement, and proficiency in physical activities using the Simon and Smoll instrument (1974). They found that children were involved mainly in the activities they liked and suggested further research to answer the question of whether attitudes influence the degree of involvement in physical activities or involvement in physical activities affects the formation of attitudes. Smoll et al. found a highly significant positive relationship between attitudes and involvement but no significant relationship between children's attitudes toward physical activity and their motor performance. Traditionally physical educators have regarded the development

of motor skills as one way of encouraging students to develop positive attitudes toward physical activity. The results of this study suggested that involvement in physical activity was an important factor in the development of positive attitudes. Physical educators were encouraged to provide sufficient opportunities for the active, enjoyable participation of all children in their classes at whatever skill level the students were functioning.

Carre (1980) modified the Simon and Smoll inventory for use in assessing the attitudes toward physical activity of grade 3, grade 7, and grade 11 students in British Columbia. The attitudes expressed were very positive at all three grade levels, with the social, and health and fitness dimensions of physical activity having the highest values. The significant differences between the sexes in their attitudes toward activities in the aesthetic and vertigo subdomains, particularly at the secondary school level, suggested that some segregated physical education classes and activities might be necessary for older students.

Attitudes Toward Physical Education

Many research studies have used the original form or a modified version of the Wear Attitude Inventory to measure attitudes toward physical education in a variety of populations. Keogh (1962) found that male and female undergraduate university students expressed similar attitudes, and both groups reacted more positively to the values physical education programs supposedly support than to the actual physical education programs themselves. This result suggested a discrepancy between intention and reality and raised the possibility

that people may have positive attitudes toward physical education in spite of, rather than because of, the programs.

Vincent (1967) applied the Wear Attitude Inventory to college women and found their attitudes were generally favourable toward physical education. There was also a significant relationship between favourable attitudes toward physical education and success in physical education, as defined by the final grade received for the activity course. In a related part of that study, Vincent (1968) found that success in physical education activities, as measured by grades, could be predicted by student attitudes.

Campbell (1968) administered the Wear Attitude Inventory to junior high school boys and found the instrument to be appropriate for that age group. In a 1969 study using the same instrument, Campbell found no significant relationship between the attitudes of grade 8 boys towards physical education and their ability to perform two selected physical fitness tests. Most of the grade 8 students in a similar study by R.M. Scott (1982) recorded positive attitudes toward physical education as measured by the Wear Attitude Inventory. There were some possibly significant differences between male and female attitudes, with the males achieving the higher attitude scores.

Carr (1945) constructed an attitude scale and compared the attitude ratings of high school freshman girls with their final physical education marks. The results of this study showed that "A" students had significantly more desirable attitudes toward physical education than did "D" students and thus indicated a relationship between attitudes and success. Carr suggested further research was needed to determine

if, and how, undesirable attitudes could be changed in order to facilitate learning. Edgington (1968) developed an attitude scale for a study involving high school freshman boys and found that the majority of the subjects had favourable attitudes toward physical education. Further research was proposed to determine the reasons for both favourable and unfavourable attitudes.

Mista (1968) studied the attitudes of freshman college women toward their high school physical education programs and found significantly higher attitudes among students who rated themselves as above average in physical skills and among those who enjoyed their physical education programs. There was no significant difference in attitudes, however, between women who had physical education in high school and those who did not, nor between those who took physical education for two hours or less a week and those who had physical education for four hours or more a week. Those findings seemed to suggest that the high school physical education programs involved had a less than profoundly positive effect on the students.

In a study conducted in Alberta, Glassford, Hohol, Mendryk, Newton, and Manz (1978) stated that while three out of four students had a positive attitude toward physical education and physical activity, physical educators must accept the challenge of planning programs to meet the needs of the other 25% of the students who responded negatively.

In Ontario schools at the present time, physical education is not compulsory after the end of grade 8. Macintosh (1979) compared the attitudes of grade 8 students who elected to take physical education

in grade 9 with those who did not choose that option. The non-selectors expressed less positive attitudes toward physical activity and physical education and were less satisfied than selectors with various aspects of physical education programs. It was suggested that existing programs be adapted to meet the needs of non-selectors. A follow-up of this study was reported by Macintosh and Albinson in 1982. The attitudes of the original grade 8 students were assessed again when they were in grade 11. It was found that the more positive attitudes of the selectors and the less positive attitudes of the non-selectors had persisted, and by grade 11, their perception of physical education programs had changed very little. Alternative programs were recommended for the secondary school level.

O'Neill (1977) reported a negative attitude toward physical education among the grade 9 student population he studied and declared that attention to the junior high school program was definitely required. O'Neill recommended that the development of a positive student attitude toward physical education become the top priority of the physical education programs in that school district.

Butcher (1982), in a study designed to measure the satisfaction of grade 6-10 girls with certain aspects of their physical education programs, noted the difficulties previous attitude instruments have had in discriminating between the attitudes of contrasting groups. While Butcher found that 83% of the subjects were satisfied or extremely satisfied with the physical education program, overall satisfaction showed a significant decline from grade 6 to grade 10, indicating the need for some program improvements. Aspects of the

physical education program with which students were least satisfied included the amount of individual attention from the teacher, the method of grading, the amount of competition in class, the size of the class, the teaching methods used, and the necessity of changing into gym uniform.

Organizational Aspects of School Physical Education Programs

Wear (1951) called for further investigations to determine the effect on attitudes of various types of physical education programs, administrative procedures, and methods of instruction, and the present study has focussed on student attitudes toward several aspects of those concerns.

This section of the literature review is divided into the five subsections which comprise the interview questionnaire in Appendix A: timetabling considerations, program decisions and responsibilities, competition, student/teacher interaction, and evaluation and reporting. The questions in each subsection were derived from several sources including other attitude inventories, variables mentioned in the research literature as sources of positive or negative attitudes toward physical education, provincial curriculum guidelines for physical education, organizational aspects the researcher considered important based on personal teaching experience in junior high and secondary schools, and suggestions from the panel of experts involved in refining and validating the interview questionnaire.

Timetabling Considerations

Recommendations concerning the length of physical education classes

have varied from province to province. Carre (1980) found that British Columbia students in grades 7 and 11 preferred 46-60 minute periods. A minimum class length of 45 minutes was recommended for grade 7-10 students in Ontario schools, while Glassford et al. (1978) suggested a minimum of 60 minutes of daily physical education for secondary school students.

Recent physical education curriculum guides (British Columbia Ministry of Education, 1980; Saskatchewan Department of Education, 1980) have recommended that students have daily physical education classes throughout the school year. Semestering of physical education was not advised. In the Ontario Ministry of Education curriculum guideline (1978), a minimum of three activity periods per week was suggested for students in the intermediate (grades 7-10) division.

Coeducational physical education classes were disliked by a very small percentage of the male and female grade 9 and 10 students surveyed by Muro and Vea (1982), and provincial curriculum guides (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978; Saskatchewan Department of Education, 1980) have all suggested at least some coeducational classes be scheduled. According to Turkington (1983), physical education teachers should consider the ability of the students and the nature of the activity before grouping the students for skill practice or games. The Saskatchewan Department of Education has also declared that the physical education program should "provide equal opportunity and demand similar performance quality of the female and the male participants" (1980, p. 11). A recent Ontario Ministry of Education document (1983) stated that no student

should be denied access to a course or program solely on the basis of the student's sex, and it was suggested that perhaps similar courses could be made available to both coeducational and separate classes. The findings of Carre (1980) indicated that some separate boys' and girls' classes might be advisable at the secondary school level to allow for the different types of physical activities preferred by male and female students.

Mista (1968) reported no significant differences in attitudes toward their high school physical education programs between freshman college women who had a female physical education teacher in high school and those who had a male physical education teacher. Macintosh and Albinson (1982) found no support for the hypothesis that female students were more likely than male students to drop out of secondary school physical education because of having a teacher of the opposite sex.

Different regulations were found to govern the status of physical education as a compulsory subject in each of the four provinces considered. At the present time, physical education is compulsory in Ontario until the end of grade 8, in Saskatchewan until the end of grade 9, in Alberta until the end of grade 10, and in British Columbia until the end of grade 11. New program and diploma requirements, however, will take effect in Ontario beginning in the 1984-85 school year and will demand that students take at least one year of physical education at the secondary school (grade 9-12) level (Ontario Ministry of Education, 1983). Carre (1980) found that 77% of the grade 11 students surveyed in British Columbia supported compulsory physical education

in grade 11 and 51% believed physical education should be compulsory in grade 12. Glassford et al. (1978) recommended that physical education be a required subject in grades 11 and 12 in Alberta schools.

Program Decisions and Responsibilities

The importance of allowing and encouraging student involvement in decision-making in physical education classes has been the subject of much research in recent years. Mancini, Cheffers, and Zaichkowsky (1976) found that elementary school children who were allowed to participate in the decision-making process in their human movement programs demonstrated more initiative, interacted more with the teachers, contributed more often in class, and had more positive attitudes toward the program than did those children who were in a class where the teacher made all the decisions. It was recognized, however, that since students matured at different rates, some might need more teacher-imposed structure at first until they learned to make decisions on their own.

Hurwitz (1977) outlined some of the many different kinds of choices students could be given in a physical education class, resulting not in chaos, but in an improvement in student attitudes, enjoyment, and self-discipline. Hurwitz also described techniques teachers could use to enable students to assume increasing degrees of responsibility.

Mosston (1966) described and analyzed what he called the spectrum of teaching styles and indicated the extent to which each style involved students and teachers in the decision-making process. Mosston encouraged teachers to plan for and to promote student independence, decision-

making, and problem-solving. No single teaching style by itself was viewed as best, and teachers were advised to use a variety of teaching methods depending on the students and the situation involved.

Collis (1972) cautioned, however, that even the most effective teaching styles and organizational structures probably required the use of some additional gimmicks and secondary reinforcements in order to make the physical education program enjoyable and to maintain student interest during the sometimes frustrating process of learning and practising skills.

Van Holst (1981) outlined a systematic and progressive plan to shift the making of some group decisions from the teacher to the students. This gradual change in responsibilities, he believed, could begin in the primary grades and would create a more relaxed classroom atmosphere. Another benefit cited by Van Holst was a reduction in the amount of time required for organizational procedures and instructions from the teacher. Students would then have more time to work on task, and the teacher would be free to spend more time observing and helping individual students. Marlowe (1980) found that by instructing students in games analysis, they could learn to structure their games to promote cooperation, increase skill development, and adjust to differences in motor ability.

McDonald (1971) established a physical education program for high school girls which allowed them to choose sports of interest to them and also to select the skills they wished to work on in those sports. Lewis (1974) stressed the importance of offering students electives in the physical education program in order to increase the

percentage of enthusiastic student behaviour and to decrease the responses of rejection, rebellion, and submission which tended to occur more frequently when teachers determined all the activities and set arbitrary achievement goals for the students. Use of the contract method was suggested as a means of accommodating the various interests, needs, and abilities of individual students.

Current provincial curriculum guides (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978; Saskatchewan Department of Education, 1980) have all stated that teachers should offer secondary school students a wide variety of activities and an opportunity to make some activity choices. Glassford et al. (1978) made similar recommendations to physical educators in Alberta. Butcher (1982) emphasized the need for physical education teachers to offer both optional and new activities, particularly at the secondary school level, in order to avoid having students repeat the same sports year after year and to make physical education classes more interesting and enjoyable. The Saskatchewan Department of Education (1980) suggested a core of compulsory activities which would vary in emphasis from one division to the next as the students progressed from kindergarten to grade 12. The same activities were not to be taught more than three times in grades 7-12. Darst (1978) not only believed that students should have some choice of activities but also suggested that students receive counselling to help them select activities to match their interests and needs.

Shrader (1971) strongly supported the individualized approach to learning, involving the arrangement of learning tasks on a continuum

and the opportunity for the students to regulate the pace at which they worked on the skills they selected. Darst (1978) emphasized the offering of instruction at different skill levels so that all students could have a chance of success. According to Watson (1974), children work best when they attempt tasks where they can quite possibly succeed but where success is not certain. Each child, therefore, needs to work at an appropriate level of challenge.

The Saskatchewan Department of Education (1980) recommended an individualized movement education approach to physical education, while the British Columbia Ministry of Education (1980) stressed the levels approach to activity learning. Physical education teachers in British Columbia were urged to use a variety of teaching methods and to select the method most appropriate to the activity, the needs of the student, the resources available, and the desired learning outcomes.

G.D. Sinclair (1983) described a microcomputer software package which would allow teachers to record, score, store, analyze, and print out the results of class fitness tests. Sinclair suggested that teachers and students use this information to help them plan an individual fitness program to meet the needs of each student.

Aufderheide, Knowles, and McKenzie (1981) stated that individualized teaching strategies could increase the Academic Learning Time (ALT) which was described as a measure of the amount of time students were working at an appropriate activity with a high rate of success. Students receiving individualized instruction in the classroom were reported to have performed as well as or better than students

receiving instruction by more traditional methods. Individualized programming was seen by Aufderheide et al. as a means of allowing for the mainstreaming of handicapped students without jeopardizing the progress of other students. Exceptional students at both extremes of skill development could then learn effectively, regardless of their physical abilities and limitations.

Watson (1974) stated that children work best on a project when they have shared in its selection and planning. Ausubel (1974), however, warned that the interests and desires of immature students should not be considered substitutes for the knowledge and experience of specialists in curriculum design nor should students be given responsibility for major policy and operational decisions. According to Ausubel, educators should consider the views of students and, in some cases, encourage their participation in curriculum planning but not restrict the students' learning to the fulfillment of their perceived needs. Ausubel declared that it was the responsibility of educators to "stimulate the development of motivations that are currently nonexistent" (p. 106). Student involvement in the planning of physical education policies and program content has, in the past, been extremely limited in the provinces of British Columbia, Saskatchewan, and Ontario. One of the recommendations of Carre (1980), however, was that teachers, parents, and students in British Columbia be given an opportunity to participate in the development of policy statements concerning the objectives of physical education programs.

Competition

Physical education curriculum guides (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978) have encouraged teachers to find an appropriate balance between competitive and co-operative activities. Carre (1980) found that 65% of the grade 11 students in British Columbia surveyed in that study wanted some emphasis on competition in their physical education classes.

In Alberta, parents interviewed in a study conducted by Glassford et al. (1978) expressed concern about an overemphasis on winning in school physical education programs. Macintosh and Albinson (1982) suggested that students who dropped out of physical education at the end of grade 8 in Ontario were more likely to be dissatisfied with the level of competition in the class than were students who selected physical education in grade 9. Teachers were advised to reduce the emphasis on activities that stressed competition and the comparison of individual skill levels and to place greater emphasis on activities that promoted enjoyment, fitness, and cooperation.

The Canada Fitness Award program has become very popular at the elementary school level but according to Dahlgren (1982) and Landry (1982), there has been a drastic decrease in participation in the program at the junior and senior high schools. Secondary school students seemed to be unmotivated by the crests awarded, and both teachers and students appeared to be bored with the test after participating in the program for several years. It was suggested that new ways be found to promote a greater use of the program by the older students.

The Saskatchewan Department of Education (1980) advised teachers to use the Canada Fitness tests two or three times a year to determine if the physical education program was actually improving the students' fitness levels and to encourage the students to become more fit. Macintosh and Albinson (1982), however, called for a reduced emphasis on the Canada Fitness Award program at the elementary school level, since the program encouraged the comparison of students and could be discouraging for students who found it hard to achieve "normal" or "above normal" standards in the different events.

The Saskatchewan Department of Education (1980) suggested that students should compete primarily to improve their own best performance. Individual and team competitions were also considered worthwhile but of secondary importance. Martens (1978) supported a shift from direct to indirect competition in order to ensure a greater incidence of success for all students. Physical educators were also encouraged to organize their programs to promote the development of students intrinsically motivated by the joy of participating rather than dependent on external rewards for their happiness.

Orlick and Botterill (1975) encouraged parents, teachers, and coaches to put winning into perspective and to emphasize to young people that everyone can win by participating in physical activities when the definition of success includes not only scoreboard results but also factors such as friendship, enjoyment, fitness, confidence, improvement, and skill development. Orlick (1978) believed that co-operation with others and the enjoyment of physical activity were becoming increasingly important in our competitive and technological

society and suggested that physical educators use cooperative game structures to ensure full participation, acceptance, and fun for all students.

Student/Teacher Interaction

Brumbach (1968) and Christensen (1981) suggested that students at a low fitness and skill level respond positively to participation by the teacher in class activities, and this may, in turn, improve the students' attitudes toward physical education. Darst (1978) stated that it was important for students to see their physical education teacher as a role model with a physically active lifestyle, and Westcott (1979) described how physical education teachers could increase their modelling influence. In a separate study involving elementary school children, Westcott (1980) found that physical education teachers could also affect students' sports-related and peer-teaching behaviour. Players who had interacted with an encouraging instructor were themselves much more encouraging than players who had not had an encouraging teacher when both groups of students taught sports skills to younger athletes.

Brumbach (1968) also suggested that students at a low fitness level were not receiving enough individual attention from their physical education teachers and that the "personal approach" might contribute to improved student attitudes toward physical education. Hass (1974, pp. 113-114) stated that children learn more when they have a warm and trusting relationship with teachers who know their students as individuals. Macintosh and Albinson (1982) noted that students who

chose not to take physical education after grade 8 were more likely to have had a poorer rapport with the physical education teachers than did selectors of physical education.

Parents interviewed in a study by Glassford et al. (1978) expressed concern about the failure of teachers to treat students as individuals and to be aware of individual needs and abilities. Bell, Walters, and staff (1953) found a positive and significant relationship between student enjoyment of physical education classes and the extent to which the instructors showed an interest in the students as individuals. According to Mosston (1966), one of the advantages of individualized instruction was its potential for freeing the teacher to work with and to evaluate students individually. The gradual change in the teacher's role from that of demonstrator, disciplinarian, and authority figure to that of observer, expert advisor, and fellow-learner was also regarded as beneficial to the learning process. Staniford (1970) believed it was important for teachers to have a genuine concern for their students as unique individuals and stressed the necessity for teachers to use teaching styles such as the reciprocal, guided discovery, and problem-solving methods in order to free them to give individual attention to the students.

Perry (1975) studied the counsellor preferences of female high school students and found that personality traits rather than the counsellor's education and/or expertise were most important to the students. A school-age friend was the preferred consultant for most personal, social, and emotional problems. Perry suggested that peer counselling programs be established to train students in helping skills,

since they were often the first people with whom their fellow students discussed problems. Parents were the first choice for assistance with problems concerning the student herself and her interaction with others. The physical education teacher was not a prime source of counselling, even for problems in the area of physical education, while the professional school counsellor was the students' first choice for help with occupational-education concerns.

Evaluation and Reporting

According to the British Columbia Ministry of Education (1980), the reporting of student progress in physical education should be consistent with the general school policies and should be both informative and a positive motivator. The Saskatchewan Department of Education (1980) encouraged teachers to individualize the reporting of student progress. Ontario Ministry of Education guidelines for evaluation (1976) stated that the effect of evaluation must be constructive. Good communication among students, teachers, and parents was seen as essential to the establishment of realistic individual learning goals and an understanding of the progress made toward those objectives.

Anecdotal reporting of student progress in physical education was suggested by Macintosh and Albinson (1982), and the British Columbia Ministry of Education (1980) called for teachers to make specific suggestions for improvement on student reports. The Ontario Ministry of Education (1978) maintained that letter grades and marks presented an incomplete picture of student achievement and advised teachers to make a detailed assessment of the students' progress available to parents and students on request.

Carre (1980) found considerable agreement among grade 7 and grade 11 students and secondary school teachers in British Columbia concerning the most important factors to be considered when physical education grades were given. While there were some variations in preferred grading criteria, all three groups emphasized the importance of student effort, skill, improvement, and attendance.

Curriculum guides (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978) and a position paper on secondary school physical education by the Canadian Association for Health, Physical Education and Recreation (Turkington, 1983) have suggested that the grading of secondary school students in physical education be based on the learning that has occurred in each of the psychomotor, affective, and cognitive domains. The British Columbia Ministry of Education suggested that 40-70% of the students' physical education grade be based on learning in the psychomotor domain and 15-30% of the grade based on each of the other two domains. The Saskatchewan Department of Education (1980) has stressed the reporting of student effort, skill technique, and physical fitness and has advised against the use of class time for written theory and rules tests. All three provinces mentioned above agreed that an appraisal of student progress should include both objective and subjective measurements.

G. Sinclair (1983) described the use of a microcomputer software program to create, administer, and mark tests involving multiple-choice questions. The program's ability to record, analyze, and print out test results was hailed as a means of saving teacher time and assisting in the planning of further instruction.

In a study conducted by Butcher (1982) involving grade 6-10 girls, changing was found to be the most unpopular aspect of physical education. Teachers were advised to explain the natural relationship between vigorous physical activity and sweating and to emphasize the importance of changing clothes for reasons of comfort both during and after activity. Barrow and McGee (1971) believed that marks for the wearing of gym uniform should not be a major factor in the students' grades. This was regarded as more of an administrative than an evaluative issue. Marks assigned for improvement were also considered questionable. It was stated that marks should be based on the student's status and not on the degree of improvement, since improvement became slower and more difficult as the student's ultimate performance was approached. If students thought improvement was all that mattered, they would be tempted to do poorly at the beginning of an activity in order to show more improvement later. Barrow and McGee also warned that effort was hard to measure and evaluate because a skill often appears to require less effort to accomplish as a person becomes better at it.

The National Task Force on Children's Play (1979) stated that children should be encouraged to learn the value of trying for a personal best in sports and should use competition to enhance rather than to measure their performance. Teachers were advised to ensure that efforts for both skill improvement and good sportsmanship were reflected in the students' grades.

Shrader (1971) suggested that students who had mastered a skill should be given an opportunity to teach and/or assist the other

students in the class with that skill if they were interested in doing so. That assistance would then be recorded on the helping student's report card.

Mosston (1966) considered the learning of self-evaluation and peer-evaluation techniques as an important part of a student's educational experience. The Ontario Ministry of Education resource guide on evaluation (1976) advised teachers to involve students in written self-evaluations more often as the students gained maturity and practice but cautioned teachers not to force self-evaluation on students who were not ready for it.

While student self-evaluation was encouraged in the latest physical education curriculum guides (British Columbia Ministry of Education, 1980; Ontario Ministry of Education, 1978), none of the three provincial curriculum guides considered in this study mentioned the involvement of students in the evaluation of the physical education program itself. Bell et al. (1953) stated that an analysis of student reactions to various aspects of the physical education program was valuable when that program was being evaluated. R.M. Scott (1982) believed it was important for students to be able to tell the physical education teachers what they liked and disliked about the program. Butcher (1982) found that the factor students said they liked least about physical education was being forced to do an activity they did not enjoy. Other unpopular aspects included fitness-related exercises, teachers and their teaching styles, and grading methods.

Summary

It is clear from this review of related literature, that the

five major organizational aspects of school physical education programs selected for investigation in this study have received the attention of many previous researchers. Various student populations have been examined and a number of different techniques developed to measure their attitudes toward physical education.

Several features have contributed to the unique design of the present study. This study has (a) combined the advantages of the interview technique with those of the structured questionnaire in a format which may be used easily and adapted readily by physical education teachers, (b) investigated a student population at a critical point in the formation of the subjects' attitudes toward school physical education programs and a physically active adult lifestyle, (c) involved both male and female students, (d) considered the attitudes of high, medium, and low achievers, and (e) attempted to include in a single study, the major organizational aspects which influence the design of school physical education programs. It is hoped that the results and recommendations of this study will assist physical educators in making appropriate decisions concerning the organization of their programs in order to best meet the needs of all their students.

Chapter III

Methodology

Pilot Project

The pilot project was conducted in April 1983 to assist the interviewer in revising and refining the interview questionnaire, format, and questioning techniques. Four grade 8 students from one of the junior secondary schools in the Greater Victoria School District were involved in this project. The content validity of the interview questionnaire was evaluated by a panel of experts selected by the researcher. The panel agreed that the questionnaire had content validity and dealt with the important organizational aspects of school physical education programs. Complete details of the pilot project, the validation of the interview questionnaire, and the recommendations of both the pilot project subjects and the panel of experts are included in Appendix J.

Research Study

Selection of Subjects

In June 1983, a letter was sent to all principals of secondary schools in the Greater Victoria School District with grade 8 and 9 student populations outlining the proposed research study and seeking permission to include their students in the study (see Appendix E). A positive response was obtained from eight of nine schools.

The principals were contacted again in September 1983 to confirm their willingness to allow their school to be involved in the research

study. In some cases, where the principals were new to the school, they were unfamiliar with the proposed study, and copies of the previous letter (see Appendix E) were sent to them.

The following eight schools were included in the research study: Arbutus Jr. S.S., Cedar Hill Jr. S.S., Central Jr. S.S., Colquitz Jr. S.S., Lambrick Park S.S., Lansdowne Jr. S.S., Reynolds S.S., and Shoreline Community School.

In September 1983, the researcher visited the eight cooperating schools and recorded the grade 8 final marks in physical education for the present grade 9 students at each school. Students eliminated from the study were those for whom there was no physical education mark, those who had been medically excused from most or all of their grade 8 physical education classes, those who had participated in the pilot project, and any grade 9 students who had taken (and failed) the grade 9 physical education program in 1982-83.

At each school, a master list was compiled of all students eligible for the study. The list contained each student's name and an assigned identification number which included the student's school, gender, number within the gender group, and final grade 8 physical education mark. Two copies of the master list for each school were left with the principal who was asked to retain them in a safe place since they were the only means of identifying the students later selected as subjects for the study. In order to ensure the confidentiality of the students' marks, the researcher took only a list of the identification numbers.

The male students from each school were then divided into three

groups: high, medium, and low achievers, according to the criteria outlined in Chapter I (supra p. 6). The female students from each school were also divided into those same three achievement levels. The students' grade 8 final mark in physical education was selected as the criterion for determining the achievement groups in order to avoid the possibility that a single grade 9 term mark as of November 1983 might not be an accurate reflection of the students' overall performance in the subject.

Within each school, every attempt was made to ensure that the three achievement level groups contained approximately equal numbers of students. In seven of the eight schools involved in the study, the high achievers were classified as the subjects who had received an A or a B mark, the medium achievers had a C+ mark, and the low achievers were the students with a mark of C or lower. At one school, however, the number of students who had earned marks of A and B was so low that the high achievers group also included subjects with a C+ mark. At that school, therefore, the medium achievers were those with a C, and the low achievers those who had received a report mark lower than a C.

A total of six lists (i.e., male high achievers, female high achievers, male medium achievers, etc.) were compiled which included all eligible grade 9 students from all eight schools. The students in each of the six subgroups were then assigned a new number, starting at one and concluding with the final number of that subgroup population total, for the purposes of random selection. Six lists of random numbers, one for each subgroup population, were generated by a random

number program run on the Apple II microcomputer. Twenty-five different random numbers from 1-250 were generated for each of the six lists.

The subjects represented by the first 10 random numbers on each list formed the total research sample of 60 individuals. The remaining 15 numbers on each list represented the order in which substitute subjects would be selected within each subgroup to replace original subjects who declined to participate, no longer attended the school, or were absent for a prolonged period.

In early October 1983, the researcher returned to each of the eight participating schools. The identity of the 60 subjects selected at random was determined by consulting one of the master lists retained in each school. The principals were given a letter containing a list of the students selected from their school (see Appendix F), and were asked to obtain the permission of the students and their parents for participation in this study. Copies of a letter outlining the purpose of the research study and the procedures to be followed were made available to the principals to assist them in obtaining parental consent (see Appendix G).

The researcher returned to the schools in mid-October 1983 to determine the number of consenting subjects available for the study. Substitutes were required to replace 11 original subjects no longer in attendance at the school from which they were selected. The numbers of students included in both the subject population and the random sample are shown in Table 1.

Table 1

Number of Grade 9 Students in the Subject Population and the Random Sample

	Achievement Level						
	Males			Females			
School	High	Medium	Low	High	Medium	Low	Total
A	20(1)	30(0)	24(1)	53(2)	31(2)	19(0)	177(6)
B	46(2)	46(3)	29(0)	48(4)	48(3)	18(2)	235(14)
C	19(1)	32(0)	24(2)	25(2)	23(1)	23(1)	146(7)
D	43(0)	29(3)	36(2)	36(2)	21(1)	44(2)	209(10)
E	13(1)	20(2)	9(0)	12(0)	22(0)	3(0)	79(3)
F	12(2)	20(2)	38(2)	23(0)	29(1)	21(4)	143(11)
G	20(3)	12(0)	24(2)	20(0)	32(1)	15(1)	123(7)
H	25(0)	14(0)	12(1)	27(0)	16(1)	14(0)	108(2)
Total	198 (10)	203 (10)	196 (10)	244 (10)	222 (10)	157 (10)	1220 (60)

Note. Numbers in parentheses indicate the number of students in the random sample.

Instrumentation

The revised version of the questionnaire was not pilot-tested because of the relatively few problems encountered during the pilot project interviews. The questionnaire was reviewed and approved, however, by the chairman of the researcher's supervising committee, the computer science specialist consulted earlier for the pilot project, and the principal and head of the physical education department at one of the schools involved in the research study.

The interview format, questionnaire, and questioning techniques used in the research study are found in Appendices A and B. Appendix C outlines some of the advantages and disadvantages of the interview technique. Measures taken to enhance the reliability of the pilot interview results (see Appendix J) were repeated during the research study and were believed to have been effective in exploiting the advantages and minimizing the disadvantages of the interview technique.

Collection of Data

In mid-October 1983, arrangements were made with the school principals to interview individually the 60 grade 9 students selected for the research study. Interviews were scheduled from mid-October until the first week of December 1983, and one or two schools were visited each week. In some cases, the arrangements were coordinated by staff members other than the principal, and the amount of actual contact the researcher had with the members of the physical education department varied greatly among the different schools. At each school, however, through discussions with the principal, staff, and students,

the researcher gathered as much background information as possible concerning the organization of the present grade 9 physical education program.

The following information was of particular interest to the researcher:

1. the length of each physical education class,

2. the number of physical education classes the grade 9 students had each week,

3. the scheduling of physical education on a year-round or a semester basis,

4. the composition of the classes (e.g., according to grade level or ability level, coeducational or separate boys' and girls' activities),

5. the opportunities for the students to make decisions related to the program,

6. the criteria used by the teachers to determine the physical education report marks.

In order to verify the accuracy of some of the data gathered during the student interviews and to gain a more detailed understanding of specific aspects of the schools' physical education programs and policies, a letter was sent to all principals in February 1984 (see Appendix H), with a brief questionnaire attached, to be completed by a member of the physical education department (see Appendix I). The questionnaire was completed and returned to the researcher by all eight schools.

Approximately one hour was allotted for each interview session. Whenever possible, the interviews were scheduled at a time during

the school day convenient for both the students and the researcher. In most cases, the interviews took place during one of the students' regular physical education periods or during an optional subject class. Every attempt was made to avoid withdrawing the students from their core subject classes.

The location of the interview area and the procedures for withdrawing students and arranging for their return to class were discussed with the principal or interview coordinator at each school. Before an interview was allowed to extend beyond the allotted time, permission to continue or to reschedule the interview was sought from the student and the subject teacher(s) involved.

Each subject was given a pencil, an eraser, and a copy of the questionnaire and was asked to read the interview format which outlined the procedures to be followed. Verbal permission was sought from each subject for the taping of the interview, and all 60 subjects consented to the use of the cassette tape recorder.

The researcher then briefly reviewed the interview procedures and encouraged the subjects to "think aloud" when explaining their answers, using the formula statement that proved to be so effective in the pilot project:

"For question _____ I chose _____ because _____."

Whenever a question asked the students to indicate what they would <u>like</u> to have happen in the physical education program, the interviewer also inquired about that aspect of the present school situation in order to compare the two sets of circumstances and determine the extent to which the subjects were aware of current practices.

Question 33 (see Appendix A) caused some confusion among the first few students interviewed. When they explained their answers, it became apparent that they would probably wish to discuss their physical education report only if there was a problem with it (e.g., if they thought the teacher had given them an unfair mark). Since the researcher was interested in determining when and with whom the subjects would prefer to discuss their report, the students were instructed in all subsequent interviews to assume there was a problem or a concern related to their report.

In summary, the recommendations of the pilot project were followed throughout the research study. The main differences between the pilot project and the research study interviews involved the degree and timing of the students'evaluation of the questionnaire itself. In the research study interviews, the focus was on the subjects' answers to the actual questions, and it was not until the end of the interview that the students were asked to comment on the content and construction of the questionnaire and to suggest improvements (e.g., any difficulties they had experienced with the questions and/or the procedures, important aspects of program organization omitted from the questionnaire, etc.).

As in the pilot project, the subjects interviewed were very cooperative and enthusiastic during their participation in the research study. According to Sax (1968), subjects generally enjoy being interviewed if they perceive that the interviewer is friendly and genuinely interested in them and their responses. Motivation, then, was not a problem in the research study, and many of the subjects expressed

an interest in learning the results and recommendations of the study when they became available.

Once the interviews were completed at each school, a letter was sent to the principals thanking them for their cooperation and assistance. The researcher also agreed to communicate the results of the study to all interested principals, staff, and students.

Analysis of Data

The master-list identification number assigned to each student was recorded on the front of the questionnaire by the researcher at the beginning of the interview. A similar method of identification was used to match each tape recording with the appropriate questionnaire. After an interview was completed, the researcher listened to the tape recording of the session and transcribed the relevant information on the questionnaire for future analysis.

After all interviews had been completed, the University of Victoria computer programmer who would be handling the data analysis was consulted concerning the procedures for coding the subjects' responses on the General Purpose NCS Answer Sheets. All questionnaire responses to be analyzed by the IBM VM 370 computer were entered on the answer sheets by the researcher and subjected to a chi-square analysis using the SPSS^{X} package to determine if there were significant differences among the six subgroups and to test the hypotheses outlined in Chapter I (supra p. 7). The subjects' written answers were analyzed separately by the researcher.

Chapter IV

Results and Discussion

In this chapter, the results of the study are presented and discussed under the five main headings of the interview questionnaire: timetabling considerations, program decisions and responsibilities, competition, student/teacher interaction, and evaluation and reporting (see Appendix A). The subjects' responses to each question within those five subsections are outlined in table form. The discussion of each question involves an analysis of the questionnaire results, including the highlights of each table, as well as a summary of pertinent student comments expressed during the interviews and relevant information from the physical education teachers' questionnaire (see Appendix I).

Timetabling Considerations

Preferred Length of Physical Education Classes

As shown in Table 2, 50 out of 60 subjects (83.3%) wanted physical education classes to be a minimum of 46 minutes in length. A total of 32 out of 60 subjects (53.3%) preferred physical education classes of 46-60 minutes in length, and that choice received strong support from members of all six subgroups. The present physical education class length at the eight schools involved in the study ranged from 54-64 minutes. Approximately half of the subjects, therefore, wanted their class length to remain the same. Concerns were expressed by the students that longer classes might become tiring or boring, while

Table 2

Preferred Length of Physical Education Classes

(Question 1)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
0 minutes	0	0	0	1	1	0	2
30 minutes or less	0	0	0	1	0	0	1
31-45 minutes	1	1	1	0	1	3	7
46-60 minutes	4	5	4	6	7	6	32
61-75 minutes	3	3	5	2	1	1	15
More than 76 minutes	2	1	0	0	0	0	3
Total	10	10	10	10	10	10	60

Note. In Tables 2-60, the abbreviations "M" and "F" refer to male and female subjects respectively.

shorter classes would not allow enough time for the students to become fit or to play the various sports. Comments were also made that physical education classes should be the same length as those of all other school subjects.

Almost one third of all subjects preferred classes of longer than one hour, mainly because present class organization procedures (e.g., changing, attendance, setting up of equipment) and warm-up exercises comprised a major part of each class. Those students commented that they enjoyed physical education, believed it was important, and wanted more time for activities such as running, skill practice, games, and showers at the end of the class.

High achievers were the only subjects to choose classes longer than 76 minutes in length, while only medium and low achievers selected classes of 30 minutes or less. The students who wanted classes shorter than their present length usually described their physical education classes as tiring and/or boring.

Preferred Frequency of Physical Education Classes

At the schools involved in this study, various timetabling formats were used including 5-, 6-, and 8-day cycles, and semester, trimester, and quarter systems. Students at schools offering physical education throughout the year generally had three classes a week, while students at schools with some form of semester system usually took physical education classes on a daily basis for part of the school year.

Only 15 out of 60 subjects (25%) in this study wanted at least 4-5 physical education classes a week (see Table 3), indicating somewhat

Table 3

Preferred Frequency of Physical Education Classes

(Question 2)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
None at all	0	0	0	1	1	0	2
1-2 classes a week	0	0	0	0	1	0	1
2-3 classes a week	3	3	1	2	2	6	17
3-4 classes a week	5	4	3	6	5	2	25
4-5 classes a week	1	3	6	1	1	2	14
More than 5 classes a week	1	0	0	0	0	0	1
Total	10	10	10	10	10	10	60

less support for daily physical education than that expressed in previous studies (Carre, 1980; O'Neill, 1977). The strongest support in the present study was given to the choice of 3-4 classes a week. Comments from students who made that selection stressed the need for a "break" from physical education at least once a week in the same way physical education provided a break from the more academic classes. There was also a concern that too much physical education might interfere with other subjects in the curriculum. Students at schools where physical education was available for only part of the year were almost evenly divided between those wishing to take physical education all year and those satisfied with the present situation.

Preferred Grouping of Physical Education Classes

Table 4 indicates that 53 out of 60 subjects (88.3%) wanted at least some coeducational physical education classes. Advantages of coeducational classes mentioned by the students included an increase in the variety of activities available to both boys and girls, an opportunity to learn from each other in activities where boys and girls have different strengths, and a greater range of skill levels within the class which could provide each student with an appropriate and enjoyable competitive challenge. Many of the subjects, however, realized that coeducational classes might not be preferred by all students for all activities, and therefore they emphasized the importance of offering students a choice of coeducational or separate activities.

Rough contact sports such as rugby, tackle football, wrestling, and floor hockey were mentioned frequently by the students as more

Table 4

Preferred Grouping of Physical Education Classes

(Question 3)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Totally coed (both boys and girls in the same class)	3	5	4	3	5	4	24
Totally separate (girls' classes for girls; boys' classes for boys)	2	2	2	0	1	0	7
A mixture of some coed classes and some separate boys' and girls' classes	5	3	4	7	4	6	29
Total	10	10	10	10	10	10	60

appropriate for all-male classes, while activities such as dance, gymnastics, aerobics, and field hockey were considered of interest mainly to the female students.

Female subjects in particular were concerned about some aspects of coeducational classes including the possibility of making mistakes and embarrassing themselves in front of the boys, a reduction in active participation if the boys were allowed to dominate the class games, and a comparison of boys' and girls' skill levels when physical education report grades were determined.

Preferred Sex of Physical Education Teacher

The results shown in Table 5 indicate a definite acceptance of teachers of either sex by the students involved in this study. Among male subjects, 23 out of 30 (76.7%) did not mind whether they had a male or a female physical education teacher, and 21 out of 30 female subjects (70%) expressed the same opinion. The students main concern was that the teacher demonstrate competence in the activity he/she was teaching and fairness in dealings with both male and female students. The majority of subjects believed that most sports could be played and taught by members of both sexes.

Some students thought a teacher of the same sex as themselves would be more understanding and easier to work with, while an almost equal number of subjects preferred a combination of male and female physical education teachers for the variety of personalities, teaching methods, and activities to which the students would be exposed. It is interesting to note that no subject preferred a teacher of the opposite sex for all classes.

Table 5

Preferred Sex of Physical Education Teacher

(Question 4)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The same sex as yourself for all your classes	3	2	1	1	1	1	9
The opposite sex to yourself for all classes	0	0	0	0	0	0	0
You would like to have a combination of male and female physical education teachers.	0	2	1	1	1	2	7
It does not matter to you if you have a male or a female physical education teacher.	7	6	8	8	8	7	44
Total	10	10	10	10	10	10	60

Compulsory Physical Education for Boys and Girls

While 35 out of 60 subjects (58.3%) wanted compulsory physical education at least until the end of grade 11, 24 out of 60 subjects (40%) and 23 out of 60 subjects (38.3%) believed physical education should be compulsory for grade 12 male and female students respectively (see Tables 6 and 7). The support for compulsory physical education in the senior secondary school years was remarkably similar among students of all achievement levels. Regardless of their status as high, medium, or low achievers in physical education, the majority of the students recognized that physical activity was important to them. Many of the students voiced the opinion that compulsory physical education probably helped force them to remain more active than they would on their own.

Slightly over one quarter of the students (17/60), however, wanted physical education to be compulsory only until the end of grade 10. Those students also recognized that physical education was important but wished to have more options available to them at the senior secondary school level and to concentrate on subjects more closely related to their possible career choices.

Among the 10% of the students (6/60) who did not think physical education should be compulsory at all in secondary school, comments were made that the presence of students who disliked physical education slowed the progress of the whole class and caused unnecessary embarrassment to unskilled or unfit students who would prefer to take another subject in which they could be more successful.

Table 6

Compulsory Physical Education for Boys

(Question 5)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Up to the end of:							
Grade 8	0	0	0	0	0	0	0
Grade 9	0	0	0	0	1	1	2
Grade 10	4	3	3	1	3	3	17
Grade 11	2	3	1	2	1	2	11
Grade 12	4	4	4	4	4	4	24
Physical Education should not be compulsory for secondary school boys at any grade level.	0	0	2	3	1	0	6
Total	10	10	10	10	10	10	60

Table 7

Compulsory Physical Education for Girls

(Question 6)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Up to the end of:							
Grade 8	0	0	0	0	0	0	0
Grade 9	0	0	0	0	1	1	2
Grade 10	4	3	3	1	3	3	17
Grade 11	2	3	1	2	1	3	12
Grade 12	4	4	4	4	4	3	23
Physical Education should not be compulsory for secondary school girls at any grade level.	0	0	2	3	1	0	6
Total	10	10	10	10	10	10	60

A recent discussion paper presented by the British Columbia Ministry of Education (1984) has suggested that physical education be compulsory only to the end of grade 10, thereby contradicting the recommendations of Carre (1980), the policies outlined in the British Columbia Ministry of Education physical education curriculum guide (1980), the tremendous public interest in physical activity, the recognized importance of physical fitness, and the results of the present study. Should such a change occur, it could mean that the very students who needed physical activity the most (i.e., those for whom physical education classes provided the only exercise) might never allow themselves to be exposed to (and hopefully enjoy) the extensive athletic facilities and the wide variety of leisure and lifetime activities available at the senior secondary school level. In the opinion of this researcher, such a change in the compulsory status of physical education could only be considered a backward step in education.

Program Decisions and Responsibilities

Suggested Involvement of Teachers and Students in Deciding Physical Education Activities

The results of this study indicate that 54 of the 60 grade 9 students (90%) were in favour of having at least some choice of activities. A totally optional program was particularly important to low achievers. Many students commented that they worked harder and learned more when they were engaged in an activity they enjoyed, and nothing seemed to cause a negative reaction faster than the prospect

of a whole year of activities they did not like and could not avoid. Several low achievers attributed their poor mark in grade 8 physical education to the lack of activity choices available at that grade level.

The selection of activities, however, was regarded by the students as very much a cooperative process involving both themselves and the teacher. The teacher was considered responsible either for determining certain compulsory activities which his/her professional judgment dictated were important for all students to learn or for helping to establish the list of activity options from which students made their selection. One student suggested an interesting combination of some compulsory activities determined by the teacher and some activities chosen by the teacher from a list drawn up by the students.

Several advantages of having at least some compulsory activities were described by the students, and included participation in some of the more strenuous sports which they might be tempted to avoid through sheer laziness, a greater variety of activities, and an introduction to new sports which they might not otherwise try. Warm-up exercises, running, soccer, basketball, and gymnastics were the activities suggested most frequently as those in which all grade 9 students should participate (see Table 8).

Preferred Skill Level of Partners When Learning Activity Skills in Physical Education Class

As shown in Table 9, 42 out of 60 subjects (70%) preferred working with friends or with students at approximately the same skill level

Table 8

Suggested Involvement of Teachers and Students in Deciding Physical Education Activities (Question 7)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The teachers should decide all the activities to be learned at each grade level.	0	0	1	0	0	0	1
The teachers should decide some of the activities to be learned at each grade level and then allow the students to choose the rest of the activities.	4	6	7	5	3	2	27
The teachers should allow the students to choose all the activities from a list of options offered at each grade level.	5	4	2	3	6	7	27
The teachers should allow each class to choose one of the three options mentioned above.	1	0	0	2	1	0	4
Other	0	0	0	0	0	1	1
Total	10	10	10	10	10	10	60

Table 9

Preferred Skill Level of Partners When Learning Activity Skills in Physical Education Class (Question 8)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Students at approximately the same skill level as yourself	4	4	3	2	1	3	17
Students who are more skilled than yourself	1	1	0	1	1	0	4
Students who are less skilled than yourself	0	0	0	0	0	0	0
Students at various different skill levels	2	0	3	3	3	3	14
Your friends, regardless of their skill level	3	5	4	4	5	4	25
Total	10	10	10	10	10	10	60

when learning activity skills in physical education class. Students who selected the latter choice enjoyed the element of equal competition that this situation usually created.

Almost one quarter of the subjects (14/60) wished to work with classmates who were at various different skill levels, mainly because that situation would allow the less skilled students to learn and receive help from their more advanced peers as well as from the teacher.

Regardless of the students' choice, however, it was extremely important to virtually all of them to have the opportunity to select the student(s) with whom they wished to work when learning activity skills.

Preferred Skill Level of Teammates When Playing Games in Physical Education Class

The results shown in Table 10 are very similar to those in Table 9. The largest number of subjects also preferred to play games in physical education class with friends as teammates regardless of their skill level. Almost one third of all subjects (19/60) wanted teammates of approximately the same skill level either because they enjoyed the competitive challenge of play among equals or because they were afraid of embarrassing themselves if they played with more highly skilled peers. Again, no one chose to play only with less skilled players.

Differences in the responses to this question among high, medium, and low achievers approached the level of significance. Playing with students of equal ability was particularly important to students who were high achievers.

Table 10

Preferred Skill Level of Teammates When Playing Games in Physical Education Class (Question 9)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Students at approximately the same skill level as yourself	5	5	4	2	1	2	19
Students who are more skilled than yourself	1	0	0	0	2	0	3
Students who are less skilled than yourself	0	0	0	0	0	0	0
Students at various different skill levels	1	0	3	5	2	4	15
Your friends. regardless of their skill level	3	5	3	3	5	4	23
Total	10	10	10	10	10	10	60

Level of Difficulty of Activity Skills Taught in Physical Education Class

Significant differences ($p < .05$) were found between the experiences of male and female subjects with regard to the level of difficulty of the activity skills taught in physical education class. The skills were considered too easy by 7 out of 30 male subjects (23.3%) and by only 1 out of 30 female subjects (3.3%), while almost twice as many females as males found the level of difficulty about right (see Table 11).

Only 25 out of 60 subjects (41.7%) considered the skill level demands of their physical education program to be about right. The group of medium achievers appeared to be best served by the present programs, with 11 out of 20 subjects (55%) expressing satisfaction with the level of difficulty. Slightly over one half of the female students (16/30) were also pleased with the skill level expectations in class. Fully one half of the male high achievers, however, found the skill demands too easy, an indication that this subgroup was not being challenged sufficiently by the present physical education class program.

Student Perceptions of Present Methods of Teaching Activity Skills in Physical Education Class

As shown in Table 12, 45 of the 60 subjects (75%), including all the male high achievers, indicated that instruction in their present physical education class involved all students working on the same skills at the same time and progressing to learn new skills on a class

Table 11

Level of Difficulty of Activity Skills Taught in Physical Education Class (Question 10)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
You are expected to repeat or review skills you think are too easy for you.	5	1	1	0	1	0	8
You are expected to learn new skills you think are too difficult for you.	1	0	1	1	2	0	5
Both situations described above apply to you depending on the activity you are doing.	2	5	4	2	4	5	22
You are expected to repeat or review some skills and to learn new ones but the level of difficulty is about right for you.	2	4	4	7	3	5	25
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female subjects to this question, $\chi^2(3) = 8.44$, $p < .05$.

Table 12

Student Perceptions of Present Methods of Teaching Activity Skills in Physical Education Class (Question 11)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
All students work on the same skills at the same time and move on to learn new skills when the teacher thinks the whole class is ready.	10	7	8	5	8	7	45
Students work on different skills or at different levels of difficulty in an activity depending on their ability, and move on to learn new skills when they and the teacher think they are ready.	0	1	2	1	0	1	5
Your teacher uses both methods described above, depending on the activity.	0	2	0	4	2	2	10
Total	10	10	10	10	10	10	60

rather than an individual basis. While the physical education teachers at almost all eight schools reported that they used a combination of large group and individualized teaching methods, only 10 out of 60 subjects (16.7%) in this study thought that was the case. This discrepancy may be explained by the fact that the students were interviewed in October and November after they had experienced only a limited number of activities in the grade 9 physical education program.

Some of the more skilled students mentioned that the class pace of learning skills was often too slow for them and they were bored and frustrated, while less skilled students were concerned when the class advanced too quickly for them and went on to new skills before they had mastered the previous ones. A few students commented that they appreciated the free practice time and assistance that some teachers incorporated into the early part of each class.

These results (see Table 12) indicate that some teachers are using a more individualized approach to skill teaching in some activities but a large majority of the subjects, particularly the male students, are frequently in a class situation where all students learn the same skills at the same time. This finding would seem to explain why so many male high achievers considered the skills taught in class too easy for them (see Table 11).

Preferred Method(s) of Teaching Activity Skills in Physical Education Class

Table 13 shows that 44 out of 60 subjects (73.3%) preferred at least some individualization of the physical education program and

Table 13

Preferred Method(s) of Teaching Activity Skills in Physical Education Class (Question 12)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
You would like to:							
Work on the same skills at the same time as all the other students in the class and move on to learn new skills when the teacher thought the whole class was ready	2	2	4	1	3	4	16
Work on different skills or at different levels of difficulty in an activity depending on your ability, and move on to learn new skills when you and the teacher thought you were ready	7	5	6	4	6	4	32
Have a teacher who used both methods described above	1	3	0	5	1	2	12
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female medium achievers to this question, $\chi^2(2) = 7.20$, $p<.05$. Significant differences were also found between the responses of males and females, $\chi^2(2) = 6.71$, $p<.05$.

an opportunity to work at their own pace and ability level. This percentage reflected almost the exact opposite of the present class situation outlined in Table 12, in which 75% of the subjects (45/60) perceived that the class organization involved all students working on the same skills at the same time.

Significant differences ($p < .05$) were found between the responses of male and female medium achievers. The male subjects were more in favour of working on the same skills at the same time than were the females, and males preferred teachers who chose one type of teaching style or the other. Female subjects, however, strongly supported the use of both group and individualized instruction by the same teacher.

There were also significant differences ($p < .05$) between the responses of males and females. One third of all females as opposed to only 2 out of 30 males (6.7%) preferred that their teachers use a combination of teaching methods, while males gave stronger support than females to the use of a totally individualized or levels approach.

Approximately one quarter of the subjects preferred to have all students work on the same skills at the same time. Low achievers were somewhat more in favour of this approach than were medium and high achievers. Some students did not want to assume responsibility for determining their own pace of learning and were prepared to allow the teacher to make those decisions for them. It would seem, then, that teacher-directed activities might be necessary and/or desirable for some students in some situations.

Several advantages of having all students work on the same skills at the same time were mentioned by the subjects. They saw this approach

as easier and less frustrating for the teacher to organize and less confusing for both students and teachers, since everyone would know what everyone else in the class was supposed to be doing. Safety factors were a consideration in sports such as gymnastics. Some students also believed that the extra review and practice of basic skills were beneficial even to the more advanced students.

The students also mentioned advantages of the more individualized approach, including an opportunity for more personal attention and assistance from both the teacher and the more advanced students, a chance to work at one's own pace and skill level without feeling rushed or held back by the progress of other students, an increased sense of challenge to perform to the best of one's ability, and an incentive to continue improving as a result of watching the skills the more advanced students were learning.

The main advantage cited by the students of having a teacher use both whole-class instruction and a more individualized approach was the possibility for greater variety and flexibility in teaching methods depending on the teacher, students, and activities involved.

Several potential problems with an individualized physical education program were mentioned by the subjects interviewed in this study, including the possibility that the more skilled students would become conceited and the less skilled students would feel dumb and embarrassed by their slower progress. The students believed an individualized program would be more difficult for the teacher to organize, particularly in a class situation with only one teacher and a large number of students. Confusion and chaos were predicted by a few

students. Concerns were also expressed that friends at different skill levels would no longer be able to work together. Advanced students might not have anyone of equal ability to work with and might have to wait a long time for others to catch up or for assistance from the teachers. A few students regarded the school teams and clubs, rather than the regular physical education classes, as the means for more advanced students to improve their skills.

At one of the schools involved in this study, a type of peer counselling program had been developed to train students who were advanced in one of several school subjects to act as teacher assistants. In the physical education department, student assistants performed a variety of duties including helping and testing students and refereeing class games.

Preferred Method(s) of Dealing With Students Without Gym Strip for Physical Education Class

The subjects gave almost equal support to several different ways teachers could deal with students without gym strip for physical education class (see Table 14). A combination of answers was selected by 20 subjects; two subjects suggested a choice other than those listed in the question.

While most of the physical education departments surveyed in this study did not allow students to participate in physical activities without gym strip, 21 out of 60 subjects (35%) believed they should be permitted to do so. Those students frequently commented that it was possible to participate in some activities in street clothes,

Table 14

Preferred Method(s) of Dealing With Students Without Gym Strip for Physical Education Class (Question 13)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Students should be:							
Allowed to participate in all the activities anyway	3	3	3	3	4	5	21
Asked to sit and observe	3	4	6	2	1	3	19
Given a study period	0	2	1	2	3	3	11
Given odd jobs to do for the physical education teachers	4	2	1	2	2	4	15
Allowed to referee games and/or to coach other students in activity skills	2	2	2	2	3	5	16
Given a written physical education assignment related to the activities the rest of the class is doing[a]	3	0	0	4	2	1	10
Expected to make up the activity time missed by coming in before or after school	2	2	1	1	2	0	8
A combination of the above choices or other	5	3	3	4	3	4	22
Total	22	18	17	20	20	25	122

Note. Totals exceed the actual number of subjects in each group because the subjects were allowed to select a combination of choices.

[a]Significant differences were found between the responses of male and female high achievers to this choice, $\chi^2(1)=3.92$, $p<.05$; between the responses of male and female medium achievers, $\chi^2(1)=5.31$, $p<.05$; and between the responses of female high, medium and low achievers, $\chi^2(2)=6.24$, $p<.05$.

although they generally acknowledged that gym strip was more comfortable and more practical for physical education classes.

The main concern of most subjects was that students without gym strip be allowed to do something constructive during the class to reduce the possibility that they might disturb or tease the students who were changed. Almost all subjects agreed that students without gym strip should be penalized in some way in order to encourage them to change for physical education class. Many students considered some of the present punishments too harsh, particularly those that involved failure of an entire term or a serious loss of marks for only a few classes without gym strip. Most of the teachers' reactions, however, were viewed as necessary and effective. Several students suggested various combinations of participation and negative consequences. The procedure in effect at one school involved giving students two marks if they changed and participated actively in a class, one mark if they were not changed but still participated, and no marks if they neither changed nor participated. One perceptive student commented that students would rarely forget their gym strip if they considered the physical education classes too interesting and enjoyable to miss.

In summary, the subjects in this study expected and wanted the teachers to deal with the problem of students with no strip in a variety of ways, depending on the students and the activities involved. It was important to the subjects that the teachers at least listen to the students' excuses and then respond fairly, either by selecting an appropriate action or by offering the students a choice of options acceptable to the teacher.

Significant differences ($p<.05$) were found between male and female high achievers, between male and female medium achievers, and among female high, medium, and low achievers with regard to the assignment of written work to students without gym strip. Since a total of only 10 out of 60 subjects (14.7%) chose that option, however, those differences, while statistically significant, were not considered to be very important within the context of the subjects' responses to the entire question.

Preferred Method(s) of Dealing With Students Temporarily Unable to Participate in Physical Education Activities for Medical Reasons

The subjects in this study wanted and expected some flexibility in teacher responses to students temporarily unable to participate in physical education activities for medical reasons (see Table 15). Strong support, however, was given to only three options, and most students preferred to be given a study period, to sit and observe, or to participate in a modified program.

The writing of an assignment and the requirement to make up the missed activity time were generally considered unfair punishment for students who were ill or injured through no fault of their own. Emphasis was placed instead on constructive use of class time. The physical education departments involved in this study reported a variety of teacher responses to students with medical problems.

Significantly more female than male low achievers ($p<.05$) chose the option of doing odd jobs for the physical education teachers, and significantly more female than male low achievers ($p<.05$) selected

Table 15

Preferred Method(s) of Dealing With Students Temporarily Unable to Participate in Physical Education Activities for Medical Reasons (Question 14)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Students should be:							
Expected to participate in a modified physical education program based on what they are able to do	3	4	4	6	1	3	21
Asked to sit and observe	4	4	3	1	6	3	21
Given a study period	3	3	3	4	5	5	23
Given odd jobs to do for the physical education teachers[a]	1	0	0	1	0	3	5
Allowed to referee games and/or to coach other students in activity skills[b]	3	2	0	1	0	3	9
Given a written physical education assignment related to the activities the rest of the class is doing	0	0	0	0	0	1	1

continued

Table 15 continued

Choice	Student Achievement Level						
	High		Medium		Low		
	M	F	M	F	M	F	Total
Expected to make up the activity time missed by coming in before or after school	0	0	0	0	0	0	0
A combination of the above choices or other[c]	2	3	0	4	2	4	15
Total	16	16	10	17	14	22	95

Note. Totals may exceed the actual number of subjects in each group because the subjects were allowed to select a combination of choices.

[a]Significant differences were found between the responses of male and female low achievers to this option, $\chi^2(1)=3.92$, $p<.05$.

[b]Significant differences were found between the responses of male and female low achievers to this option, $\chi^2(1)=3.92$, $p<.05$.

[c]Significant differences were found between the responses of male and female medium achievers to this option, $\chi^2(1)=4.44$, $p<.05$ and also between the responses of males and females, $\chi^2(1)=4.44$, $p<.05$.

the refereeing or coaching option. Significant differences ($p < .05$) were also found between the preferences of male and female medium achievers and between males and females regarding the selection of a combination of choices. While statistically significant, the differences mentioned above involved relatively small numbers of subjects and were not considered to be important in the context of the subjects' responses to the entire question.

Preferred Method of Choosing Teams for Games in Physical Education Class

Fair, enjoyable competition between teams of approximately equal skill levels was considered important by virtually all subjects in this study (see Table 16). The majority of the students preferred to have the teachers choose the teams. The comments of students supporting that choice indicated that they believed the teachers were able to make appropriate team selections quickly and impartially, based on their knowledge of the skill level of all the students in the class and their awareness of which students enjoyed playing together.

There were significant differences ($p < .05$) between the preferences of male and female subjects, as 12 out of 30 males (40%) and only 2 out of 30 females (6.6%) wanted the class teams to be chosen in some way by student captains. Females, on the other hand, showed greater support than males for both teacher selection of teams and the free choice of students to join whatever team they wished. Those differences should be considered, particularly by teachers of coeducational classes.

Table 16

Preferred Method of Choosing Teams for Games in Physical Education Class (Question 15)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The teacher should make up the teams so that they are approximately equal in numbers and skill level.	7	7	5	7	5	8	39
The teacher should choose the captains who then pick the teams.	3	0	1	1	2	0	7
The students should choose the captains who then pick the teams.	0	1	4	0	2	0	7
The students should be free to join whatever team they wish up to a maximum number of players.	0	1	0	2	1	2	6
The teams should be made up by random selection according to the students' birthdates, home forms, etc.	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female subjects to this question, $\chi^2(4)=11.45$, $p<.05$.

Many subjects acknowledged that the choice of teams by student captains could be discouraging and embarrassing to those students selected last. They expected the physical education teachers to be aware of the students' feelings and to use team selection processes which would not focus attention on the less skilled students. At one of the schools involved in this study, the physical education teacher arranged for the student captains to choose the teams while the rest of the students were playing. In that way, only the captains knew who was picked last. At another school, the student captains each selected a few team members, and then the teachers divided the rest of the class evenly among the teams. At a third school, two student captains would choose a certain number of the most skilled players between them and those two teams would begin playing. The teacher would then choose two more captains from among the students left, and they, in turn, would select players for their teams. In that way, highly skilled teams played each other as did teams of less skilled players.

The subjects who supported the choice of teams by captains believed that the students knew their peers' skill level better than the teachers did and were also more aware of which students enjoyed playing together. Other subjects declared that the choosing of teams by students frequently resulted in uneven teams and a loss of game time due to a lengthy selection process. Students suggested that teachers not simply number the students (e.g., all the number 1's on one team; all the number 2's on another, etc.), since that procedure often produced unfair teams and the students frequently switched teams anyway in order to play with their friends.

Teachers were advised not to penalize the losing class teams by making them run laps of the gym, take down equipment, etc. The students believed such punishments could cause members of the losing teams to resent their less skillful players and to blame them for both the loss and the subsequent extra work.

Preferred Frequency of Changes in Physical Education Class Teams

Over one third of the subjects (22/60) wanted the teams in physical education to change every class (see Table 17). The students mentioned that one important advantage of such a frequent change in teams was the opportunity to make new friends and to learn from many students in the class. The students also appreciated the chance to avoid playing too long on a poor team or with classmates they did not like. Almost one quarter of the subjects (14/60) preferred to change teams only at the beginning of each new activity in order to avoid wasting time and to encourage the development of team play.

Significant differences ($p<.05$) were found between the responses of the male and female low achievers and also between males and females. In both cases, male subjects showed a much stronger preference for changing teams at the start of each new activity, while female subjects favoured a wider variety of options which included more student involvement in deciding when teams should change.

Preferred Ways of Learning and Practising Activity Skills in Physical Education Class

The combined results of Tables 18, 19, and 20 indicate that when learning activity skills in physical education class, the subjects'

Table 17

Preferred Frequency of Changes in Physical Education Class Teams (Question 16)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The teams should:							
Stay the same all year	0	0	0	0	0	0	0
Change at the start of each new activity	4	1	2	1	6	0	14
Change every week or every cycle	0	0	1	1	0	2	4
Change every class	3	6	2	3	4	4	22
Change at any time if they are extremely unequal in numbers or skill level	2	0	2	2	0	0	6
The students should have the choice of keeping the same teams or switching teams if they wish.	1	1	1	2	0	3	8
It is not important how often the teams change.	0	2	1	1	0	1	5
Total	10	10	9[a]	10	10	10	59

Note. Significant differences were found between the responses of male and female low achievers to this question, $\chi^2(4)=12.00$, $p<.05$, and also between the responses of males and females, $\chi^2(5)=13.22$, $p<.05$.

[a]One of the male medium achievers could not decide which choice to select.

Table 18

Students' First Choice of Ways to Learn and Practise Activity Skills in Physical Education Class (Question 17)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Alone	1	0	0	0	0	0	1
With a partner	6	7	10	8	6	7	44
In small groups of 4-5 students	2	3	0	2	4	2	13
With the whole class following the teacher at the same time	1	0	0	0	0	1	2
With the teacher	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Table 19

Students' Second Choice of Ways to Learn and Practise Activity Skills in Physical Education Class (Question 17)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Alone	1	1	4	0	2	0	8
With a partner	3	3	0	2	3	1	12
In small groups of 4-5 students	6	5	6	7	1	5	30
With the whole class following the teacher at the same time[a]	0	0	0	1	3	4	8
With the teacher	0	1	0	0	1	0	2
Other	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

[a]Significant differences were found among the responses of high, medium, and low achievers to this option, $\chi^2(4)=9.55$, $p<.05$.

Table 20

Students' Third Choice of Ways to Learn and Practise Activity Skills in Physical Education Class (Question 17)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Alone	3	4	2	4	2	2	17
With a partner	1	0	0	0	1	2	4
In small groups of 4-5 students	1	2	3	1	5	2	14
With the whole class following the teacher at the same time	4	4	4	2	1	4	19
With the teacher	1	0	1	3	1	0	6
Other	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

choices in descending order of preference were: working with a partner (selected as a first, second, or third choice by all 60 subjects), working in small groups (chosen by 57 out of 60 subjects), working with the whole class following the teacher at the same time (selected by 29 out of 60 subjects), working alone (chosen by 26 out of 60 subjects), and working with the teacher (selected by only 8 out of 60 subjects).

Many students considered the option of working with the teacher an unrealistic choice because of the large class sizes. Student comments indicated that they thought working with a partner and working with small groups were generally the most effective and most enjoyable ways for them to learn skills. The option of working alone was selected by students for a variety of reasons, including a desire for more control over what they were doing, an opportunity to get away from other people for awhile, and the lack of fellow students at an equally high skill level.

The option of working with the whole class following the teacher at the same time was chosen by many students because it was an easy way to learn and made everyone in the class feel involved. Those subjects who rejected that option found it boring, and they mentioned how difficult it was for the teacher to watch all the students let alone help individuals. Significant differences ($p < .05$) were found among the responses of high, medium, and low achievers with regard to that option. It was selected as their second choice by 7 out of 20 low achievers (35%), compared with 1 out of 20 (5%), and 0 out of 20 (0%) medium and high achievers respectively (see Table 19).

Those results may indicate that low achievers have some difficulty working independently and require a more teacher-directed approach to learning new activity skills.

Suggested Degree of Student Involvement in the Development of Physical Education Policies, Program Content, and Class Organization

As shown in Table 21, 59 out of 60 subjects (98.3%) thought secondary school students should be involved at least to some degree in the development of physical education policies, program content, and class organization. The involvement of all students to a great extent was particularly important to low achievers.

According to the students' comments, there was no doubt in their minds that the major responsibility for the physical education program organization rested with the teachers. The students neither wished to assume the teachers' rights and responsibilities nor to dictate policies to their instructors. Instead the students were interested in participating in some way in the decisions affecting their physical education class experiences. They sought an opportunity to discuss procedures freely with the teachers and wanted to be encouraged to make suggestions. The subjects expressed some concern that the teachers might resent student suggestions, and the students were, therefore, reluctant to become involved in policy, program, and organizational matters unless explicitly invited to do so by the teachers. According to both the physical education teachers and the subjects surveyed in this study, the students' present involvement in program organization was largely limited to their selection of activity options.

Table 21

Suggested Degree of Student Involvement in the Development of Physical Education Policies, Program Content, and Class Organization (Question 18)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
All students should be involved to a great extent.	0	1	1	0	2	3	7
All students should be involved to some extent.	6	5	6	5	4	6	32
Students should not be involved at all.	0	1	0	0	0	0	1
Only those students who are concerned and interested should have an opportunity to be involved.	4	3	3	5	4	1	20
Total	10	10	10	10	10	10	60

Decisions Teachers Should Allow Students to Make in Physical Education Class

Table 22 outlines the decisions that two or more subjects believed teachers should allow secondary school students to make in physical education class. There was close to unanimous support for student involvement in the choice of at least some of the class activities, as 57 out of 60 (95%) wished to make that decision. Most subjects believed that choice was very important in the development of positive student attitudes toward physical education.

Other decisions mentioned by single subjects included student involvement in the following areas: the choice of coeducational or separate boys' and girls' activities, the leading of warm-up exercises, the choice of running routes, the choice of appropriate gym strip, the amount of game time, the choice of teacher, the choice of running indoors or outdoors, the setting-up of equipment, the choice of students to work with, and the choice of the timetable block in which to take physical education.

Several students commented that they would be more willing to go along with a class decision than the teacher's decision concerning the amount of time spent on each activity, particularly if they disagreed with that decision. The students wanted the needs and interests of each class to be considered whenever possible instead of having all classes participate in the same activities for the same period of time.

Table 22

Decisions Teachers Should Allow Students to Make in Physical Education Class (Question 19)

	Student Achievement Level						
	High		Medium		Low		
Decisions	M	F	M	F	M	F	Total
Some choice of activities	10	8	9	10	10	10	57
Amount of time spend on each activity	4	0	4	3	3	3	17
Order in which activities occur	0	2	1	3	1	2	9
Rules in the gym	0	1	2	2	1	3	9
Choice of teams	1	1	0	1	1	2	6
Rules of games	0	1	1	2	0	0	4
Whether to participate if feeling ill	0	1	0	0	2	0	3
Suggestions for new activities or new ideas for games	0	0	1	0	0	1	2
Total	15	14	18	21	18	21	107

Note. Only decisions mentioned by two or more subjects are included in this table.

Decisions Teachers Should Not Allow Students to Make in Physical Education Class

Table 23 outlines the decisions that two or more subjects believed teachers should not allow students to make in physical education class. Other decisions mentioned by single subjects included the choice of potentially dangerous sports and the rules for those sports, the physical education course content, the choice of team captains, the option of wearing gym strip, the list of activities offered, the removal of students from a team for poor behaviour, the choice of skills to work on, the pace at which skills were learned, the distances students were expected to run, the length of classes, participation in class activities without gym strip, and responsibility for the class in the teacher's absence.

Over 60% of the subjects (37 out of 60) did not believe students should be involved in deciding the rules governing procedures and behaviour in the gym. Many students were concerned that their peers would disregard necessary considerations of safety and quickly turn the physical education class into a dangerous and chaotic nightmare. All subjects agreed that the ultimate responsibility for the class rested with the teacher, and most students asked only that fair rules be established, explained, and enforced.

Close to one third of the subjects (19/60) did not want students to be involved in determining the amount of time spent on each activity. Concerns were expressed that a decrease in the variety of activities offered and an increase in the amount of time spent arguing rather than playing might result if students were allowed to decide that matter.

Table 23

Decisions Teachers Should Not Allow Students to Make in Physical Education Class (Question 20)

	Student Achievement Level						
	High		Medium		Low		
Decisions	M	F	M	F	M	F	Total
Rules in the gym	10	6	5	5	7	4	37
Amount of time spent on each activity	3	5	2	3	4	2	19
Whether to participate	1	1	1	0	0	2	5
Some of the activities	1	2	0	0	1	0	4
Order in which activities occur	3	1	0	0	0	0	4
Rules of games	0	2	0	1	0	1	4
Choice of teams	0	1	0	1	2	0	4
Safety procedures	0	0	3	0	1	0	4
Standards of student behaviour	0	0	0	0	3	0	3
Treatment and use of equipment	0	0	0	1	2	0	3
No comment	0	0	1	1	0	1	3
Class organization	1	0	0	0	1	0	2

continued

Table 23 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Whether to have a warm-up	0	1	1	0	0	0	2
Students' grades (marks)	0	0	0	1	0	1	2
Total	19	19	13	13	21	11	96

Note. Only decisions mentioned by two or more subjects are included in this table.

One student comment which appeared to summarize the feelings of many others was that the teachers must be responsible for ensuring that whatever happened in the gym was in the students' best interests, even if the students would not have chosen that particular course of action themselves.

Competition

Preferred Amount of Physical Education Class Time Involving Team Competition With an Emphasis on Winning

A total of 43 out of 60 subjects (71.7%) wanted to spend at least "a fair amount" of physical education class time participating in team competition with an emphasis on winning (see Table 24). Male subjects, particularly low achievers, enjoyed "a lot" of that type of competition more than did female subjects. Several positive results from participation in team competition with an emphasis on winning were mentioned by the students and included an incentive to try harder, increased skill development, a higher degree of interest, and an opportunity to experience both winning and losing. Negative results described included a feeling of discouragement when losing and the anger of teammates when mistakes were made in a game.

Preferred Amount of Physical Education Class Time Involving Individual or Partner Competition With an Emphasis on Winning

The subjects in this study did not enjoy individual or partner competition with an emphasis on winning as much as they did team competition. While 71.7% of the students (43/60) wanted to spend at

Table 24

Preferred Amount of Physical Education Class Time Involving Team Competition With an Emphasis on Winning (Question 21a)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	4	2	3	2	6	1	18
A fair amount	2	5	6	2	4	6	25
A little	3	3	1	3	0	1	11
None	1	0	0	3	0	2	6
Total	10	10	10	10	10	10	60

least "a fair amount" of physical education class time participating in team competition with an emphasis on winning (see Table 24), only 41.7% of the students (25/60) wanted to spend at least that amount of time on individual or partner competition (see Table 25). Individual or partner competition with an emphasis on winning was more popular with male than with female subjects. Student comments indicated an appreciation for the friendships partner competition could foster and the self-reliance individual competition could develop.

Preferred Amount of Physical Education Class Time Involving Competing Against Oneself

Over one third of the subjects (23/60) wanted to spend "a lot" of physical education class time competing against their own previous best performance (see Table 26). Within that group, competition against oneself was supported most by high achievers and least by low achievers. In general, student comments indicated that they found that type of competition enjoyable and challenging. One student believed it was considered more acceptable to talk about improving one's own performance than to compare oneself to others.

Preferred Amount of Physical Education Class Time Involving Competing Against an Established Standard or Level of Achievement

A total of 35 out of 60 subjects (58.3%) wanted to spend at least "a fair amount" of physical education class time competing against an established standard or level of achievement (see Table 27). There were significant differences ($p < .05$) between the attitudes of male and female high achievers toward that type of competition. Half of the male

Table 25

Preferred Amount of Physical Education Class Time Involving Individual or Partner Competition With an Emphasis on Winning (Question 21b)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	1	1	2	1	1	0	6
A fair amount	4	2	4	3	3	3	19
A little	4	5	3	1	5	5	23
None	1	2	1	5	1	2	12
Total	10	10	10	10	10	10	60

Table 26

Preferred Amount of Physical Education Class Time Involving Competing Against Oneself (Question 21c)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	5	7	5	3	2	1	23
A fair amount	2	3	3	4	4	6	22
A little	2	0	2	3	3	3	13
None	1	0	0	0	1	0	2
Total	10	10	10	10	10	10	60

Table 27

Preferred Amount of Physical Education Class Time Involving Competing Against an Established Standard or Level of Achievement (Question 21d)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	5	1	4	2	2	1	15
A fair amount	0	5	4	5	3	3	20
A little	3	2	2	3	3	4	17
None	2	2	0	0	2	2	8
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female high achievers to this option, $\chi^2(3)=7.87$, $p<.05$.

high achievers preferred to spend "a lot" of time on that type of competition, while half of the female high achievers wanted to spend "a fair amount" of time competing in that way. Since both subgroups generally supported that form of competition strongly, those statistical differences were not considered to be very important in the context of the overall results.

The inclusion of the Canada Fitness Award program as an example of competition against an established standard of achievement generated many comments from the subjects. Most of the students had completed the tests several times in elementary and secondary school. The program appeared to motivate mainly the students who had a good chance of experiencing success in it. Those students enjoyed the personal challenge and were interested in learning how well they had performed in comparison to others of their own age. Many students, however, described the tests as boring, embarrassing, time-consuming, and difficult and suggested that participation in the Canada Fitness Award program be optional at the secondary school level.

Preferred Amount of Physical Education Class Time Involving Competition Without an Emphasis on Winning

Competition without an emphasis on winning was a popular choice among the subjects in this study, and 44 out of 60 students (73.3%) wanted to spend at least "a fair amount" of their physical education class time competing in that way (see Table 28). There were significant differences ($p<.01$) between the responses of male and female subjects with regard to the amount of time they wished to spend on competition without an emphasis on winning. One half of all female subjects but

Table 28

Preferred Amount of Physical Education Class Time Involving Competition Without an Emphasis on Winning (Question 21e)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	1	4	0	5	2	6	18
A fair amount	5	4	6	1	6	4	26
A little	1	1	1	3	1	0	7
None	3	1	3	1	1	0	9
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of males and females to this option, $\chi^2(3)=13.38$, $p<.01$, and between the responses of male and female medium achievers, $\chi^2(3)=10.57$, $p<.05$.

only 3 out of 30 male subjects (10%) preferred to spend "a lot" of class time on that type of competition, and almost one quarter of all male subjects as opposed to only 2 out of 30 female subjects (6.7%) did not want to spend any time competing that way. An awareness of those differences was regarded as important for physical educators. There were also significant differences ($p<.05$) between the attitudes of male and female medium achievers on the same issue but since both subgroups expressed equal support for that type of competition when the categories of "a lot" and "a fair amount" were combined, those differences were not considered to be very important.

Student comments in favour of competition without an emphasis on winning focussed on such desirable outcomes as enjoyment, relaxation, skill development, a lack of pressure to win at all costs, and team play. That form of competition was also recommended for beginners in an activity to introduce them to the required skills and to allow them to learn without fear of making mistakes or causing arguments. Students who did not enjoy competing without an emphasis on winning commented that such competition usually caused the game to deteriorate as students lost interest, stopped trying, forgot what they should be doing, broke the rules, and wasted time.

Perceived Emphasis of Fellow Students on Winning in Physical Education Class

While 56.7% of the subjects in this study (34/60) believed their fellow students placed "some emphasis" on winning in physical education class, 41.7% of them (25/60) thought their peers emphasized winning "a lot" (see Table 29). There were significant differences ($p<.05$) between

Table 29

Perceived Emphasis of Fellow Students on Winning in Physical Education Class (Question 22)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot of emphasis	5	2	6	5	6	1	25
Some emphasis	5	8	4	5	4	8	34
No emphasis at all	0	0	0	0	0	1	1
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female subjects to this question, $\chi^2(2)=6.12$, $p<.05$.

males and females concerning the emphasis they perceived their fellow students placed on winning in physical education class. Over half of all male subjects (17/30) believed winning was very important to their classmates, while just over one quarter of all female subjects (8/30) expressed the same opinion. Although the subjects were not asked to state whether the classes they referred to were coeducational, separate, or a combination of both, male students appeared to be exposed to greater peer pressure to win than were female subjects, regardless of the class composition. This was considered an important difference for physical education teachers to recognize.

Winning seemed to be most important to the students when they had the greatest chance of doing so. Several subjects mentioned that an emphasis on winning provided students with enjoyment and an incentive to work hard. Many students were comfortable with the degree of emphasis on winning in their present class, while others disliked the arguments, violence, and showing-off that sometimes resulted when winning was emphasized a lot by the students.

The subjects reported factors other than winning that were also important to their fellow students, including enjoyment, participation, skill development, individual as well as team performance, and equal competition.

Student Perceptions of Teacher Emphasis on Winning in Physical Education Class

The subjects involved in this study perceived that their physical education teachers placed generally less emphasis on winning in class than did the students. While only one subject thought the students

placed "no emphasis at all" on winning (see Table 29), 21 out of 60 subjects (35%) believed winning received "no emphasis at all" from the physical education teachers (see Table 30). Most subjects expressed strong approval for their teachers' attitude in that regard.

Factors other than winning that the students believed were just as important to the teachers included skill development, enjoyment, participation, good individual and team play, effort, and the demonstration of a knowledge of game rules and strategies.

Several students mentioned that they disliked the practice followed by some teachers of always assigning extra chores or exercises to the members of the losing class teams. "Fun" penalties were considered acceptable occasionally but when they more closely resembled punishments, the less skilled players were sometimes blamed by their teammates for causing both the loss and the unpleasant consequences.

Student/Teacher Interaction

Preferred Amount of Active Teacher Participation in Physical Education Class Activities

As shown in Table 31, 52 out of 60 subjects (86.7%) thought the physical education teachers should participate either "a lot" or "a fair amount" in class activities. Student comments indicated that the present level of teacher participation varied widely. Those teachers who participated frequently in warm-up exercises, running, skill demonstrations, and games were generally well-respected and well-liked by the students. It was considered important for teachers to set a good example of personal fitness and an active lifestyle. Teachers who had a

Table 30

Student Perceptions of Teacher Emphasis on Winning In Physical Education Class (Question 23)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot of emphasis	1	0	0	1	1	0	3
Some emphasis	6	5	6	7	6	6	36
No emphasis at all	3	5	4	2	3	4	21
Total	10	10	10	10	10	10	60

Table 31

Preferred Amount of Active Teacher Participation in Physical Education Class Activities (Question 24)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	2	4	1	3	4	4	18
A fair amount	5	6	6	6	6	5	34
A little	3	0	3	1	0	1	8
None	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

tendency simply to sit or stand around while the students exercised were usually not as highly regarded. The students questioned those teachers' ability to perform the skills they expected of the students and they doubted if the teachers could understand the students' problems with those skills.

The students recognized the fact that teachers with several physical education classes a day could become too tired to participate by the afternoon and they also realized that medical problems could prevent teachers from performing certain activity skills. Teachers who were willing to explain their limitations and to participate as best they could were readily accepted by the students.

The students were aware that the teachers had many other responsibilities including marking, refereeing, testing, correcting, and supervising the class. A few students considered the teachers unfair competition and did not enjoy having them join the class games but far more subjects claimed teacher participation encouraged better student behaviour, increased student learning, and added enjoyment and challenge to the games.

Perceived Amount of Individual Attention From Teacher in Physical Education Class

The majority of subjects (35/60) claimed they had received "a little" individual attention from their physical education teacher(s) since the beginning of the school year (see Table 32). One interesting result was the fact that most of the students who believed they had received "a lot" of personal attention were low achievers, while the majority of students who thought they had been given no individual

Table 32

Perceived Amount of Individual Attention From Teacher in Physical Education Class (Question 25)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	0	0	0	1	3	0	4
A fair amount	2	1	4	3	2	1	13
A little	4	8	5	5	4	9	35
None	4	1	1	1	1	0	8
Total	10	10	10	10	10	10	60

attention at all were high achievers. Male high achievers, in particular, appeared to have had little or no direct interaction with the teacher, usually because they were relatively skilled in the class activities and did not seem to require assistance. The low achievers in this study appeared to be receiving at least as much time and attention from the teacher as did the other two achievement groups. Student comments indicated that the teachers usually spoke to the class as a whole rather than to individuals, and some subjects preferred that arrangement.

Preferred Amount of Individual Attention From Teacher in Physical Education Class

A total of 38 out of 60 subjects (63.3%) wished to have their physical education teacher spend "a little" time with them individually (see Table 33). Only one student wanted "a lot" of attention, and a single subject preferred no personal attention from the teacher at all.

The students' comments indicated that they were aware of the large class sizes and the difficulties the teachers had devoting much time to any one student. Most students simply wanted their fair share of the teacher's time, particularly if they were having difficulty learning a skill. It was important to the students to have a teacher who was approachable and who would assist them when they asked for help. High achievers wanted at least a little attention from the teacher but their need was usually for an extra challenge rather than assistance with the regular class program.

Table 33

Preferred Amount of Individual Attention From Teacher in Physical Education Class (Question 26)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	0	0	0	0	1	0	1
A fair amount	5	2	4	3	3	3	20
A little	5	7	6	7	6	7	38
None	0	1	0	0	0	0	1
Total	10	10	10	10	10	10	60

Relationship Between Students' Perceived and Preferred Amounts of Individual Attention From Teacher in Physical Education Class

Table 34 shows the relationship between the subjects' perceived and preferred amounts of individual attention from the teacher in physical education class. While 37 of the 60 students (61.7%) were receiving the amount of attention they wanted, 15 of the 60 students (25%) wanted more attention, and 8 of the 60 students (13.3%) wanted less attention.

When the responses of the six subgroups were considered separately, it was discovered that 5 of the 15 students who wanted more attention were male high achievers. Those students realized that other classmates who were having difficulty with the physical education program needed the teacher's assistance more than they did but they wanted at least a little attention from the teachers, mainly in the form of encouragement and more advanced coaching hints. Most students wanted to avoid having the teacher spend too much time with them since extra attention often meant they were in trouble or involved a reduction in their activity time because of lengthy teacher explanations.

Perceived Interest of Physical Education Teacher in Students as Individuals

The largest number of subjects (27/60) believed that the physical education teachers showed "a fair amount" of interest in them as individuals (see Table 35). That finding was in contrast with the results outlined in Table 32 which indicated the majority of subjects claimed they had received "a little" personal attention from the teacher in class. The amount of time the teachers spent talking or

Table 34

Relationship Between Students' Perceived and Preferred Amounts of Individual Attention From Teacher in Physical Education Class

Perceived Amount of Attention	Preferred Amount of Attention				
	A lot	A fair amount	A little	None	Total
A lot	0	2	2	0	4
A fair amount	1	10	3	0	14
A little	0	6	27	1	34
None	0	2	6	0	8
Total	1	20	38	1	60

Table 35

Perceived Interest of Physical Education Teacher in Students as Individuals (Question 27)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A lot	3	1	1	1	1	0	7
A fair amount	6	5	5	4	5	2	27
A little	1	4	4	4	2	6	21
Not at all	0	0	0	1	1	2	4
Total	10	10	10	10	9[a]	10	59

[a]One of the male low achievers did not know the answer to this question.

working with individual students, therefore, was not the only indication of teacher interest. While no high achievers received a lot of personal attention in class (see Table 32), 20% thought the teacher showed "a lot" of interest in them as individuals (see Table 35). The only subjects who thought the teacher was not interested in them at all were in the medium and low achiever groups.

According to 55 of the 59 subjects (93.2%), the physical education teachers expressed at least "a little" interest in them as individuals, and for most students, the degree of interest shown was sufficient. Most subjects believed the teachers were genuinely interested in them and not just pretending to care because it was their responsibility to do so. Several students commented, however, that some teachers seemed to show the greatest personal interest in those students who were doing particularly well in the class activities and who were actual or potential members of one or more school teams. The less skilled members of the class were more likely to feel they were "just another student." While they were not ignored, neither were they the recipients of any special attention from the teacher.

Indicators of Physical Education Teacher Interest in Students as Individuals

The various teacher behaviours that two or more subjects mentioned as indicators of interest in the students as individuals are outlined in Table 36. Over one third of the subjects (24/60) interpreted teacher assistance with skills in class as a sign of personal interest.

Other teacher behaviours described by single students included

Table 36

Indicators of Physical Education Teacher Interest in Students as Individuals

(Question 28)

	Student Achievement Level						
	High		Medium		Low		
Teacher Behaviour	M	F	M	F	M	F	Total
Helps student with skills in class	3	3	5	5	4	4	24
Spends time with student in class	1	1	2	2	3	2	11
Talks to student individually in class	1	1	0	2	1	5	10
Corrects student's skills	4	1	1	1	2	0	9
Compliments student	1	2	1	2	0	2	8
Gives encouragement	0	0	1	0	2	3	6
Encourages student with special skills to try out for school teams	2	1	1	0	0	0	4
Knows and uses student's name	1	0	1	0	1	1	4
Asks if student needs help	0	0	1	2	0	1	4
Talks to student in the halls	1	0	0	1	0	1	3
Asks if student is enjoying the class	0	1	0	0	1	1	3

continued

Table 36 continued

	Student Achievement Level						
	High		Medium		Low		
Teacher Behaviour	M	F	M	F	M	F	Total
Asks student to demonstrate skills	1	1	0	0	0	0	2
Watches student often--not just at report time	0	2	0	0	0	0	2
Asks about student's health	0	0	1	1	0	0	2
Jokes with student	0	0	2	0	0	0	2
Knows student's skill level	0	0	2	0	0	0	2
"Picks on" student	0	0	0	1	0	1	2
Total	15	13	18	17	14	21	98

Note: Only behaviour mentioned by two or more subjects is included in this table.

the following: asks for the students' ideas to make the class more interesting, gives guidance when students have a problem, treats the students fairly, behaves in a friendly manner, does not "bug" students, asks students to help with odd jobs, does not give up on students, listens to the students, explains the reasons behind decisions, gives students fair marks, notices if students are having a bad day, helps students outside of class time, and asks students if they are choosing the activity the teacher is instructing.

A few students were uncomfortable with this question and had difficulty answering it. One male low achiever replied, "No phys. ed. teacher I've ever had has actually been interested in me."

Frequency of Students' Hesitation to Participate in Physical Education Class Because of Possible Teasing From Peers

While 42 out of 60 subjects (70%) indicated they had "almost never" hesitated to participate in physical education class because of possible teasing from the other students (see Table 37), there were significant differences ($p < .01$) between the responses of male and female subjects to that question. Although 27 out of 30 male subjects (90%) stated they had "almost never" hesitated to participate, only 15 out of 30 female subjects (50%) made the same claim. It was impossible to determine to what degree the subjects' responses were influenced by a reluctance to admit their feelings but it was obvious from the subjects' comments that a sizable number of female students were concerned about making mistakes and embarrassing themselves in physical education class, particularly when they were participating in coeducational activities or in sports they did not enjoy. Some student

Table 37

Frequency of Students' Hesitation to Participate in Physical Education Class Because of Possible Teasing From Peers (Question 29)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Almost never	9	5	9	6	9	4	42
Sometimes	1	4	1	4	1	5	16
Many times	0	1	0	0	0	1	2
Almost all the time	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Note: Significant differences were found between the responses of male and female subjects to this question, $\chi^2(2)=11.68$, $p<.01$.

choice of activities, therefore, was considered important.

It was interesting to note that there was very little difference in the amount of hesitation reported by high, medium, and low achievers. Even students who generally performed well in physical education activities were unsure at times of their abilities. Usually such concerns about being teased did not affect the students' behaviour noticeably but a few students commented that they would rather "forget" their gym strip or simply not participate in an activity if other students were likely to make fun of their performance. Gymnastics seemed to be the activity that caused the greatest amount of anxiety. It was suggested that the students be allowed to volunteer to demonstrate skills in front of the class in order to avoid unnecessary embarrassment. One high achiever,however, was concerned that the other students would think the volunteers were showing off. While many subjects claimed that the opinions of their classmates did not affect them at all, a few students admitted that they would not select their preferred activity option if their friends ridiculed that choice.

Preferred Person(s) With Whom to Discuss Physical Education Problems

The combined results of Tables 38-40 indicate that 36 out of 60 subjects (60%) selected talking to a friend about a problem in physical education class as either their first, second, or third choice of ways to deal with that problem. There were significant differences ($p<.05$) between the responses of male and female subjects, with 14 out of 30 males (46.7%) and 22 out of 30 females (73.3%) selecting that option. Within the context of the entire question, however, those differences were not considered to be very important, since talking to a friend was

Table 38

Students' First Choice of Person(s) With Whom to Discuss Physical Education Problems (Question 30)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A friend[a]	1	3	4	5	4	4	21
Your physical education teacher on an individual basis in class time	1	2	4	2	1	1	11
Your physical education teacher on an individual basis outside of class time	3	2	2	1	2	2	12
Your physical education teacher and one or two of your friends together in class time	1	1	0	1	0	1	4
Your physical education teacher and one or two of your friends together outside of class time	0	0	0	0	0	0	0
Your physical education teacher if class time were set aside for the whole group to talk about their concerns together	0	0	0	1	0	0	1

continued

Table 38 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your parents	0	1	0	0	2	2	5
Another teacher or guidance counsellor	2	1	0	0	0	1	4
Other	2	0	0	0	1	0	3
Total	10	10	10	10	10	11[b]	61

[a]Significant differences were found between the responses of male and female subjects to this option, χ^2,(1)=4.51, $p<.05$.

[b]One female low achiever selected two options for her first choice.

Table 39

Students' Second Choice of Person(s) With Whom to Discuss Physical Education Problems (Question 30)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A friend[a]	1	3	3	2	0	2	11
Your physical education teacher on an individual basis in class time	1	2	2	1	2	1	9
Your physical education teacher on an individual basis outside of class time	2	1	1	1	3	1	9
Your physical education teacher and one or two of your friends together in class time	1	1	0	1	0	2	5
Your physical education teacher and one or two of your friends together outside of class time	2	2	1	0	0	1	6
Your physical education teacher if class time were set aside for the whole group to talk about their concerns together	0	0	0	0	0	0	0
Your parents	0	1	2	2	2	2	9

continued

Table 39 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Another teacher or guidance counsellor	2	0	1	3	2	1	9
Other	1	0	0	0	0	0	1
Total	10	10	10	10	9[b]	10	59

[a]Significant differences were found between the responses of male and female subjects to this option, $\chi^2(1)=4.51$, $p<.05$.
[b]One male low achiever did not select a second choice.

Table 40

Students' Third Choice of Person(s) With Whom to Discuss Physical Education Problems (Question 30)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
A friend[a]	0	3	0	0	1	0	4
Your physical education teacher on an individual basis in class time	1	0	1	2	1	2	7
Your physical education teacher on an individual basis outside of class time	1	2	1	1	2	2	9
Your physical education teacher and one or two of your friends together in class time	1	1	1	1	1	0	5
Your physical education teacher and one or two of your friends together outside of class time	2	0	0	1	2	0	5
Your physical education teacher if class time were set aside for the whole group to talk about their concerns together	1	0	1	0	0	2	4
Your parents	1	2	3	2	0	1	9

continued

Table 40 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Another teacher or guidance counsellor	1	2	3	2	1	2	11
Other	0	0	0	0	0	0	0
Total	8	10	10	9	8	9	54[b]

[a]Significant differences were found between the responses of male and female subjects to this option, $\chi^2(1)=4.51$, $p<.05$.
[b]Six subjects did not select a third choice.

still the overall favourite choice of male subjects. Four other options that received strong support are listed in descending order of popularity as either a first, second, or third choice and included: talking to the physical education teacher on an individual basis outside of class time (chosen by 30 out of 60 subjects), talking to the physical education teacher on an individual basis in class time (selected by 27 out of 60 subjects), talking to another teacher or guidance counsellor (chosen by 24 out of 60 subjects), and talking to parents (selected by 23 out of 60 subjects).

The students who wished to talk to a friend about their problems in physical education class chose that option because they believed their friend would understand how they felt and would be able to offer advice and moral support. Advantages of speaking to the physical education teacher outside of class time included greater privacy and more time to talk about the situation. Advantages of speaking to the physical education teacher in class time included an opportunity to deal with the problem immediately and no extra demands on teacher or student time. Most students who selected the option of speaking to another teacher or a guidance counsellor about their problem preferred to talk to a counsellor and indicated that their past experiences with the counselling department had been helpful. Parents were selected mainly for their understanding of the student, their moral support, and their willingness to speak to the teacher on the student's behalf. A few subjects believed the teacher would be more likely to take the students' problem seriously if the parents became involved.

The options which involved discussing the problem with the physical education teacher and a few of the students' friends together

either in class or outside of class were considered important if the students felt they needed the moral support of their peers or if several students were experiencing similar problems. Only 5 of the 60 subjects (8.3%) chose to discuss their problems with the teacher and the whole class together, indicating that teachers should try to deal with most problems on a more individual basis instead of interrupting the entire class for that purpose.

A few students suggested an option other than the ones listed on the questionnaire. One subject chose to speak directly to those students in the class who were making fun of him, while the other students preferred not to speak to anyone if they had a problem in physical education class.

Evaluation and Reporting

Preferred Method of Reporting Physical Education Achievement

Over two thirds of all subjects (41/60) preferred to have their physical education achievement reported by a letter grade (see Table 41). That method of reporting was most popular among high achievers. They were the very students most likely to receive the top grades, and they wanted their specific level of excellence to be reflected in the report. While the majority of medium and low achievers were also in favour of letter grades, many of those students supported other reporting methods such as a rating scale, written comments, and a pass/fail system because those methods distinguished less sharply among achievement levels and reduced comparisons between students. As one student remarked, "Satisfactory sounds better than a C, although it means the same."

Table 41

Preferred Method of Reporting Physical Education Achievement (Question 31)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Pass/fail	0	0	0	1	1	0	2
Letter grade	9	9	6	6	5	6	41
Rating scale	1	0	1	2	2	2	8
Marks	0	0	0	0	1	0	1
Mark ranges	0	0	1	1	0	0	2
Written comments only	0	1	2	0	1	2	6
Physical education achievement should not be reported at all.	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Student Interest in Receiving Written Comments by the Teacher on the Physical Education Report

As shown in Table 42, 49 out of 60 subjects (81.7%) wanted the teacher to make written comments as part of their physical education report. The current reporting policies varied among the physical education departments at the eight schools participating in this study and involved written comments for some, most, or all students. When teachers were not required to comment on the progress of all students, they tended to restrict their comments to those students who were either doing very well or very poorly in the physical education program.

The students suggested that written comments could make the report more personal, give parents specific information about the physical education program, describe the students' achievements, explain any major problems the students might be having, and indicate areas for improvement.

Subjects who did not want written comments tended to associate them only with negative remarks that often caused problems for the students at home when their parents demanded an explanation. There was also concern that comments could be affected by the teachers' mood at the time of writing. A few students who chose not to have comments admitted they would appreciate some remarks if they could be assured that the teacher would try to find at least something positive to say about their work in class instead of concentrating on the negative aspects of their performance.

Table 42

Student Interest in Receiving Written Comments by the Teacher on the Physical Education Report (Question 32)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Yes	9	9	8	6	9	8	49
No	1	1	2	4	1	2	11
Total	10	10	10	10	10	10	60

Situation Preferred by Students for Discussion of Physical Education Report

The majority of the subjects (32/60) preferred to discuss their physical education report with the teacher outside of class time (see Table 43). That option was particularly popular among low achievers. Student comments indicated they believed the advantages of that choice included greater privacy, less distraction, and more time for the teacher to explain the report. Subjects who wanted to speak to the teacher in class time appreciated the presence of their friends for moral support. Discussions involving the students, their parents, and the teachers were preferred by some subjects because they allowed everyone concerned to meet and examine all aspects of the situation at one time.

Almost one fifth of all the subjects (11/60) did not want to discuss their report with the teacher at all. Most of those students claimed that discussion was pointless since the teacher was unlikely to change the report grade. Other reasons for selecting that choice included a willingness to accept the teacher's assessment as accurate and a better rapport with a counsellor than with the physical education teacher.

Suggested Importance of Various Factors in Physical Education Reports

Tables 44-56 indicate the degree of importance suggested by the subjects for various factors involved in reporting physical education achievement.

Factors which the majority of subjects thought should count for "a lot" or "a fair amount" were considered of greatest importance to the

Table 43

Situation Preferred by Students for Discussion of Physical Education Report (Question 33)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
With your teacher in class time	1	3	2	2	1	1	10
With your teacher outside of class time	5	6	3	3	8	7	32
With your teacher both in class and outside of class time	0	0	1	0	1	0	2
With your teacher and your parent(s) together outside of class time	1	0	1	2	0	1	5
You would not care to discuss your report with your teacher at all.	3	1	3	3	0	1	11
Total	10	10	10	10	10	10	60

Table 44

Suggested Importance of Fitness Level as a Factor in Physical Education Reports (Question 34a)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your fitness level at the end of the term should count:							
A lot	2	1	1	2	3	1	10
A fair amount	2	7	5	4	4	4	26
A little	4	2	4	2	1	4	17
Nothing	2	0	0	2	2	1	7
Total	10	10	10	10	10	10	60

Table 45

Suggested Importance of Improvement in Fitness Level as a Factor in Physical Education Reports (Question 34b)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The improvement in your fitness level during the term should count:							
A lot	7	6	2	4	7	6	32
A fair amount	2	4	7	5	2	3	23
A little	1	0	1	1	1	1	5
Nothing	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Table 46

Suggested Importance of Skill Level as a Factor in Physical Education Reports (Question 34c)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your skill level at the end of the activity unit should count:							
A lot	0	0	1	4	3	2	10
A fair amount	7	7	5	2	5	7	33
A little	2	2	4	3	1	1	13
Nothing	1	1	0	1	1	0	4
Total	10	10	10	10	10	10	60

Table 47

Suggested Importance of Improvement in Skill Level as a Factor in Physical Education Reports (Question 34d)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
The improvement in your skill level during the activity unit should count:							
A lot	9	5	6	4	5	5	34
A fair amount	0	5	4	3	2	4	18
A little	1	0	0	3	3	1	8
Nothing	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male and female high achievers to this question, $\chi^2(2)=7.14$, $p<.05$.

Table 48

Suggested Importance of Skill Knowledge as a Factor in Physical Education Reports (Question 34e)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your knowledge of how to perform skills should count:							
A lot	3	3	2	1	3	0	12
A fair amount	4	4	4	8	3	7	30
A little	2	2	3	1	3	3	14
Nothing	1	1	1	0	1	0	4
Total	10	10	10	10	10	10	60

Table 49

Suggested Importance of Knowledge of Rules and Strategies as a Factor in Physical Education Reports (Question 34f)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your knowledge of rules and strategies in sports should count:							
A lot	1	2	1	1	2	1	8
A fair amount	5	5	5	5	2	4	26
A little	4	2	3	4	4	5	22
Nothing	0	1	1	0	2	0	4
Total	10	10	10	10	10	10	60

Table 50

Suggested Importance of Effort as a Factor in Physical Education Reports (Question 34g)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your effort in class should count:							
A lot	10	7	5	4	7	7	40
A fair amount	0	3	5	5	3	2	18
A little	0	0	0	1	0	1	2
Nothing	0	0	0	0	0	0	0
Total	10	10	10	10	10	10	60

Note. Significant differences were found between the responses of male high, medium, and low achievers to this question, $\chi^2(2)=6.48$, $p<.05$.

Table 51

Suggested Importance of Student Behaviour as a Factor in Physical Education Reports (Question 34h)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your behaviour in class should count:							
A lot	5	3	4	1	5	5	23
A fair amount	5	7	4	7	5	4	32
A little	0	0	2	1	0	1	4
Nothing	0	0	0	1	0	0	1
Total	10	10	10	10	10	10	60

Table 52

Suggested Importance of Wearing of Gym Strip as a Factor in Physical Education Reports (Question 34i)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your wearing of proper gym strip should count:							
A lot	1	2	0	0	2	1	6
A fair amount	4	2	6	3	5	4	24
A little	5	5	4	6	1	5	26
Nothing	0	1	0	1	2	0	4
Total	10	10	10	10	10	10	60

Table 53

Suggested Importance of Officiating in Class Games as a Factor in Physical Education Reports (Question 34j)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your assistance as an official in class games, tournaments, etc. should count:							
A lot	0	0	1	0	0	0	1
A fair amount	2	0	1	4	2	2	11
A little	6	6	6	4	5	3	30
Nothing	2	4	2	2	3	5	18
Total	10	10	10	10	10	10	60

Table 54

Suggested Importance of Helping Other Students as a Factor in Physical Education Reports (Question 34k)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your assistance to other students in the class in learning new skills should count:							
A lot	2	2	0	1	1	1	7
A fair amount	5	3	4	4	4	3	23
A little	1	4	4	5	3	4	21
Nothing	2	1	2	0	2	2	9
Total	10	10	10	10	10	10	60

Table 55

Suggested Importance of Marking or Testing Other Students as a Factor in Physical Education Reports (Question 341)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your assistance with marking or testing other students in the class on certain skills should count:							
A lot	0	0	0	1	0	0	1
A fair amount	3	1	0	2	1	2	9
A little	4	3	8	4	4	2	25
Nothing	3	6	2	3	5	6	25
Total	10	10	10	10	10	10	60

Table 56

Suggested Importance of Student Self-Evaluation as a Factor in Physical Education Reports (Question 34m)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Your written self-evaluation of your own progress in an activity should count:							
A lot	1	1	0	2	1	0	5
A fair amount	4	0	4	2	1	3	14
A little	1	5	4	3	3	5	21
Nothing	4	4	2	3	5	2	20
Total	10	10	10	10	10	10	60

students and included improvement in fitness level (see Table 45), improvement in skill level (see Table 47), effort (see Table 50), and behaviour (see Table 51).

Factors in physical education reporting which the majority of students believed should count for "a fair amount" or "a little" were considered of moderate importance to the students. Those factors were: fitness level (see Table 44), skill level (see Table 46), skill knowledge (see Table 48), a knowledge of rules and strategies (see Table 49), the wearing of proper gym strip (see Table 52), and the helping of other students (see Table 54).

Factors which the majority of subjects thought should count for "a little" or "nothing" were considered of least importance to the students in physical education reporting. Those factors included the officiating of class games (see Table 53), the marking or testing of other students (see Table 55), and student self-evaluation (see Table 56).

There were significant differences ($p < .05$) between male and female high achievers in their estimation of the importance of improvement in skill level (see Table 47). Male high achievers were almost unanimous in their belief that improvement in skill level should count "a lot" for physical education reports, while only half of the female high achievers held the same opinion. The rest of the female high achievers, however, thought that factor should count "a fair amount" and, therefore, the actual difference in emphasis was not considered to be very great.

Significant differences ($p < .05$) also occurred between the attitudes of male high, medium, and low achievers regarding the importance of effort as a factor in physical education reports (see Table 50). Those differences were not considered to be very important since all male subjects believed effort should count either "a lot" or "a fair amount."

The students made many comments about the various factors involved in the reporting of physical education achievement. The most interesting and most frequent comments are summarized below and represent the opinions of one or more students.

It was not considered fair to expect a very fit person to improve as much or as quickly as an unfit person but improvement in skill level was believed to be an indication to the teacher that the student had listened in class and was putting forth some effort. Knowledge of how to perform skills was thought to be important because students who were unable to do the actual skill might be able to help another student with that skill or referee the game. A knowledge of the rules and strategies in sports was deemed essential in order to keep the game under control and to avoid numerous penalties.

The effort and behaviour displayed in physical education were seen as affecting the performance of both the individual student and the entire class. Many students wanted assistance to other students in the class in the form of officiating, coaching, and marking to be voluntary. Some thought the performance of those duties should not affect the students' report grade, while others believed that those assistants should receive both extra training and additional credit. There was some concern that student markers might give poor marks to

students they did not like. Other students, however, found it easier to accept marks and criticism from their peers than from the teacher.

Only a small number of students had written a self-evaluation of their progress either in a physical education activity or in another subject. Many students thought a self-evaluation could be a useful learning process for both the student and the teacher, particularly if time were set aside to discuss the criteria used, analyze the student's performance, and establish goals for improvement. Some of the subjects were concerned that their peers would be less than honest if their self-evaluation marks counted directly for their reports. Most students, therefore, preferred to have the teacher simply take the student's self-evaluation into consideration when assigning report grades.

There was some variation in the criteria used to establish the students' physical education report grades at the schools involved in this study. Both the psychomotor and the affective domains accounted for 30-60% of the student's grade, while the cognitive domain was the basis for 10-20% of the report grade. For the psychomotor and the cognitive domains, those percentages were close to the suggested values (40-70% and 15-30% respectively) outlined in the British Columbia Secondary Physical Education Curriculum and Resource Guides. At the schools involved in this study, however, the affective domain, which included marks for factors such as effort, behaviour, and the wearing of gym strip accounted for approximately twice the suggested percentage (15-30%) of the students' overall grade in physical education. This emphasis was interpreted as an attempt by the physical education teachers to compensate for their predominantly whole-class

instructional methods of teaching skills by recognizing individual differences in student performance in the affective domain. By establishing programs based on an individualized or a levels approach to skill instruction, physical education teachers could reduce the emphasis on largely subjective measures of evaluation. At only about half of the schools involved in this study were the students graded on their fitness level and improvement in fitness. Those aspects of the psychomotor domain could possibly assume greater importance in the reporting of physical education achievement if a smaller percentage of marks were allotted to affective components.

Suggested Degree of Student Involvement in Evaluating the Physical Education Program

All but one subject thought secondary school students should be involved at least "to some extent" in evaluating the physical education program (see Table 57). Most of the students, however, did not feel involved in that form of evaluation at the present time, except to the extent that their activity choices indicated some of their preferences to the teachers. The use of more formal procedures involving a written evaluation of the program was reported by the physical education teachers at three of the eight schools included in this study.

Some students were afraid to voice their opinions concerning various aspects of the physical education program because they feared the teacher's reaction to criticism or believed nothing would be done about their suggestions. Students who had expressed their views, however, were generally pleased with the teacher's response. Many students thought their teacher was already aware of some student

Table 57

Suggested Degree of Student Involvement in Evaluating the Physical Education Program (Question 35)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
All students should be involved to a great extent.	2	0	2	1	0	4	9
All students should be involved to some extent.	3	6	6	4	7	5	31
Students should not be involved at all.	1	0	0	0	0	0	1
Only those students who are concerned and interested should have an opportunity to be involved.	4	4	2	5	3	1	19
Total	10	10	10	10	10	10	60

reactions as a result of overhearing their comments and observing their efforts in class. Most students simply wanted an increase in student/teacher communications and assurance that their opinions and suggestions concerning the physical education program would be respected and considered.

Aspects of Physical Education Program Organization Students Liked Most

The aspects of their present physical education program organization that two or more subjects said they liked most are outlined in Table 58. For over half of the students (33/60), the opportunity to choose at least some of the physical education class activities was extremely important. Several students also mentioned the crucial role of the teacher in influencing student attitudes. A good teacher, they claimed, could make almost any program bearable or even enjoyable, while a poor teacher could ruin an otherwise excellent program.

The favourite aspects of program organization mentioned by single students included: the coordination of class activities with the school team schedule, some student involvement in establishing the order of activities, switching sports every three weeks, having only one teacher, having grade 9 and 10 students but not grade 8's in the same physical education class, warm-up exercises, a weekly run, appropriate skill expectations, some choice of teachers, the use of volunteers to demonstrate skills in front of the class, the prominance of effort as a factor in the physical education report, the use of various activity areas to accommodate large numbers of students, the random selection of students for physical education classes which reduced the formation of

Table 58

Aspects of Physical Education Program Organization

Students Liked Most (Question 36)

	Student Achievement Level						
	High		Medium		Low		
Aspect	M	F	M	F	M	F	Total
Having at least some choice of activities	4	4	4	5	8	8	33
Variety and type of activities the teachers offer	2	1	2	2	1	2	10
The teachers (their attitude, ability, handling of the class, explanations)	1	0	2	0	0	1	4
No comment	0	0	2	1	0	0	3
Schedule within activities (mixture of skill practice, games, running)	1	1	1	0	0	0	3
Having different teachers for different activities	0	1	0	1	0	0	2
Having the opportunity to take more than one P.E. course per quarter	0	0	0	0	2	0	2
Choice of coed or separate activities	0	1	0	1	0	0	2
Having P.E. all year	0	0	0	0	2	0	2
Total	8	8	11	10	13	11	61

Note. Only aspects mentioned by two or more subjects are included in this table.

cliques, the choice of teams by students, encouragement from the teachers to try new sports or those in which the student was relatively unskilled, and the presence of a skilled senior student (called a Department Assistant) to help the teacher and the students in the physical education class.

Aspects of Physical Education Program Organization Students Liked Least

The aspects of the physical education program organization that two or more subjects liked least are summarized in Table 59. It is interesting to note that one third of all the subjects had no comment, indicating at least a general satisfaction with their present program.

Other organizational aspects liked least by single subjects included: the amount of class time the teachers had to waste disciplining individual students, the offering of some activity choices for only one term, the amount of time taken to organize the class at the start of a new activity, the lateness of the teacher coming from a previous class, the excessive amount of time spent on skills, the alphabetical seating arrangement for class attendance, the lack of active participation by the teachers in class, the lack of changing time, the inability of students to choose their teacher, a set time limit for each activity, too short a class length, the marking of students in track and field according to rigid skill standards without considering student improvement and effort, the loss of marks for no gym strip even if the student had a good reason, the lack of a core program for less skilled students, doing "garbage duty" for forgetting gym strip, not getting a preferred activity choice either because the class was already full or because too few students had selected it,

Table 59

Aspects of Physical Education Program Organization

Students Liked Least (Question 37)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
No comment	3	5	1	2	5	4	20
Not enough activity time (too much time spend on changing, setting up equipment, attendance, warm-up, taking down equipment)	1	0	1	2	1	0	5
Some of the compulsory activities	0	0	1	0	1	2	4
Repetition of the same skills every year	1	1	1	0	0	0	3
Warmups (too hard, too tiring)	0	0	1	1	1	0	3
Not enough activity choices	1	0	0	1	0	0	2
Not having a say in what the students do in P.E. class	1	0	0	0	1	0	2
Not enough game time	0	1	0	1	0	0	2
Having P.E. outside in cold or wet weather	0	0	0	1	1	0	2
Total	7	7	5	8	10	6	43

Note. Only aspects mentioned by two or more subjects are included in this table.

having physical education too often (three times a week), repeating some sports year after year, learning the same activities at the same time of each year, having grade 9-11 students in the same class, failing a physical education activity course if students forgot their gym strip three times, having too many students in the class, the overweight condition of some of the physical education teachers, having to repeat a run if it was not completed within a certain time limit, the disturbances and distractions caused by some non-participating students, and the offering of different opportunities and experiences to students taking the same activity course with different teachers.

Student Suggestions for Improving the Organization of the Physical Education Program

The suggestions of two or more subjects for improving the organization of their present physical education program are summarized in Table 60. The greater involvement of students in decisions related to program policies, content, and organization was a factor in many of the subjects' suggestions and was considered to be an important aspect of program improvement.

Suggestions mentioned by single subjects included: the basing of marks more on effort than on skill, a reduction in class organization time, provision for students to work on different skills instead of repeating the same ones they learned previously, more opportunities for students to act as referees in class games, the setting of a good example by teachers through more active participation in class and a loss of weight, the evaluation of teachers by the students, the use of more objective measures of student progress, the playing of music

Table 60

Student Suggestions for Improving the Organization of the Physical Education Program (Question 38)

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
No comment	3	3	3	1	2	1	13
Involve students in deciding what activities to offer.	3	1	2	2	0	0	8
Offer more activity choices.	1	0	2	2	1	2	8
Allow students to choose at least some activities.	1	0	0	2	0	2	5
Give students more say in what they are doing.	0	0	1	2	2	0	5
Offer two groups (eg., beginners and advanced) if a lot of students choose one activity.	0	0	0	3	0	0	3
Offer at least some coed classes.	0	0	0	0	2	1	3
Involve students in decisions concerning amount of time per activity.	0	0	1	2	0	0	3
Give detentions only to the misbehaving students rather than hold up the whole class.	1	0	1	0	0	0	2

continued

Table 60 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Make the classes longer.	1	0	1	0	0	0	2
Offer the same activity choices for more than one term.	1	0	0	0	1	0	2
Have teachers who are more patient and understanding.	0	1	0	1	0	0	2
Make gymnastics optional.	0	1	0	0	0	1	2
Allow more time to complete the running courses.	0	0	1	0	0	1	2
Do not do outside activities in poor weather.	0	0	0	1	1	0	2
Allow more changing time so that students could shower.	0	0	0	1	0	1	2
Do not do the same activities in the same terms each year.	0	0	0	0	1	1	2
Encourage students to evaluate the program and make suggestions.	0	0	0	0	1	1	2

continued

Table 60 continued

	Student Achievement Level						
	High		Medium		Low		
Choice	M	F	M	F	M	F	Total
Have more personal attention from teachers.	0	0	0	0	1	1	2
Give students more say as to whether an activity will be coed or separate.	0	0	0	0	0	2	2
Total	11	6	12	17	12	14	72

Note. Only suggestions mentioned by two or more subjects are included in this table.

during warm-up exercises, the addition of aerobics to the program, the installation of shower curtains for the girls' change room, an increase in the amount of game time, the use of game time for teachers to coach and correct students, the involvement of students in the determination of both class length and the decision to offer physical education for part or all of the school year, the establishment of separate classes for each grade level, more encouragement from teachers to students who are doing well, the placing of greater demands on the students by the teachers for disciplined behaviour and excellent performance, the use of student volunteers to set up the gym equipment before the start of the class, an increase in the amount of information given to students concerning sports teams, clubs, and facilities available in the community, the permitting of students to run outside in poor weather if they wish, no loss of marks for the lack of gym strip, the standardization of course context taught by different teachers, the offering of more activities per trimester, a reduction in warm-up time, shorter classes, fewer physical education classes per week, the establishment of a core physical education program for less skilled students based on attendance, effort, and skill improvement, a concentration on student abilities rather than disabilities, the offering of some new sports each year, the elimination of running routes around the neighbourhood, the permitting of students without gym strip to run errands for the teachers, the designation of participation in the Canada Fitness Award program as optional, the provision for medically excused students to have a study period, shorter running routes for students taking physical education immediately after lunch, the use of a written assignment for students without gym strip, and the maintenance of a warmer temperature in the gymnasium.

Chapter V

Summary, Conclusions, and Recommendations

This chapter includes a summary of the research study, conclusions based on the testing of the hypotheses outlined in Chapter I (supra p. 6), and recommendations both for the organization of physical education programs and for further research.

Summary

The purpose of this study was to determine the attitudes of male and female secondary school students toward various organizational aspects of physical education programs and to recommend organizational structures which would take into consideration the expressed attitudes of high, medium, and low achievers in school physical education programs.

A total of 60 subjects, including equal numbers of male and female high, medium, and low achievers in physical education were selected at random from the grade 9 student population at eight secondary schools in the Greater Victoria School District. The subjects were interviewed individually using a questionnaire designed by the researcher to determine their attitudes toward five major aspects of physical education program organization: timetabling considerations, program decisions and responsibilities, competition, student/teacher interaction, and evaluation and reporting.

The students' responses to the questionnaire were subjected to a chi-square analysis to determine if there were significant differences between the attitudes of male and female high, medium, and low

achievers toward those aspects of physical education program organization. Comments made by the students during the interviews were recorded on tape and analyzed separately by the researcher.

Statistically significant but relatively unimportant differences were found between the attitudes of (a) female high, medium, and low achievers; (b) male high, medium, and low achievers; and (c) male and female high achievers.

Statistically significant and important differences were found between the attitudes of (a) male and female medium achievers; (b) male and female low achievers; (c) males and females; and (d) high, medium, and low achievers. The greatest number of statistically significant and important differences in attitudes occurred between male and female subjects. The subjects' achievement level in physical education distinguished very little between their attitudes toward the organization of physical education programs.

Recommendations were made for secondary school physical education program organization, including the individualization of activity programs to meet the needs of students at all skill levels and a greater involvement of grade 9 students in a variety of decisions related to physical education program policies, content, organization, and evaluation. Separate physical education classes for students at different ability or achievement levels were considered to be unnecessary.

Conclusions

Hypotheses

Each of the following null hypotheses was tested at the .05 level of significance:

1. There will be no significant differences between the attitudes of female high, medium, and low achievers.

This hypothesis was rejected because significant differences were found between the responses of female high, medium, and low achievers to the assignment of written work to students without gym strip. Medium achievers were much more in favour of that option than were high or low achievers. Since a total of only 10 out of 60 subjects (16.7%) chose that option, however, those differences, while statistically significant, were not considered to be very important within the context of the subjects' responses to the entire question.

2. There will be no significant differences between the attitudes of male high, medium, and low achievers.

This hypothesis was rejected because significant differences were found between the responses of male high, medium, and low achievers to the importance of effort as a factor in the reporting of achievement in physical education. High achievers were more in favour of that factor counting "a lot" in reporting than were medium or low achievers. Since all male subjects thought effort should count either "a lot" or "a fair amount", however, those differences, while statistically significant, were not considered to be very important.

3. There will be no significant differences between the attitudes of male and female high achievers.

This hypothesis was rejected because significant differences were

found between the responses of male and female high achievers to three questions.

Male high achievers were more in favour of the assignment of written work to students without gym strip than were female high achievers. Since a total of only 10 out of 60 subjects (16.7%) chose that option, however, those differences, while statistically significant, were not considered to be very important within the context of the subjects' responses to the entire question.

Male high achievers were much more in favour of spending "a lot" of physical education class time competing against an established standard or level of achievement, while female high achievers were much more in favour of spending "a fair amount" of time competing that way. Since both subgroups generally supported that type of competition strongly, those statistically significant differences were not considered to be very important within the context of the overall results.

Male high achievers were much more in favour of having improvement in skill level count "a lot" in the reporting of achievement in physical education, while female high achievers were much more in favour of having that factor count "a fair amount." Since all but one high achiever thought improvement in skill level should count either "a lot" or "a fair amount," those statistically significant differences were not considered to be very important within the context of the overall results.

4. There will be no significant differences between the attitudes of male and female medium achievers.

This hypothesis was rejected because significant differences were

found between the responses of male and female medium achievers to four questions.

Male medium achievers were more in favour of working on the same skills at the same time than were female medium achievers. Female subjects strongly supported the use of both group and individualized skill instruction by the same teacher, while male subjects preferred to have a teacher who chose one type of teaching style or the other. An awareness of those differences was considered important, particularly for teachers organizing coeducational physical education classes.

Female medium achievers were much more in favour of the assignment of written work to students without gym strip than were male medium achievers. Since a total of only 10 out of 60 subjects (16.7%) chose that option, however, those differences, while statistically significant, were not considered to be very important within the context of the subjects' responses to the entire question.

Female medium achievers showed significantly stronger support than male medium achievers for a combination of teacher responses to students temporarily unable to participate in physical education activities for medical reasons. All the male medium achievers preferred to choose a single option. Those differences, however, were not considered to be very important within the context of the subjects' responses to the entire question.

Female medium achievers were much more in favour of spending "a lot" of physical education class time competing without an emphasis on winning, while male medium achievers were much more in favour of spending "a fair amount" of time competing that way. Since both subgroups generally supported that type of competition strongly, those

statistically significant differences were not considered to be very important within the context of the overall results.

5. There will be no significant differences between the attitudes of male and female low achievers.

This hypothesis was rejected because significant differences were found between the responses of male and female low achievers to three questions.

More female than male low achievers were in favour of allowing students who were temporarily unable to participate in physical education activities for medical reasons to do odd jobs for the teachers. Since only 5 out of 60 subjects selected that option, those statistically significant differences were not considered to be important.

More female than male low achievers were in favour of allowing students who were temporarily unable to participate in physical education activities for medical reasons to referee games or coach other students in the class. Since only 9 out of 60 subjects selected that option, those statistically significant differences were not considered to be important.

Male low achievers wanted to change the teams in physical education class either at the start of each new activity or every class, while female low achievers preferred a wider variety of options including some student control over when the teams changed. Those statistically significant differences were considered to be important indications that some flexibility was necessary in decisions concerning the appropriate frequency of team changes.

6. There will be no significant differences between the attitudes

of males and females.

This hypothesis was rejected because signficant differences were found between the responses of males and females to nine questions.

The activity skills taught in physical education class were considered "too easy" by 7 out of 30 male subjects (23.3%) and by only 1 out of 30 female subjects (3.3%), while 16 out of 30 females (53.3%) and 8 out of 30 males (26.7%) found the level of difficulty "about right." Those statistically significant differences were considered important indications to teachers that male subjects, particularly high achievers, needed to experience greater challenges in the physical education activities.

One third of the female subjects, compared to 2 out of 30 male subjects (6.7%) supported the use of both group and individualized skill instruction by the same teacher. Male subjects preferred to have a teacher who chose one type of teaching style or the other. An awareness of those differences was considered to be important, particularly for teachers organizing coeducational physical education classes.

Female subjects showed significantly stronger support than male subjects for a combination of teacher responses to students temporarily unable to participate in physical education activities for medical reasons. Those differences, however, were not considered to be very important within the context of the subjects' responses to the entire question.

While 12 out of 30 males (40%) wanted the class teams to be chosen in some way by student captains, only 2 out of 30 females (6.6%) preferred that method of selecting teams. Females showed greater

support than males for both teacher selection of teams and the free choice of students to join whatever team they wished. Those differences were considered important, particularly to teachers organizing coeducational physical education classes.

Male subjects expressed a much stronger preference than female subjects for a change of class teams at the start of each new activity, while females preferred a wider variety of options, including some student control over when the teams changed. Those statistically significant differences were considered to be important indications that some flexibility was necessary in decisions concerning the appropriate frequency of team changes.

One half of all female subjects but only 3 out of 30 male subjects (10%) preferred to spend "a lot" of class time competing without an emphasis on winning. Almost one quarter of all male subjects as opposed to only 2 out of 30 female subjects (6.7%) did not want to spend any time competing that way. Those differences were regarded as important indications to physical educators that students should be involved to some extent in selecting competitive situations with their preferred degree of emphasis on winning.

Over half of all male subjects believed winning was very important to their classmates, while just over one quarter of all female subjects expressed the same opinion. Male students, therefore, appeared to be exposed to greater peer pressure to win than were female students. That difference was considered important for physical education teachers to recognize.

While 27 out of 30 male subjects (90%) stated that they had "almost never" hesitated to participate in physical education class

because of possible teasing from the other students, only half of the female subjects made the same claim. It was considered important for physical education teachers to recognize the tendency for significant differences in behaviour to occur, particularly when the students were participating in coeducational activities or in sports they did not enjoy. Some student choice of activities, therefore, was considered essential.

While 22 out of 30 females (73.3%) selected the option of talking to a friend about a problem in physical education class as either their first, second, or third choice of ways to deal with that problem, only 14 out of 30 males (46.7%) made the same selection. Although that difference was significant, the fact that a friend was still the choice selected most often by male subjects would suggest that a peer counselling program would be important to students of both sexes.

7. There will be no significant differences between the attitudes of high, medium, and low achievers.

This hypothesis was rejected because significant differences were found between the responses of high, medium, and low achievers to the option of learning and practising activity skills by having the whole class follow the teacher at the same time. That option was selected as their second choice by 7 out of 20 low achievers (35%), compared with 1 out of 20 (5%), and 0 out of 20 (0%) medium and high achievers respectively. Those significant differences may indicate that low achievers have some difficulty working independently of the teacher and require a more teacher-directed approach to learning new activity skills.

Many of the subjects involved in this study commented that both

the teachers and the program organization influenced the students' attitudes toward the school physical education program and affected their level of achievement. Differences between the physical education teachers and programs the subjects experienced in grades 8 and 9 might have resulted, therefore, in a change in the students' achievement level between grades. Such a situation could help to explain the almost complete lack of significant differences in the attitudes toward physical education program organization between the high, medium, and low achievers in this study.

Recommendations for Physical Education Program Organization

The following recommendations for the organization of grade 9 physical education programs in the Greater Victoria School District have been made after careful consideration of the questionnaire results outlined in Chapter IV. In most cases, the recommendations coincide with the preferences of the majority of the subjects involved in this study. Special mention is made whenever recommendations differ from or go beyond the wishes of many of the students in accordance with this researcher's professional judgment regarding the students' best interests.

In summary, it is possible to organize secondary school physical education programs that respond to the expressed attitudes, needs, and preferences of the students without compromising the responsibilities and standards of the teacher.

Timetabling Considerations

1. Grade 9 physical education classes should be approximately one hour in length. The minimum class length should be 46 minutes, and the maximum number of minutes should be determined by the timetable at each individual school. Within those guidelines, physical education classes should be the same length as the other grade 9 subject classes in the school.

2. Grade 9 students should participate in a minimum of 3-4 physical education classes per week. In the opinion of this researcher, daily physical education should be the ultimate goal, although only one quarter of the subjects in this study preferred 4-5 classes or more per week.

3. Grade 9 physical education programs should include a mixture of coeducational and separate boys' and girls' activities, and the students should be allowed at least some opportunity to select the grouping they prefer.

4. The abilities and interests of the teachers, rather than their gender, should be the main criteria for deciding which physical education classes or activities they should instruct.

5. Whenever coeducational activities are taught, consideration should be given to the possibility of combining two or more classes and team teaching the whole group of students with a combination of male and female physical education teachers. Such an arrangement could accommodate the teacher preferences of all students by exposing them to a greater variety and choice of personalities, teaching styles and activities.

6. The grade level at which physical education is compulsory

should be the same for both male and female students.

7. Physical education should remain a compulsory subject at the grade 11 level. Consideration should be given to the extension of compulsory physical education to grade 12, since the largest number of subjects involved in this study wanted physical education to be a required subject throughout the secondary school years.

Program Decisions and Responsibilities

8. The grade 9 physical education program should offer students a combination of compulsory activities determined by the teacher and optional activities selected by the students. This researcher suggests that the teachers explain why certain activities or categories of activities are compulsory and invite the students to suggest optional activities of interest to them.

9. Physical education teachers should allow grade 9 students to choose the classmate(s) with whom they wish to learn and practise activity skills, as long as the students demonstrate their ability to work well together.

10. Physical education teachers should allow a variety of methods to be used when teams are chosen for class games. Grade 9 students should have frequent opportunities to play with and against the types of teams they enjoy most, whether they involve friends or classmates at the same or different skill levels.

11. Physical educators should expand their use of a levels or an individualized approach to teaching activity skills in order to meet the needs of all students and to make skill progression from one grade to the next a reality.

12. This researcher suggests that permanent records be kept of the skills the secondary school students complete each year in each activity in order to prevent the repetition of skills previously mastered, aid in the setting of individual goals, and assist in reporting. Consideration should be given to the possible use of a microcomputer software program to maintain those student records and produce a print-out for reporting purposes.

13. While the majority of the subjects involved in this study wanted their physical education teacher to use only an individualized or levels-based approach, this researcher suggests that teachers develop a large repertoire of teaching styles and select the method most appropriate to the students and the activity involved.

14. Whenever possible, students without gym strip should be expected to do something constructive during the physical education class, and the teacher should either select an appropriate action or offer the students a choice of options acceptable to the teacher.

15. Whenever possible, students who are temporarily unable to participate actively in all aspects of the physical education program for medical reasons should be given a modified program depending on their capabilities and the advice of their doctor. Students who are unable to participate in a modified program should be expected to use the physical education class time in a constructive manner, either by assisting the teacher and the class in some way or by doing homework in the gymnasium or in a designated study area.

16. This researcher suggests that the physical education teachers discuss with each class at the beginning of the year the importance of wearing gym strip for physical activities and the possible variety of

teacher responses to students arriving for class without gym strip, either for medical or non-medical reasons. This should be a time for student suggestions and questions in order to avoid unnecessary misunderstanding later in the year. The teachers should stress their willingness to respond in a fair and flexible manner according to their assessment of the individual circumstances and within the parameters established by the class and the teachers at the beginning of the year.

17. Physical education teachers should vary the methods of team selection for class games and experiment with both teacher- and student- selected teams. Although almost two thirds of the subjects involved in this study wanted the teachers to make up the class teams, in the opinion of this researcher, grade 9 students should be given opportunities to practise choosing teams which provide for fair and enjoyable competition without hurting the feelings of their less skilled classmates.

18. The teams for games in physical education class should definitely change at the beginning of each new activity, since equal teams in one sport are not necessarily evenly matched in another activity. During the initial phase of class instruction in an activity, the teams should change every class to allow the students to develop their individual skills while playing with many different classmates. This researcher suggests that during the last half of the activity unit, teachers should allow the students some choice in determining if and when teams change in order to provide experience in decision-making, encourage the development of team strategies, and permit friends to play together more often.

19. Physical education teachers should be aware of the importance of a variety of class groupings when students learn and practise activity skills in class. Although most students prefer to work with their friends in partners or small groups, they should also have opportunities to work alone, with the whole class following the teacher, and with the teacher.

20. Physical educators should be aware that some grade 9 students, particularly low achievers, may have difficulty working independently and may need more direction from the teacher at first. Those students should be encouraged to gradually assume greater control over the pace and direction of their own learning.

21. Teachers should involve all grade 9 students to some extent in decisions related to the development of physical education policies, program content, and class organization. The students could participate in decisions which affect everyone in the class, including the variety of activities offered, the choice of activities, the selection of partners, groups, and teams; the amount of time spent on each activity, the order in which activities occur, and variations in the rules of games. In the opinion of this researcher, the extent and suitability of student involvement in these types of decisions should be determined by the professional judgment of the teacher, depending on variables such as the activity involved, the equipment available, the weather, teacher resources, and the maturity of the students.

22. Although the majority of the students involved in this study did not think they should be involved in deciding the rules governing student behaviour in the gymnasium, this researcher suggests that the present regulations be explained by the teacher and discussed with

the students at the beginning of the school year. Student opinions and suggestions should be encouraged and considered at that time.

23. Physical education program decisions, such as the planning of new activities that may require meetings and extra work outside of the regular class time, should involve only interested and concerned students.

24. Throughout the school year, teachers should use both formal and informal methods to encourage the students to share in the decision-making process. Written questionnaires, an analysis of student activity choices, and discussions with individuals, small groups, entire classes, and student leaders are various suggestions this researcher would make to achieve greater student involvement.

Competition

25. Physical education teachers should be aware that grade 9 students enjoy many different forms of competition, particularly those which involve competing against oneself, competing without an emphasis on winning, and teams competing to win. All forms of competition should be included in the grade 9 physical education program but the three types of competitive situations mentioned above should be stressed at that grade level.

26. In the opinion of this researcher the Canada Fitness Award program should be regarded as one of several diagnostic tests available to teachers to help determine the strengths and weaknesses of both the students and the physical education program itself. The emphasis should be on the use of those test results for the purposes of fitness evaluation and counselling rather than simply as a basis for the

students' report grades. Grade 9 students could perform some of the test items as part of the regular class physical fitness program and then be given the option of completing the test and striving to earn the various awards.

27. Through observation and discussion, physical education teachers should try to become aware of their students' attitudes toward winning and, through example, continue to encourage the students to appreciate the importance of not only scoreboard results but also factors such as enjoyment, participation, skill improvement, fitness development, cooperation, effort, and team play.

Student/Teacher Interaction

28. Physical education teachers should be aware of their importance as role models to students and should demonstrate a lifestyle involving a high level of personal fitness and physical activity.

29. Physical education teachers should participate actively, as much as possible, in all phases of the program, including warm-up exercises, running, skill demonstrations, and games.

30. Teachers should explain to the class if there are supervisory or medical reasons why they are not participating in certain physical education activities, and they should concentrate instead on those areas in which their performance is both desirable and possible.

31. Physical education teachers should be careful not to monopolize the class games in which they participate.

32. Teachers should attempt to give all students at least a little individual attention in physical education class, both when the

students request assistance and when the teachers notice that help may be required.

33. Care should be taken to provide adequate encouragement and challenge for the high achievers whose enthusiasm for physical activity, advanced skill level, and membership on school teams may hide the fact that they are performing well below their personal potential in the regular physical education program.

34. Physical education teachers should try to express personal concern for all their students and avoid creating the impression that they are interested only in the highly skilled athletes in the class. This personal interest could be expressed in many ways, including spending time with students individually, helping them with skills, talking to them individually both in class and outside of class, treating everyone with fairness and respect, asking students for their help, ideas, and opinions; and encouraging students with special abilities to develop their skills further by joining school clubs and teams.

35. Teachers should be aware of the fact that some students hesitate to participate in some physical education class activities because of possible teasing from their classmates. This appears to be of greatest concern to female students, particularly when they are participating in coeducational activities. This researcher suggests that teachers try to prevent major problems from occurring in this area by such measures as discussing the problem with the whole class if necessary, providing assistance with skills, using only volunteers for skill demonstrations, allowing the students at least some choice of the activities and skills they learn, and giving the

students the opportunity to select partners and teams with whom they feel comfortable working.

36. In the opinion of this researcher, some form of peer counselling program should be established at the secondary school level to train students in skills they can use to help their fellow students deal with a variety of personal and school-related problems.

37. Physical education teachers should encourage students to discuss problems with them on an individual basis either in class or outside of class time whenever the need arises.

38. Physical educators should recognize the important role that students, guidance counsellors, other teachers, and the students' parents can play in helping both students and teachers to deal with problems in physical education class.

Evaluation and Reporting

39. The reporting of student achievement in physical education should include both a letter grade and written comments by the teacher for all students.

40. In all written comments, the physical education teachers should try to emphasize the specific area(s) in which the students are doing well or showing improvement, since positive remarks appear to be more motivating to many students than a recital of problems and failures.

41. The physical education teachers should attempt to deal with the students directly concerning class difficulties of a minor nature and reserve report comments for alerting parents to the existence of major problems.

42. At the beginning of each term or activity and again just before the reports are distributed, this researcher suggests that the physical education teachers outline and review with each class the criteria used to evaluate the students' achievement and the procedures followed in calculating the report grades.

43. Teachers should encourage the students to speak to them immediately if there are problems with the physical education report and should set aside time outside of class when discussions with the students could occur. Regular class time could also be used to speak briefly to individual students about their reports.

44. The factors of greatest importance in the reporting of achievement in grade 9 physical education should be effort, behaviour, improvement in fitness level, and improvement in skill level. Each of these factors should account for "a lot" or "a fair amount" of the report grade.

45. The factors of moderate importance in the reporting of achievement in grade 9 physical education should be fitness level, skill level, skill knowledge, and the helping of other students. Each of these factors should account for "a fair amount" or "a little" of the report grade. While the students involved in this study also considered a knowledge of rules and strategies and the wearing of proper gym strip to be of moderate importance, this researcher suggests that those two factors receive less emphasis.

46. The factors of minor importance in the reporting of achievement in grade 9 physical education should be a knowledge of rules and strategies, the wearing of proper gym strip, the officiating of class games, the marking or testing of other students, and student

self-evaluation. Each of these factors should account for "a little" of the report grade or should not count at all.

47. Student self-evaluations should not be incorporated directly into the report grade but should be considered by the teacher at the time the grades are established.

48. Physical education teachers should encourage all students to become involved "to some extent" in evaluating the program and should use a variety of formal and informal methods to obtain student input. All student suggestions should be given careful consideration and the resulting teacher responses explained.

49. Physical education teachers should try to reduce the amount of class time devoted to changing, attendance, and equipment procedures. Student volunteers could be encouraged to set up the appropriate equipment before the start of the class.

50. Teachers should ensure that the content of similar activity courses taught by different physical education instructors is approximately the same in order to expose all students to comparable experiences and to avoid conflict between teachers and between teachers and students if special arrangements are made only for certain classes.

51. Whenever activity instruction in physical education is offered at a single skill level rather than on a more individual basis, students should be encouraged to select an activity that is new to them or one in which they are relatively unskilled, in order to reduce the possibility of boredom and a repetition of a number of skills previously learned.

52. Physical education teachers should consider establishing a student leadership program, similar to the student assistant program in operation at one of the schools involved in this study, in order to train skilled and interested students to work with their peers in the regular class activities. These volunteer student assistants would be evaluated on their leadership qualities and their performance as helpers, markers, coaches, and referees.

Recommendations for Further Research

1. Further research should be conducted to determine student attitudes toward organizational aspects of school physical education programs using larger sample populations and including students at all secondary school grade levels.

2. The interview questionnaire used in the present study could be adapted to suit the needs of individual schools or classes. With large numbers of students, however, individual interviews using such a long questionnaire would be too time-consuming. Teachers, therefore, should either administer an abbreviated version of the questionnaire to large groups or ask the students to complete the entire questionnaire one or two sections at a time over a period of several classes.

3. Questions concerning student reactions to positive and negative report comments, student preferences for physical education classes for part or all of the school year, and preferred grade levels of students in each class could be useful additions to a future version of the interview questionnaire used in this study.

4. Future studies should investigate the variations in the

students' physical education report marks between terms and between grade levels to determine the causes of those variations and the implications for program design.

5. Research should be conducted to determine the effects on student attitudes toward physical education of establishing a program organization based on the students' expressed interests, needs, preferences, and suggestions.

Bibliography

Adams, R.S. Two scales for measuring attitude toward physical education. Research Quarterly, 1963, 34, 91-94.

Allport, G.W. Attitudes. In C. Murchison (Ed.), Handbook of social psychology. Worcester, Mass.: Clark University Press, 1935.

Aufderheide, S.K., Knowles, C.J., & McKenzie, T.L. Individualized teaching strategies and learning time: Implications for mainstreaming. Physical Educator, 1981, 38, 20-26.

Ausubel, D.P. Viewpoints from related disciplines: Human growth and development. In G. Hass, J. Bondi, & J. Wiles (Eds.), Curriculum planning: A new approach. Boston: Allyn & Bacon, 1974.

Barrow H.M., & McGee, R. A practical approach to measurement in physical education (2nd ed.). Philadelphia: Lea & Febiger, 1971.

Bell, M., Walters, C.E., and staff. Attitudes of women at the University of Michigan toward physical education. Research Quarterly, 1953, 24, 379-391.

Brumbach, W.B. Effect of a special conditioning class upon students' attitudes toward physical education. Research Quarterly, 1968, 40, 211-213.

Butcher, J. Student satisfaction with physical education. CAHPER Journal, 1982, 48 (5), 11-14.

Campbell, D.E. Wear Attitude Inventory applied to junior high school boys. Research Quarterly, 1968, 39, 888-893.

Campbell, D.E. Relationship between scores on the Wear Attitude Inventory and selected physical fitness scores. Research Quarterly, 1969, 40, 470-474.

Carr, M.G. The relationship between success in physical education and selected attitudes expressed by high school freshmen girls. Research Quarterly, 1945, 16, 176-191.

Carr, R., & Saunders, G. Peer counselling starter kit. Victoria, B.C.: University of Victoria, 1980.

Carre, F.A. (Ed.). British Columbia assessment of physical education 1979: General report. Victoria, B.C.: British Columbia Ministry of Education, 1980.

Carre, F.A., Carroll, L., Cousins, J., Gillrie, A., & McBride, G. Individualized instruction in the secondary school. In J.J. Jackson & H.D. Turkington (Eds.), Quality programming in H.P.E.R. (Vol. 2). Victoria, B.C.: University of Victoria, 1981.

Christensen, K.D. The effectiveness of an alternative physical education programme for low achievers. Unpublished M.Ed. project, University of Victoria, B.C., 1981.

Collis, M.L. Introduction: The underdeveloped area of elementary physical education. CAHPER Journal, 1972, 39 (2), 5-7.

Dahlgren, W.J. The Canada fitness award: Its development and use. CAHPER Journal, 1982, 49 (1), 3-5.

Darst, P.W. Learning environments to create lifelong enjoyment of physical activity. In J. Mancuso (Ed.), Quality secondary school education. JOPER, 1978, 49 (1), 44.

Drinkwater, B.L. Development of an attitude inventory to measure the attitude of high school girls toward physical education as a career for women. Research Quarterly, 1960, 31, 575-580.

Edgington, C.W. Development of an attitude scale to measure attitudes of high school freshman boys toward physical education. Research Quarterly, 1968, 39, 505-512.

Glassford, R.G., Hohol, H.J., Mendryk, S.W., Newton, D.M., & Manz, R.L. A study of compulsory physical education programs in Alberta: The programs, their costs and the incidence of injuries sustained by students. CAHPER Journal, 1978, 44 (3), 19-25; 28-29.

Hass, G. Who should plan the curriculum? In G. Hass, J. Bondi, & J. Wiles (Eds.), Curriculum planning: A new approach. Boston: Allyn & Bacon, 1974.

Hurwitz, D. Give students a choice. JOPER, 1977, 48 (5), 28-29.

Kappes, E.E. Inventory to determine attitudes of college women toward physical education and student services of the physical education department. Research Quarterly, 1954, 25, 429-436.

Kenyon, G.S. Six scales for assessing attitude toward physical activity. Research Quarterly, 1968, 39, 566-574.

Keogh, J. Analysis of general attitudes toward physical education. Research Quarterly, 1962, 33, 239-244.

Keogh, J. Extreme attitudes toward physical education. Research Quarterly, 1963, 34, 27-33.

Kneer, M.E. Kneer attitude inventory and diagnostic statements. In H.M. Barrow & R. McGee, A practical approach to measurement in physical education (2nd ed.). Philadelphia: Lea & Febiger, 1971.

Landry, D. The Canada fitness award: A secondary school perspective. CAHPER Journal, 1982, 49 (1), 33.

Lapp, V.W. Pupil objectives in high school physical education. Research Quarterly, 1933, 4 (2), 157-167.

Lewis, G.T. Student behavior: A rationale for elective physical education. Physical Educator, 1974, 31, 127-128.

Likert, R. A technique for the measurement of attitudes. Archives of Psychology, 1932, 140.

Macintosh, D. Factors influencing the election of secondary school physical education. CAHPER Journal, 1979, 45 (5), 3-4; 40.

Macintosh, D., & Albinson, J. Physical education in Ontario secondary schools. CAHPER Journal, 1982, 48 (3), 14-17.

Macintosh, D., Albinson, J., King, A.J.C., & Rabb, J. Physical education in secondary schools: Non-participation consequences: A follow-up study. Ministry of Education, Ontario, 1981.

Mancini, V.H., Cheffers, J.T.F., & Zaichkowsky, L.D. Decisionmaking in elementary children: Effects on attitudes and interaction. Research Quarterly, 1976, 47, 80-85.

Marlowe, M. Games analysis intervention: A procedure to increase peer acceptance of socially isolated children. Research Quarterly for Exercise and Sport, 1980, 51, 422-426.

Martens, R. Joy and sadness in children's sports. Champaign, Ill.: Human Kinetics Publishers, 1978.

McDonald, L.J. An elective curriculum. JOHPER, 1971, 42 (7), 28-29.

Ministry of Education of Ontario. Evaluation of student achievement: A resource guide for teachers. Toronto: Ministry of Education of Ontario, 1976.

Ministry of Education, Province of British Columbia. Secondary physical education curriculum and resource guides. Victoria, B.C.: B.C. Ministry of Education, 1980.

Ministry of Education, Province of British Columbia. Secondary school graduation requirements: A discussion paper. Victoria, B.C.: B.C. Ministry of Education, 1984.

Mista, N.J. Attitudes of college women toward their high school physical education programs. Research Quarterly, 1968, 39, 166-174.

Moore, B.Y. The attitude of college women toward physical activity as a means of recreation. Research Quarterly, 1941, 12, 720-725.

Mosston, M. Teaching physical education: From command to discovery. Columbus, Ohio: Merrill, 1966.

Muro, C., & Vea, L. Co-ed physical education at Maillard Junior Secondary School, Coquitlam. Pro Motion, 1982, 26 (2), 2-5.

National Task Force on Children's Play. Fair play codes for children in sport. Ottawa: Canadian Council on Children and Youth, 1979.

O'Neill, W.A. A study of attitudes, physical fitness and physical education in School District #44 (North Vancouver). North Vancouver, B.C., 1977.

Ontario Ministry of Education. Curriculum guideline for the intermediate division physical and health education. Toronto: Ontario Ministry of Education, 1978.

Ontario Ministry of Education. Ontario schools: Intermediate and senior divisions. Ontario Ministry of Education, 1983.

Orlick, T.D. Winning through cooperation. Washington, D.C.: Acropolis, 1978.

Orlick, T., & Botterill, C. Every kid can win. Chicago: Nelson-Hall, 1975.

Perry, J.L. Counsellor preferences of female high school students in the state of Illinois. Research Quarterly, 1975, 46, 184-190.

Saskatchewan Department of Education. A curriculum guide for kindergarten to division IV physical education. Regina, Sask.: Saskatchewan Department of Education, 1980.

Sax, G. Empirical foundations of educational research. Englewood Cliffs, N.J.: Prentice-Hall, 1968.

Scott, M.G. The contributions of physical activity to psychological development. Research Quarterly, 1960, 31, 307-320.

Scott, R.M. Attitudes of grade eight students toward physical education. Unpublished M.Ed. project, University of Victoria, 1982.

Seaman, J.A. Attitudes of physically handicapped children toward physical education. Research Quarterly, 1970, 41, 439-445.

Shrader, R.D. Individualized approach to learning. JOHPER, 1971, 42 (7), 33-36.

Simon, J.A., & Smoll, F.L. An instrument for assessing children's attitudes toward physical activity. Research Quarterly, 1974, 45, 407-415.

Sinclair, G. Microcomputers in the gymnasium: A knowledge assessment and reporting program. CAHPER Journal, 1983, 49 (6), 12-15.

Sinclair, G.D. Microcomputers in the gymnasium: A fitness analysis reporting program. CAHPER Journal, 1983, 49 (5), 14-16.

Smoll, F.L., Schutz, R.W., & Keeney, J.K. Relationships among children's attitudes, involvement, and proficiency in physical activities. Research Quarterly, 1976, 47, 797-803.

Staniford, D.J. Personalized physical education: A child-centred movement approach to learning. CAHPER Journal, 1978, 44 (6), 3-5; 40-41.

Sudman, S., & Bradburn, N.M. Asking questions. San Francisco: Jossey-Bass, 1982.

Thurstone, L.L., & Chave, E.J. The measurement of attitude. Chicago: University of Chicago Press, 1929.

Turkington, D. (Ed.). Secondary school physical education. CAHPER Journal, 1983, 49 (3), 3-4.

Van Holst, A. Moving toward independent group work. CAHPER Journal, 1981, 47 (6), 3-7.

Vincent, M.F. Attitudes of college women toward physical education and their relationship to success in physical education. Research Quarterly, 1967, 38, 126-131.

Vincent, M.F. Prediction of success in physical education activities from attitude, strength, and efficiency measurements. Research Quarterly, 1968, 38, 502-506.

Watson, G. What do we know about learning? In G. Hass, J. Bondi, & J. Wiles (Eds.), Curriculum planning: A new approach. Boston: Allyn & Bacon, 1974.

Wear, C.L. The evaluation of attitude toward physical education as an activity course. Research Quarterly, 1951, 22, 114-126.

Wear, C.L. Construction of equivalent forms of an attitude scale. Research Quarterly, 1955, 26, 113-119.

Westcott, W.L. Physical educators and coaches as models of behavior. JOPER, 1979, 50 (3), 31-32.

Westcott, W.L. Effects of teacher modeling on children's peer encouragement behavior. Research Quarterly for Exercise and Sport, 1980, 51, 585-587.

APPENDIX A

INTERVIEW FORMAT AND INTERVIEW QUESTIONNAIRE

School of Physical Education

University of Victoria

Victoria, B.C.

STUDENT ATTITUDES TOWARD ORGANIZATIONAL ASPECTS OF PHYSICAL EDUCATION PROGRAMS

Researcher: Virginia Hurst

Student Number: _____

Start Time: _____

Finish Time: _____

INTERVIEW FORMAT

Welcome to the world of research! The following questionnaire is designed to find out your attitudes toward various aspects of the organization of school physical education programs. This is not a test. There are no right or wrong answers. Your answers will not be marked nor will they affect your physical education grades in any way.

The results of this questionnaire will be valuable only if you feel free to express your opinions openly and honestly as you answer these questions. For this reason, the comments you make and the responses you mark on the questionnaire will remain confidential between us. Your teacher will not know what you said.

We will each have a copy of the questionnaire and will work through it together. You will find instructions for each question on the questionnaire. If you do not understand the instructions or the questions, just ask me for an explanation. After you mark your answer to each question on the questionnaire itself, please explain your choice to me briefly to help me understand fully the opinions and ideas you are expressing.

May I have your permission to tape our interview so that I may concentrate on our discussion instead of taking notes?

The questionnaire will take approximately 45-60 minutes to complete. There are 38 questions.

Thank you for your time and cooperation in filling out this questionnaire.

Virginia Hurst
University of Victoria

INTERVIEW QUESTIONNAIRE

NOTE: Throughout this questionnaire, the term "physical education" refers only to the activities students have in their regular physical education classes. Activities which may occur before or after school or at lunch time are not included.

Section A - Timetabling Considerations

To answer questions 1 - 6, circle the one letter (a, b, c, etc.) that corresponds to your choice.

1. How long would you like each of your physical education classes to be?

   a) 0 minutes
   b) 30 minutes or less
   c) 31-45 minutes
   d) 46-60 minutes
   e) 61-75 minutes
   f) more than 76 minutes

2. If each physical education class were the length you chose in question 1, how many classes would you like to have in a week?

   a) none at all
   b) 1-2 classes a week
   c) 2-3 classes a week
   d) 3-4 classes a week
   e) 4-5 classes a week
   f) more than 5 classes a week

3. How would you like your physical education classes to be grouped?

   a) totally coed (both boys and girls in the same class)
   b) totally separate (girls' classes for girls; boys' classes for boys)
   c) a mixture of some coed classes and some separate boys' and girls' classes.

4. You would prefer to have a physical education teacher who is:

   a) the same sex as yourself for all your classes.
   b) the opposite sex to yourself for all classes.
   c) You would like to have a combination of male and female physical education teachers.
   d) It does not matter to you if you have a male or a female physical education teacher.

5. Physical education classes should be compulsory for boys up to the end of:

   a) grade 8
   b) grade 9
   c) grade 10
   d) grade 11
   e) grade 12
   f) Physical education should not be compulsory for secondary school boys at any grade level.

6. Physical education classes should be compulsory for girls up to the end of:

   a) grade 8
   b) grade 9
   c) grade 10
   d) grade 11
   e) grade 12
   f) Physical education should not be compulsory for secondary school girls at any grade level.

Section B - Program Decisions and Responsibilities

To answer questions 7 - 16, circle the one letter (a, b, c, etc.) that corresponds to your choice.

7. How should the activities secondary school students learn in each grade in physical education be decided?

   a) The teachers should decide all the activities to be learned at each grade level.
   b) The teachers should decide some of the activities to be learned at each grade level and then allow the students to choose the rest of the activities.
   c) The teachers should allow the students to choose all the activities from a list of options offered at each grade level.
   d) The teachers should allow each class to choose one of the three options (a, b, c) mentioned above.
   e) Other.

   _____

   Please explain.

8. When you learn and/or practise activity skills in your physical education class, you prefer to work with:

   a) students at approximately the same skill level as yourself.
   b) students who are more skilled than yourself.
   c) students who are less skilled than yourself.
   d) students at various different skill levels.
   e) your friends, regardless of their skill level.

9. When you play games in physical education class, you prefer to play with:

   a) students at approximately the same skill level as yourself.
   b) students who are more skilled than yourself.
   c) students who are less skilled than yourself.
   d) students at various different skill levels.
   e) your friends, regardless of their skill level.

10. When you learn and practise activity skills in your present physical education class, you find:

    a) you are expected to repeat or review skills you think are too easy for you.
    b) you are expected to learn new skills you think are too difficult for you.
    c) both (a) and (b) described above apply to you, depending on the activity you are doing.
    d) you are expected to repeat or review some skills and to learn new ones but the level of difficulty is about right for you.

11. In your present physical education class, when you learn and practise activity skills:

    a) all students work on the same skills at the same time and move on to learn new skills when the teacher thinks the whole class is ready.
    b) students work on different skills or at different levels of difficulty in an activity depending on their ability, and move on to learn new skills when they and the teacher think they are ready.
    c) your teacher uses both methods (a) and (b) described above, depending on the activity.

12. If you had a chance to organize a physical education program that would be ideal for you, you would be able to:

    a) work on the same skills at the same time as all the other students in the class and move on to learn new skills when the teacher thought the whole class was ready
    b) work on different skills or at different levels of difficulty in an activity depending on your ability, and move on to learn new skills when you and the teacher thought you were ready.
    c) have a teacher who used both methods described in (a) and (b) above.

13. If you do not have your gym strip for physical education class, you should be:

a) allowed to participate in all the activities anyway.
b) asked to sit and observe.
c) given a study period.
d) given odd jobs to do for the physical education teachers.
e) allowed to referee games and/or to coach other students in activity skills.
f) given a written physical education assignment related to the activities the rest of the class is doing.
g) expected to make up the activity time missed by coming in before or after school.
h) a combination of the above choices or other.

_____

Please explain.

14. If you are temporarily unable to participate actively in all regular activities in your physical education classes for medical reasons, you should be:

a) expected to participate in a modified physical education program based on what you are able to do.
b) asked to sit and observe.
c) given a study period.
d) given odd jobs to do for the physical education teachers.
e) allowed to referee games and/or to coach other students in activity skills.
f) given a written physical education assignment related to the activities the rest of the class is doing.
g) expected to make up the activity time missed by coming in before or after school.
h) a combination of the above choices or other.

_____

Please explain.

15. How do you think the teams for games in physical education classes should be chosen?

a) The teacher should make up the teams so that they are approximately equal in numbers and skill level.
b) The teacher should choose the captains who then pick the teams.
c) The students should choose the captains who then pick the teams.
d) The students should be free to join whatever team they wish up to a maximum number of players.
e) The teams should be made up by random selection according to the students' birth dates, home forms, etc.
f) Other.

_____

Please explain.

16. In your opinion, the teams for games in physical education classes should:

a) stay the same all year.
b) change at the start of each new activity.
c) change every week or every cycle.
d) change every class.
e) change at any time if they are extremely unequal in numbers or skill level.
f) The students should have the choice of keeping the same teams or switching teams if they wish.
g) It is not important how often the teams change.

To answer question 17, consider all the choices in each question and select your first three preferences by writing:

1 - beside your first choice

2 - beside your second choice

3 - beside your third choice

17. When you learn and/or practise most activity skills in physical education class, you like to work:

_____ a) alone

_____ b) with a partner

_____ c) in small groups of 4-5 students

_____ d) with the whole class following the teacher at the same time.

_____ e) with the teacher

_____ f) other

_____

Please explain.

To answer question 18, circle the one letter (a, b, c, etc.) that corresponds to your choice.

18. How much do you think secondary school students should be involved in the development of physical education policies, program content, and class organization? (e.g. the rules in the gym, the variety of activities offered, the order of activities, the amount of time spent on each activity, etc.)

a) All students should be involved to a great extent.
b) All students should be involved to some extent.
c) Students should not be involved at all.
d) Only those students who are concerned and interested should have an opportunity to be involved.

Write your answers to questions 19 and 20 in the space provided below. Continue your answers on the back of the page if you need more space.

19. What kinds of decisions do you think teachers <u>should</u> allow secondary school students to make in physical education class? (Refer to question 18 for possible ideas).

_____

_____

_____

20. What kinds of decisions do you think teachers <u>should not</u> allow secondary school students to make in physical education class? (Again, refer to question 18).

_____

_____

_____

SIT BACK AND RELAX FOR A MOMENT.

YOU ARE NOW OVER HALFWAY THROUGH THE QUESTIONNAIRE!!!

Section C - Competition

To answer question 21, choose the number from the scale below (3, 2, 1, 0) that corresponds to your choice and write that number on the line at the left of each phrase.

Scale

3 - a lot

2 - a fair amount

1 - a little

0 - none

21. There are several different kinds of competition. How much time would you like to spend in your physical education classes on activities that:

_____ a) involve teams competing against each other in order to win.

_____ b) involve individuals or partners competing in order to win.

_____ c) involve competing against yourself (trying to beat your own previous best performance)

_____ d) involve competing against an established standard or level of achievement (e.g. trying to reach a certain level on the Canada Fitness Test)

_____ e) involve competition but without an emphasis on winning (e.g. playing games without keeping score).

To answer questions 22 and 23, circle the one letter (a, b, c, etc.) that corresponds to your choice.

22. In your opinion, how much emphasis do most of your fellow students place on winning in your present physical education class?

a) a lot of emphasis
b) some emphasis
c) no emphasis at all

23. In your opinion, how much emphasis is placed on winning in class by your present physical education teacher(s)?

a) a lot of emphasis
b) some emphasis
c) no emphasis at all

Section D - Student/Teacher Interaction

To answer questions 24 - 27, circle the one letter (a, b, c, etc.) that corresponds to your choice.

24. How much time do you think your physical education teacher should spend participating actively in the class activities? (e.g. exercising with the class, playing in games rather than marking, refereeing, coaching, etc.)

a) a lot
b) a fair amount
c) a little
d) none

25. How much time has your physical education teacher spent talking and/or working with you individually in your classes so far this year?

a) a lot
b) a fair amount
c) a little
d) none

26. How much time would you like your physical education teacher to spend talking and/or working with you individually in class?

a) a lot
b) a fair amount
c) a little
d) none

27. How interested do you think your physical education teacher is in you as an individual?

a) a lot
b) a fair amount
c) a little
d) not at all

Write your answer to question 28 in the space provided below.

Continue your answer on the back of the page if you need more space.

28. How would you be able to tell that your physical education teacher was interested in you as an individual?

_____

_____

_____

To answer question 29, circle the one letter (a, b, c, etc.) that corresponds to your choice.

29. Have you ever hesitated to participate in physical education class activities either last year or so far this year because you thought other students in the class would make fun of you?

a) almost never
b) sometimes
c) many times
d) almost all the time

To answer question 30, consider all the choices and select your first three preferences by writing:

1 - beside your first choice

2 - beside your second choice

3 - beside your third choice

30. If you had a problem with some part of the physical education program (e.g. other students making fun of you, difficulty learning certain activity skills), with whom would you like to discuss this problem?

_____ a) a friend

_____ b) your physical education teacher on an individual basis in class time

_____ c) your physical education teacher on an individual basis outside of class time

_____ d) your physical education teacher and one or two of your friends together in class time

_____ e) your physical education teacher and one or two of your friends together outside of class time

_____ f) your physical education teacher if class time were set aside for the whole group to talk about their concerns together

_____ g) your parents

_____ h) another teacher or guidance counsellor

_____ i) other

_____

Please explain.

THIS IS THE LAST SECTION. ONLY 8 QUESTIONS TO GO!

Section E - Evaluation and Reporting

To answer questions 31 - 33, circle the one letter (a, b, c, etc.) that corresponds to your choice.

31. How do you think physical education achievement should be reported at the secondary school level?

a) pass/fail
b) letter grade (A, B, C, etc.)
c) rating scale (e.g. good, satisfactory, unsatisfactory)
d) marks (e.g. 58, 76)
e) mark ranges (e.g. 60 - 69)
f) written comments only
g) Physical education achievement should not be reported at all.

32. Would you like to have written comments by the teacher on your physical education report?

a) yes
b) no

33. You would like to have a chance to discuss your physical education report

a) with your teacher in class time
b) with your teacher outside of class time
c) with your teacher both in class and outside of class time
d) with your teacher and your parent(s) together outside of class time
e) You would not care to discuss your report with your teacher at all.

To answer question 34, choose the number from the scale below (3, 2, 1, 0) that corresponds to your choice and write that number on the line at the left of each phrase.

Scale

3 - a lot

2 - a fair amount

1 - a little

0 - nothing

34. How much should each of the following factors count for your physical education report?

_____ a) your fitness level at the end of term

_____ b) the improvement in your fitness level during the term

_____ c) your skill level at the end of the activity unit

_____ d) the improvement in your skill level during the activity unit

_____ e) your knowledge of how to perform skills

_____ f) your knowledge of rules and strategies in sports

_____ g) your effort in class

_____ h) your behaviour in class

_____ i) your wearing of proper gym strip

_____ j) your assistance as an official in class games, tournaments, etc.

_____ k) your assistance to other students in the class in learning new skills

_____ l) your assistance with marking or testing other students in the class on certain skills

_____ m) your written self-evaluation of your own progress in an activity

To answer question 35, circle the one letter (a, b, c, etc.) that corresponds to your choice.

35. How much do you think secondary school students should be involved in evaluating the physical education program? (e.g. indicating to the teacher the parts of the program they like and dislike, suggesting improvements, etc.)

a) All students should be involved to a great extent.
b) All students should be involved to some extent.
c) Students should not be involved at all.
d) Only those students who are concerned and interested should have an opportunity to be involved.

Write your answers to questions 36 - 38 in the space provided below. Continue your answers on the back of the page if you need more space.

36. What do you like most about the way the physical education program is organized so far this year?

_____

_____

_____

37. What do you like least about the way the physical education program is organized so far this year?

_____

_____

_____

38. What suggestions do you have for improving the way the present physical education program is organized?

_____

_____

_____

CONGRATULATIONS! You made it to the end of the questionnaire! Thanks again for your help.

APPENDIX B

INTERVIEW QUESTIONING TECHNIQUES

Interview Questioning Techniques

(Carr & Saunders, 1980)

Definitions

1. Closed questions are defined as those questions which force the subject to make a specific response. Often this is a short reply or simply a "yes" or "no" answer.

2. Open-ended questions are defined as those questions which free the subject to answer in many ways and to take the discussion in the direction he/she wishes to go.

The following are examples of the types of open-ended questions and statements the researcher used during the interviews to clarify the subjects' responses and to encourage the students to explore their feelings and ideas related to the interview questionnaire:

I'm not quite sure what you mean by that. Could you explain your answer a bit more?

Could you give me an (another) example?

I'm wondering how you feel about that.

I'd be interested in hearing more about your opinion on that issue.

Could you explain why you chose that answer?

What can you think of to improve that situation?

Can you tell me more about that?

How would you like things to be?

I'd like to hear more about the reasons behind your choice.

Perhaps you'd like to talk about that further?

How do you think that could be done?

APPENDIX C

ADVANTAGES AND DISADVANTAGES OF THE INTERVIEW TECHNIQUE

Advantages and Disadvantages of the Interview Technique (Sax, 1968)

Advantages

1. The interview technique is very flexible and may be adapted to many different situations. The interviewer may rephrase questions which the subject does not understand and may respond to questions if the subject asks for clarification.

2. The interview may be structured with standardized questions outlined in advance or unstructured or a combination of both according to the plans of the researcher. In a relatively unstructured interview, the subjects are encouraged to explain their ideas and to expand on their answers in a way that may yield more useful information than a strictly structured interview.

3. The interviewer has an opportunity to observe the subject's response in several ways. The subject's posture, facial expressions, tone of voice, and general behaviour may tell the interviewer as much as the actual content of the responses. Moore (1941) claimed the use of the interview technique resulted in the collection of added data and a better understanding of the attitudes of college women toward physical activity as a means of recreation.

4. A skilled interviewer may develop a rapport with the subject which will enhance the subject's motivation to respond honestly and openly, and thus add to the validity of the responses. Thurstone and Chave (1929) stated that attitudes should not be measured in situations where the subjects are under pressure to hide their true feelings.

5. The interviewer is able to standardize the conditions under which the questions are asked, control the amount of time available, and

influence, to some extent, the amount of care taken by the subject in answering the questions. Subjects may give less thoughtful and more superficial answers to questionnaires than to interviews (Ontario Ministry of Education, 1976).

Disadvantages

1. The questions and/or explanations of an unskilled interviewer may reflect his/her personal beliefs, values, and biases which may influence the subject's response and the outcome of the investigation.
2. Totally unstructured interviews may present problems when the researcher begins to summarize, categorize, and interpret the mass of data collected.
3. The interpretation of the subject's behaviour may be influenced by the interviewer's personal biases.
4. If the interviewer and the respondent establish a negative relationship, the cooperation of the subject and the validity of the responses may be affected.
5. The number of subjects involved in the research study is limited by the amount of time available to both the interviewer and the respondents.

APPENDIX D

LETTER SENT TO PANEL

OF EXPERTS

Apt. 212,
1680 Poplar Street,
Victoria, B.C.
V8P 4K7
May 6, 1983

Dear

Here is the first draft of the questionnaire part of my thesis proposal. It has to be revised, refined, and generally taken apart (and put back together again) during May and June. An important part of this process involves getting feedback from experts in the field (that's you!) regarding both the content and the format of the questionnaire. I will be sending it to Phys. Ed. colleagues in North York and Victoria, and, of course, to various teacher friends.

Already the ideas I have received from some of the professors and P.E. graduate students at the University of Victoria have been very helpful. I will also be conducting a pilot study using the questionnaire with a few grade 8 students here in Victoria, and I expect them to suggest even more changes. As a result, the questionnaire I administer during my actual research study with grade 9 students in September and October will undoubtedly be drastically different.

You have a marvellous opportunity to become involved in this exhilarating process by reading the questionnaire in your "spare" time and evaluating it according to the following criteria:

1) Is the vocabulary suitable for grade 9 students?
2) Are the questions worded so that they can be understood easily? If not, how would you suggest they be worded?
3) Should the order of the questions in each section be changed?
4) Should the order of the sections within the questionnaire be changed?
5) Is the questionnaire too long?
6) Should some of the questions be omitted? If so, which ones?
7) Do you think the five aspects of program organization I have chosen to investigate are important?
8) Have I left out aspects of program organization you think should be included? If so, what are they?
9) Can you suggest other questions I should add to the questionnaire?
10) Does the lay-out of the questionnaire need to be changed? If so, how do you think it should look?

Please write your suggested changes and/or comments on the questionnaire itself IN PENCIL so that I can recycle these things (they are expensive to photocopy by the millions). I would really appreciate it if you could reply as soon as possible so that I can pilot-test the

revised questionnaire in June. You will notice I have enclosed a stamped, self-addressed envelope for you to use when returning the questionnaire to me. (How's that for service?)

Many thanks for your help with this project. I will be glad to send you a copy of the "finished product" if you would like to receive one.

Sincerely,

Virginia Hurst

APPENDIX E

INTRODUCTORY LETTER SENT TO PRINCIPALS

Apt. 212,
1680 Poplar Street,
Victoria, B.C.
V8P 4K7
June 15, 1983

Dear

I have received permission from the University of Victoria Human Subjects Committee and the Superintendent of District 61 (see enclosed letter) to conduct my Master's degree research in the Greater Victoria School District this year on the topic of student attitudes toward organizational aspects of physical education programs.

Last month, as part of a pilot project, I interviewed individually several grade 8 students at Arbutus Junior Secondary School using a questionnaire designed to determine student attitudes, and I am now in the process of revising and refining that questionnaire for use in my research study in the fall. This study will involve individual interviews with sixty grade 9 students selected at random from District 61, and I am hoping that all secondary schools in the district with a grade 9 student population will participate.

Since I am interested in studying attitudes of high, medium, and low achievers in physical education, I will require the grade 9 students' final grade 8 marks in physical education in order to divide them into those three achievement levels. I would like to visit the secondary schools in District 61 in September in order to obtain those grade 8 marks and would appreciate your cooperation and assistance in that undertaking. The confidentiality of the students' marks will be ensured as outlined in the research application submitted to the superintendent.

Should you wish further details concerning this project, please contact me at the above address or by telephone (721-3655). If I do not hear from you by the end of June, I will assume that you would like your school to be included in this research study, and I will contact you again in September to arrange a convenient time for me to visit and record the students' physical education marks.

Thank you for your consideration of this request.

Sincerely,

Virginia E. Hurst
Graduate Student
University of Victoria

APPENDIX F

LETTER SENT TO PRINCIPALS CONCERNING

RANDOMLY SELECTED STUDENTS

October 7, 1983

Dear

The following grade 9 students from your school have been selected at random to participate in my research study on the topic of student attitudes toward the organization of physical education programs:

Student Code #	Student Name

I would appreciate it very much if you could contact the above students immediately and obtain their consent to take part in this project. Should parental permission also be required, I have enclosed, for your use, copies of a letter addressed to parents explaining the research study briefly. Selected students who may have transferred from your school recently or who do not wish to be involved in this study will be replaced by substitute subjects also chosen at random.

...../2

Since the process of interviewing individually a total of 60 students throughout District 61 is a lengthy one, I would like to begin as soon as possible. I will, therefore, return to your school on Thursday October 13 or Friday October 14 to make arrangements with you to interview your students at a time convenient to all concerned. Should you be unavailable on those two days, it would be most helpful if you could designate someone else to make these arrangements with me. I hope to complete the entire interview process in all eight schools involved during the period from October 17 to the end of November.

Please contact me (721-3655) if you have any questions or concerns about these arrangements.

Sincerely,

[redacted]

Virginia E. Hurst, Graduate Student
University of Victoria

APPENDIX G

LETTER SENT TO PARENTS OF RANDOMLY SELECTED STUDENTS

October 5, 1983

Dear Parent:

Your son/daughter has been selected at random from over 1200 grade 9 students in the Greater Victoria School District to participate in a research study on the topic of student attitudes toward the organization of school physical education programs. This study has the approval of the Superintendent of the Greater Victoria School District, the University of Victoria Human Subjects Committee, and the principals of the eight participating secondary schools. It is hoped that the results of this study will assist physical education teachers in the planning of future programs.

During the next two months, I will interview individually each of the 60 students selected for the project, using a questionnaire designed to determine their attitudes toward the way their school physical education program is organized at the present time. It is expected that each interview will last approximately 45 - 60 minutes. Every attempt will be made to conduct the interview during one of the student's regular physical education classes or at another convenient time in his/her school timetable. The individual opinions expressed by your son/daughter will remain confidential and will not affect his/her physical education grade in any way.

Should you wish further details concerning this project, or not wish your son/daughter to participate in the study, please contact your school principal immediately.

Sincerely,

[redacted]

Virginia E. Hurst, Graduate Student
University of Victoria

VEH/vt

APPENDIX H

LETTER SENT TO PRINCIPALS CONCERNING THE PHYSICAL EDUCATION PROGRAM AND POLICIES

Apt. 212,
1680 Poplar Street
Victoria, B.C.
V8P 4K7
February 8, 1984

Dear

I am in the process of analyzing the questionnaire responses obtained in the interviews I conducted with students from your school last fall, and would like to confirm some of the details of the present physical education program. During my previous discussions with you, your staff, and the students, I was able to obtain most of the background information I require but I wish to verify the accuracy of some data and clarify the physical education department's policies in a few areas where student answers were either uncertain or conflicting. Please be assured that this information will not be used to identify the policies of individual schools but rather to establish a district-wide context for the students' responses.

I would appreciate it very much if you would ask someone in the physical education department to respond to the brief questionnaire attached and return it to me in the enclosed envelope as soon as possible. I hope this request does not cause you or your staff any undue inconvenience.

I look forward to contacting you again later in the school year regarding the results of this study. Many thanks for your continued cooperation.

Sincerely,

Virginia E. Hurst
University of Victoria

APPENDIX I

PHYSICAL EDUCATION TEACHERS' QUESTIONNAIRE

PHYSICAL EDUCATION TEACHERS' QUESTIONNAIRE

SCHOOL _____

Please check the accuracy of the information in statements 1-3 and make any necessary corrections.

1. The Gr. 9 students have P.E. _____ times in _____ for

_____.

2. Grades _____ are in the same P.E. Class.

3. Most Gr. 9 classes are _____

_____.

For questions 4-8, please circle the one answer that best applies to your P.E. program.

4. How are the Gr. 9 P.E. activities decided?

   a) All activites are decided by the teachers and are compulsory for all the students to take.
   b) The teachers have made some activities compulsory for all students and the students are allowed to choose the rest of the activities.
   c) The students are allowed to choose all the activities they take from a list of options offered by the teachers.
   d) Other.

   _____
   Please explain.

5. In most Gr. 9 P.E. classes:

   a) all students work on the same skills at the same time and move on to learn new skills when the teacher thinks the whole class is ready.
   b) students work on different skills or at different levels of difficulty in an activity depending on their ability, and move on to learn new skills when they and the teacher think they are ready.
   c) the teachers use both methods (a) and (b) described above, depending on the activity.

6. Are the Gr. 9 students involved in making decisions concerning the P.E. Department policies, program content, and class organization?

   a) Yes _____
      Please explain what decisions students are involved in.

   b) No.

7. Are the Gr. 9 students involved in evaluating the P.E. program?

   a) Yes _____

      Please explain how this is done.

   b) No.

8. The Gr. 9 P.E. teachers make written comments each term on the reports of:

   a) all students.
   b) most students.
   c) some students.
   d) a few students.
   e) The teachers do not make any written comments.

Please answer question 9 by writing in the blanks to the left of each phrase.

9. How much do each of the following factors count for a Gr. 9 student's P.E. report mark?

Approximate percentage of the total mark	
_____	a) the fitness level at the end of the term.
_____	b) the improvement in the fitness level during the term.
_____	c) the skill level at the end of the activity unit.
_____	d) the improvement in skill level during the activity unit.
_____	e) knowledge of how to perform skills.
_____	f) knowledge of rules and strategies in sports.
_____	g) effort in class.
_____	h) behaviour in class.
_____	i) wearing of gym strip.
_____	j) assistance as an official in class games, tournaments, etc.
_____	k) assistance to other students in the class in learning new skills.

_____ l) assistance with marking or testing other students in the class on certain skills.
_____ m) a written self-evaluation of the student's own progress in an activity.

For questions 10 and 11, please circle all the answers that apply.

10. If a student does not have his/her gym strip for P.E. class he/she is:

a) allowed to participate in all the activities anyway.
b) asked to sit and observe.
c) given a study period.
d) given odd jobs to do for the P.E. teachers.
e) allowed to referee games and/or coach other students in activity skills.
f) given a written physical education assignment related to the activities the rest of the class is doing.
g) expected to make up the activity time missed by coming in before or after school.
h) given a lower P.E. mark _____
Please explain.
i) other. _____
Please explain.

11. If a student is temporarily unable to participate actively in all regular activities in the P.E. class for medical reasons, he/she is:

a) expected to participate in a modified P.E. program based on what he/she is able to do.
b) asked to sit and observe.
c) given a study period.
d) given odd jobs to do for the P.E. teachers.
e) allowed to referee games and/or coach other students in activity skills.
f) given a written physical education assignment related to the activities the rest of the class is doing.
g) other. _____
Please explain.

Many thanks for your help! If you have any further comments, please write them down and then return the completed questionnaire to me in the enclosed envelope.

APPENDIX J

PILOT PROJECT

Pilot Project

Purpose

The pilot project was designed to assist the interviewer in revising and refining the interview questionnaire to make it suitable for use with grade nine students. The pilot project subjects were asked to comment on the appropriateness and clarity of the instructions, the wording and content of each individual question, the range of options available in the multiple-choice questions, and the importance of the various organizational aspects of school physical education programs included in the questionnaire.

The pilot project also afforded the researcher an opportunity to become familiar with the interview format, to practise the interview questioning techniques described in Appendix B, and to establish the approximate time required for each interview.

Selection of Subjects

In April 1983, permission was received from the Human Subjects Committee of the University of Victoria and the Superintendent of Schools for the Greater Victoria School District to conduct both the pilot project and the research study.

In May 1983, two grade eight boys and two grade eight girls from Arbutus Junior Secondary School were selected for the pilot project with the advice, cooperation, and assistance of the school principal and members of the physical education department. All four subjects were volunteers and were recommended for inclusion in the pilot project on the basis of their willingness and ability to articulate their ideas and opinions. The students' physical education grades, which were in

the C to A range, were not a factor in their selection. Grade eight students were involved in the pilot project since their peers would form the grade nine population for the research study conducted in the autumn of 1983.

Instrumentation

A questionnaire was developed for the pilot project to determine student attitudes toward the following organizational aspects of school physical education programs: timetabling considerations, program decisions and student responsibilities, evaluation and grading, competition, and allocation of teacher time. The questionnaire included a total of 40 questions. A written interview format preceded the questionnaire and outlined the procedures to be followed by both the subject and the interviewer.

A member of the University of Victoria faculty with expertise in statistics and computer science was consulted regarding the construction of the questionnaire to facilitate future processing of the subjects' responses and to ensure that the data would be in proper form for analysis.

Validity. The content validity of the questionnaire used in the pilot project was evaluated by a panel of experts consisting of the researcher's supervising committee members, graduate students and a faculty member in the University of Victoria School of Physical Education, and former physical education teaching colleagues of the researcher. Each member of the panel of experts received a copy of the pilot project interview format and questionnaire. The criteria for

evaluating the questionnaire were outlined verbally to the University of Victoria panel members and in written form for the researcher's physical education colleagues (see Appendix D). A total of 22 people contributed to this validation process. Their comments and suggestions were summarized and included in the pilot project results and recommendations sections below.

Collection of Data

In May 1983, each of the four pilot project subjects was interviewed individually at a time during the school day acceptable to the principal and convenient for both the student and the interviewer. In most cases, each interview occurred during one of the students' regular physical education periods. The length of time required for each interview ranged from 45 minutes to almost two hours.

Each subject was given a pencil, an eraser, and a copy of the questionnaire and was asked to read the interview format which outlined the procedures to be followed. Verbal permission was sought from each subject for the taping of the interview, and all four subjects consented to the use of the cassette tape recorder.

The interviewer then explained the purpose of the pilot project and the students' role in revising and refining the questionnaire. The students were informed that they were chosen to participate in the project because of their ability to express their ideas openly and clearly, both in response to the actual questions and with regard to possible questionnaire improvements. The subjects were asked to "think aloud" for the interviewer and were assured again that all opinions and

suggestions they expressed would be treated confidentially and with respect.

In order to assist the students in developing the habit of explaining verbally their response to each question after they had marked their answer on the questionnaire, the interviewer encouraged them to complete the following statement: "For question _____ I chose _____ because _____." This format helped to structure the subjects' comments and also enabled the researcher to follow their responses more easily during the replay of the tape recording.

The students were reminded to answer the questions strictly from their own point of view and not that of their peers. When answering questions that asked what they thought should happen or what they would like to have happen in their physical education classes, the subjects were instructed to think of the ideal situation for them and to assume that this situation could occur. Their answers were not to be restricted by what was happening at their school or by what they thought had to happen because of present conditions.

Reliability. All interviews for both the pilot project and the research study were conducted by the researcher. The reliability of the interview results was enhanced by the interviewer's previous counselling training and experience, the practice in interviewing techniques provided by the pilot project, the researcher's strict adherence to the interview format outlined in Appendix A, the structured nature of the questionnaire itself, and the use of a cassette tape recorder to obtain a complete and accurate record of each subject's verbal responses to the questionnaire and the discussions

that occurred between the subject and the researcher in each interview session.

Analysis of Data

The subject's name and the start and finish times for each interview were recorded on the front of the questionnaire. After each interview was completed, the researcher listened to the tape recording of the session and transcribed the relevant information. All student comments and suggestions were considered by the interviewer both when conducting subsequent interviews and when revising the questionnaire for use in the research study. A summary of those suggestions and revisions has been made in the results and recommendations sections below.

Results

The four grade eight students interviewed in the pilot project had few problems with the format, vocabulary, or content of the questionnaire, and they did not anticipate that their fellow students would have many difficulties. They did indicate, however, that the wording of some questions and instructions might be confusing to their peers, and suggested that those sections be simplified or reworded. The students also advised the interviewer to be prepared to explain any question in greater detail and to read some of the more complicated parts of the questionnaire aloud for less skilled readers.

The subjects all expressed interest in the topic of the questionnaire, and they responded willingly and even enthusiastically to their role in spite of the sometimes lengthy interview sessions. It

was expected that the pilot project interviews would take longer than the later research study interviews because of the emphasis in the pilot project on both a discussion of the subjects' responses to the questions and an evaluation of the questionnaire itself. As the researcher became more experienced with the interview format and as some student suggestions were repeated, thus requiring less discussion, the interview time gradually decreased. It was decided, therefore, that an allotment of 45-60 minutes for each research study interview was a realistic time which would coincide with the average class length at most schools and would provide for optimal student involvement and interest.

The subjects were allowed whatever time they needed to express their ideas, and they were advised to continue on to the next question whenever they were ready. The interviewer interrupted their pace only when it was necessary to ask for clarification of their comments. During long pauses in the discussion when the subject was reading a question, thinking, or writing an answer, it was found to be less distracting to allow the tape to run than to switch the tape recorder off and on. Shortly after the interview began, both the subject and the interviewer tended to forget that the tape recorder was playing, and the use of the machine did not seem to interfere with the discussion in any way.

By providing an opportunity for the students to explain each of their answers, it was possible for the interviewer to determine if the question had been understood correctly and if the choices offered were reasonable in the subjects' opinion. In some cases, the students'

responses were used to construct new choices which appeared in the revised version of the questionnaire.

It was difficult at times for the interviewer to remember to keep personal opinions and biases out of the discussions that often developed as a result of the issues raised by the questionnaire. The pilot project interviews themselves provided the researcher with invaluable experience and practice, and the subsequent reviews of the tape recordings reinforced the importance of limiting the interviewer's involvement to clarifying the questionnaire when necessary, paraphrasing the subjects' responses accurately, and asking for further explanations when appropriate. The fact that the students were expected to mark their answer to each question on the questionnaire before discussing it also served to reduce the interviewer's influence on their responses.

The panel of experts agreed that the interview questionnaire had content validity and that the important organizational aspects of school physical education programs were covered well. The vocabulary used throughout was judged to be suitable for use with most grade nine students but there was some concern that poor readers might find the questionnaire long and difficult. It was thought, however, that the individual nature of each interview, the opportunity for the subjects to explain their choices, and the availability of the researcher to answer the subjects' questions, read parts of the questionnaire if necessary, and provide personal motivation could overcome most of the problems.

Some of the experts suggested that having different types of questions within each section would be too confusing for the subjects,

while others on the panel thought the variety of questions essential to maintain the students' interest. The researcher decided to retain the various types of questions on the understanding that some explanation of the different instructions might be necessary.

In summary, the panel of experts approved of the content, direction, and format of the study, and many members commented favourably on the humanistic, caring approach shown by the researcher toward both the subjects and the organization of school physical education programs. There was a definite feeling among the experts that the students involved in answering the questionnaire would benefit from that experience and that the results of the research study would assist physical education teachers in planning suitable programs.

Recommendations

While the essential outline of the pilot project interview format and questionnaire remained unchanged for the research study, many important and necessary refinements were made as a result of the suggestions offered by the pilot project subjects and the panel of experts selected by the researcher. Further information concerning techniques of questionnaire construction outlined by Sudman and Bradburn (1982) was also considered.

The following summary includes the revisions incorporated into the final version of the interview questionnaire used in the research study (see Appendix A):

1. Space was provided on the front of the questionnaire for the subject's identification number and the start and finish times for the interview.

2. The approximate time required for the interview and the number of questions involved were included in the interview format.

3. The interview format was condensed to fit on a single page.

4. The term "physical education" was defined at the beginning of the questionnaire.

5. The wording was changed for three of the five questionnaire headings involving the organizational aspects of school physical education programs.

6. The order of the five major sections of the questionnaire was altered to position the easiest and least threatening section first, the longest and most difficult section second (before the subjects had a chance to tire or lose interest), and the section concerned with evaluation and reporting last (to enable the students to apply some of the ideas they might have developed as a result of earlier questions and discussions).

7. The order of some questions within sections of the questionnaire and the order of some answer choices within questions were changed to present a more logical progression.

8. The number of answer choices was decreased in some questions for the purposes of simplicity and increased in others to include new options recommended by the pilot project subjects and/or the panel of experts.

9. Some complete questions or parts of questions were deleted because they were confusing or yielded relatively unimportant information.

10. Many revisions were made in the interview format, the various sets of instructions, and the actual questions in order to improve their accuracy, clarity, consistency, and legibility.

11. Important words were underlined in some parts of the interview format and the questionnaire to provide additional emphasis and to help ensure a correct reading of those sections.

12. The subjects were allowed an unrestricted number of answer choices within two questions in order to reflect the complexity of the decisions required in those situations.

13. The questions were designed to involve a minimum amount of writing on the part of the subjects. Those questions which did require a short written answer were interspersed throughout the questionnaire.

14. When the students were asked to evaluate their present school physical education program in the final section of the questionnaire, they were instructed to concentrate on the organizational aspects of the program.

15. No question was split between two pages of the questionnaire. When a single question had special instructions, those instructions appeared on the same page as the question itself.

16. Separate questions with related content were placed on the same page wherever possible.

17. Students who indicated they would like a physical education program that included a mixture of some coeducational and some separate boys' and girls' classes were then asked to indicate verbally which activities (from a list of examples mentioned by the interviewer) they would prefer to do with each group.

18. Before each subject answered the questions concerning the

amount of time the teacher spent with students individually, the interviewer defined "individually" as meaning personal attention given by the teacher to the student regardless of whether the teacher was dealing with the student alone, in a small group, or with the whole class.

19. The interview format was typed in script to distinguish it from the rest of the questionnaire and to give it a more informal appearance.

20. The instructions for the various questions were enclosed in a box to make them more visible.

21. Motivating statements were added to the questionnaire at the mid-point, before the final section, and at the end to help maintain a relaxed, friendly atmosphere and to provide a brief respite for both the researcher and the subjects from the possible strain of the interview process.

VITA

Surname: HURST Given Names: Virginia Ellen

Place of Birth: Toronto, Ontario

Date of Birth: November 19, 1947

Educational Institutions Attended, with Dates of Entering and Leaving:

University of Toronto, Ontario 1965 to 1970

University of Victoria, B.C. 1982 to 1984

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

B.P.H.E. 1969 University of Toronto, Ontario

B.Ed. 1970 University of Toronto, Ontario

Honors and Awards:

Margaret Eaton Scholarship, University of Toronto, 1969

University of Victoria Fellowship 1982/84

Publications:

PARTIAL COPYRIGHT LICENSE

I hereby grant the right to lend my thesis or dissertation (the title of which is shown below) to users of the University of Victoria Library, and to make *single copies only* for such users or in response to a request from the library of any other university, or similar institution, on its behalf or for one of its users. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by me or a member of the University designated by me. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis/Dissertation

STUDENT ATTITUDES TOWARD ORGANIZATIONAL ASPECTS

OF SECONDARY SCHOOL PHYSICAL EDUCATION PROGRAMS

Author [redacted]
Signature

VIRGINIA ELLEN HURST
Name

June 11, 1984
Date