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**ATTITUDES OF YEAR-ROUND PHYSICAL EDUCATION
TEACHERS TOWARDS YEAR-ROUND PHYSICAL EDUCATION**

Peggy L. McGuire

**A dissertation presented to the
Graduate Faculty of Middle Tennessee State University
in partial fulfillment of the requirements
for the degree Doctor of Arts
December 1996**

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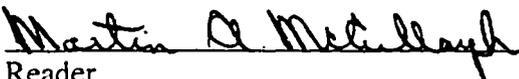
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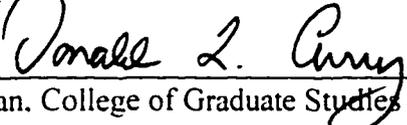
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ABSTRACT

Attitudes of Year-Round Physical Education Teachers Towards Year-Round Physical Education

Peggy L. McGuire

Many public school districts in the United States currently have year-round calendars. Whereas several attitudinal studies concerning Year-Round Education (YRE) have been conducted, none were specific to physical education. Thus, the purpose of this study was to examine the attitudes of physical education teachers regarding year-round physical education within the dimensions of teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment. In addition, an effort was made to describe the relationship of the physical education teachers' attitudes according to demographic characteristics. The instruments used in this study were constructed after reviewing several questionnaires and demographic data sheets pertaining to YRE. Following a stratified random sampling of year-round schools nationwide, 992 physical education teachers were mailed evaluation packets of which 393 were returned. However, only 342 surveys were used to generate statistics since some were deemed unusable. The surveys were analyzed using descriptive, step-wise regression, MANOVA, and Chi-Square statistics. The 0.05 level of probability was used to determine significance. The results of this study revealed that a majority of physical education teachers agreed that they preferred using a year-round calendar more than a traditional calendar. In addition, statistical differences were found for the variables of type of school, track system, continue to teach, and curriculum guides. Groups having a

more favorable disposition towards YRE included elementary teachers, single-track teachers, those planning to continue instructing at a year-round school, and those who had access to a curriculum guide. The less favorable groups included secondary teachers, multi-track teachers, those who planned to discontinue instructing at a year-round school, and those not having access to a curriculum guide. In conclusion, this study determined that differences existed between physical education teachers' attitudes towards year-round physical education. Further research was recommended to identify localized issues affecting teachers and children participating in physical education classes within year-round schools.

ACKNOWLEDGMENTS

A very special thank-you is extended to Dr. Timothy Michael for spending an infinite number of hours providing direction for this project. During the duration, Dr. Michael continuously confirmed his devotion to students by assisting many of us with his expertise and knowledge. Dr. Michael's dedication helped this particular student achieve a dream.

To Dr. Douglas Winborn, I am grateful for his kind encouragement. Dr. Winborn's comments and smiles helped to provide the motivation needed to complete the paper.

To Dr. Martin McCullough, I express appreciation for helping to formulate the idea for this body of work. Dr. McCullough's visions of educational alternatives contributed greatly in examining physical education in year-round schools.

To Dr. John David Bass, I am thankful for assistance in obtaining the statistics used in this research. Dr. Bass spent many unselfish hours providing the technical support needed to analyze the collected data.

Lastly, I would like to thank all the others who were instrumental in making this work possible. These people include Dr. Guy Penny, Dr. Martha Whaley, Lee Allsbrook, Dr. William Connelly, Dr. Ryan Gray, Dr. Jack Arters, Betty McFall, Monika Kosich, William Parr, Carol Connelly, Jeff Bonacci, Daniel McMasters, and Danica Gray. Furthermore, special thanks are sent to the members of my family for their love and

support. Finally, I wish to extend a special thank-you to members of my survey validation panel and to the year-round physical education teachers who participated in this study.

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CHAPTER 1

Introduction

Among the eight recommendations concerning school reform offered by the National Education Commission on Time and Learning (1994) was the suggestion that schools be reinvented “around learning, not time” (p. 29). Traditionally, the majority of schools in the United States have operated on 180 day calendars with classes beginning in September and ending in June. Ballinger (1988), however, stated that the “September-June school calendar has outlived its usefulness” (p. 57).

Restructuring of the traditional school calendar to date has been largely accomplished by the establishment of year-round education (YRE) schools (National Education Commission on Time and Learning, 1994). In fact, YRE schools have existed within the United States for nearly a century. While YRE schools “do not provide additional time for either learning or nonacademic services....their existence indicates that alternative calendars are feasible...” (National Education Commission on Time and Learning, 1994, p. 39).

The National Association for Year-Round Education (NAYRE) (1996) reported that 37 states now have YRE public schools, involving 2,369 schools. Furthermore, records indicated that 1,754,947 students attend YRE public schools. In addition, NAYRE noted that 10 states have 47 private YRE schools that serve 10,616 students.

Fundamentally, YRE schools have been established for either educational or fiscal reasons. The founding of year-round schools for educational reasons is based on the

premise that “children learn continually” (Ballinger, 1988, p. 57). Therefore, calendars have been adapted that offer single-track year-round instructional blocks interspersed with brief vacation breaks. On the other hand, several school districts have incorporated YRE as a means of defraying the construction costs required of new buildings. School calendars have been developed to accommodate larger numbers of students within an existing structure by using a multi-track system of organization. Multi-track organization guarantees that at any given time during the school year, a percentage of staff and students are on vacation (Hawkins, 1992).

The restructuring of the traditional school calendar by school officials has an impact upon teachers who instruct curriculum courses, as well as, the curriculum. Currently, physical education is a curriculum course required in 47 of the 50 States throughout the nation (Pate, Small, Ross, Young, Flint, & Warren, 1995). In fact, the School Health Policies and Programs Study (SHPPS) recently demonstrated “that physical education is an established component of the educational program in virtually (sic) states, districts, and schools in the United States” (Pate, et al., p. 317). With regard to course content and facilities and equipment, the physical education curriculum is unique.

Historically, attitudes of physical educators in traditional school settings have been documented. Concerning YRE, however, no effort has been made to distinguish the remarks of physical education teachers from the remarks of classroom teachers. Since a trend exists towards the proliferation of schools incorporating YRE, research is needed to

assess the perceptions of physical educators regarding the current status of physical education within YRE schools.

Statement of the Problem

Research concerning the status of physical education in year-round school is relatively non-existent. Because a trend exists towards an increase in the number of year-round schools, an investigation was deemed necessary to determine how non-traditional calendars effect teachers and students. More specifically, positive and negative attributes of teaching in year-round schools and upon the physical education curriculum were examined.

Purpose of the Study

The primary purpose of this study was to examine physical education teachers' attitudes regarding physical education in YRE schools within the dimensions of teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment. In addition, an effort was made to describe the relationship of the physical education teachers' attitudes according to demographic characteristics.

Research Questions

During the course of this research, the following research questions were investigated:

1) Were year-round physical education teachers more inclined to favor the year-round school calendar than the traditional school calendar with regards to individual questionnaire items in the subsequent dimensions:

- a) teacher satisfaction
- b) student achievement
- c) student discipline
- d) units of instruction
- e) staff development
- f) facilities and equipment

2) Was there a difference in attitudes between physical education teachers on single-track calendars versus multi-track calendars with regards to the subsequent dimensions:

- a) teacher satisfaction
- b) student achievement
- c) student discipline
- d) units of instruction
- e) staff development
- f) facilities and equipment

3) Was there a difference in attitudes between physical education teachers instructing in YRE elementary schools versus YRE secondary (middle and high) schools with regards to the following dimensions:

- a) teacher satisfaction
- b) student achievement
- c) student discipline
- d) units of instruction
- e) staff development
- f) facilities and equipment

4) Were any other personal or professional characteristics a determining factor with regards to the following dimensions:

- a) teacher satisfaction
- b) student achievement
- c) student discipline
- d) units of instruction
- e) staff development
- f) facilities and equipment

Assumptions

The basic assumptions of this study were:

- 1) the teachers selected for this study were a representative population of YRE physical education school teachers; and
- 2) the teachers' expressed their true perceptions of the variables in question.

Delimitations

This study was delimited by the following factors:

- 1) the survey of teacher attitudes regarding physical education in YRE schools was confined to a stratified random sample of the known number of possible respondents.
- 2) the items on the survey were valid and reliable measures of the areas under investigation.
- 3) the survey was administered to public school teachers only.

Definition of Terms

Attitude/Perceptions--"A personal disposition common to individuals, but possessed to different degrees, which impels the individual to react to objects, situations, or propositions in ways that can be called favorable or unfavorable" (Rice, 1975, p. 9).

Extended Contracts--Contracts offered to teachers to instruct beyond their districts' or states' minimum requirements.

Intercession/Off-Track/Vacation--"The period of time between terms when all or part of the student body is on vacation and does not attend school" (Sanders, 1991, p. 12).

Multiple-Track/Multi-Track--“The student body is divided into several groups referred to as tracks. The instructional and vacation periods of each track are staggered so that at least one track is on vacation at all times...Depending on the calendar selected and the student body size, from 20-to 50% of the students are always on vacation” (Hawkins, 1992, p.4).

On-track--“The days students and teachers are in school” (Hawkins, 1992, p.4)

Single-track--“All students and teachers in the school attend classes and have vacations on the same schedule” (Hawkins, 1992, p. 4)

Traditional calendar-- All students attend school from September to June or a slight variation thereof.

Year-round education (YRE)--“Year-round education is the restructuring of the school year in such a way that the long summer vacation is broken up into shorter vacation periods throughout the year for the purpose of providing more continuous learning” (Ballinger, Kirschenbaum & Poimbeauf, 1987, p. 31)

CHAPTER 2

Review of Related Literature

The Review of Literature was divided into the following six areas relating to year-round education: A Rationale for Year-Round Education; Inferences Against Year-Round Education; A Brief History of Year-Round Education; Types of School Calendars Utilized in Year-Round Education; Attitudes of Teachers Towards Year-Round Education; and Physical Education in Year-Round Education.

A Rationale for Year-Round Education

According to Glines (1987), "Year-round education (YRE) is a philosophy - a concept - related to the present quality of life" (p. 14). In describing YRE, the writer stated that it has several advantages for the lifestyles of many members of contemporary society since it can furnish calendar and curricular alternatives. Furthermore, Glines emphasized that YRE provides a chance for "continuous lifelong learning" (p. 14). This attribute of YRE may become increasingly important as "the world edges into the 21st Century" (p. 14).

Concerning the prevalence of schools incorporating YRE calendars, Ballinger (1987) wrote "Year-round education, in all its kinds and forms, is here to stay..... It is instructionally sound and it has shown its worth fiscally" (p. 16). In 1988, Ballinger detailed the reasons why school systems implemented YRE for instructional reasons. These reasons included more continuous learning and the ease of structuring the

curriculum into “units, segments, or blocks of learning” (p. 61). Other instructional benefits included improved retention of previously learned instruction and opportunities for more frequent remediation due to the altered calendar.

In 1994, Worthen and Zsiray cited advantages most customarily given by proponents implementing YRE programs. Two favorable claims were the capacity for improved student learning and professional enhancement opportunities for teachers. Other positive assertions included that YRE schools maximize resources and reduce expenditures “through better use of existing buildings” (p. 2). Families also benefit from YRE because of the capability “to choose periods for schooling and vacation” (p. 2). Finally, community programs experience less episodes of “feast or famine” (p. 2).

In addition to the positive claims of proponents towards YRE listed above, Glines (1987) suggested that YRE expands human, physical and fiscal resources available to society. With respect to these three areas, he wrote

“The human aspect is enhanced by enrolling only 70-80 percent of the students in the school buildings at one time, thereby leaving a potential pool of 20-30 percent of the youth throughout the year for community services...Physically, by allowing districts to build fewer facilities, precious land can be saved for more valuable ecological, parks and recreation use, as well as reducing long-range energy demands and the immediate use of rapidly depleting raw materials...Fiscally, by avoiding new construction, millions of dollars can be saved in growing communities. Long-term maintenance costs are reduced, as are ongoing insurance and utilities fees” (p. 14 and 15).

In accordance with Glines (1987) assumption of fiscal savings, Ballinger (1989) announced that the National Association for Year-Round Education (NAYRE) predicted a total savings of \$25 billion dollars over a 20 year period by establishing YRE on a

national scale. In turn, Ballinger stated that the majority of this money “could be directed toward improved instruction, increased student counseling, and improved teacher salaries” (p. 2).

In addition to economic efficiency, McLain (1973) proclaimed that people are “concerned about *when* the students are taught” (p. 4). Similarly, the National Education Commission on Time and Learning (1994) recommended that schools be reinvented “around learning, not time” (p. 29). In contrast to traditional schedules, an observation was made by the Commission that while YRE schools “do not provide additional time for either learning or nonacademic services....their existence indicates that alternative calendars are feasible...” (1994, p. 39). Glines (1987), however, established that “Wherever possible, caring educators believe that YRE should be offered as a choice. The current ideal is for a school or district to offer both the nine-month and the year-round calendar plans as alternatives” (p. 1).

In summary, there are many reasons why school systems have incorporated YRE calendars. During the 1994-1995 academic school year, approximately 45% of the 2,258 schools incorporating YRE used single track calendars (NAYRE, 1995). Undoubtedly, these schools have adopted the belief that YRE is beneficial for learning. On the other hand, several school districts have instituted YRE calendars for fiscal reasons. For example, a multi-track method of organization ensures that more students can be served within an existing facility without having to finance new construction. Regardless of the

reasons for implementation, however, YRE has become a permanent fixture within the educational network of the United States.

Inferences Against Year-Round Education

In 1960, the American Association of School Administrators characterized the traditional school calendar as being a time when school districts shut down their facilities, when teachers are either unemployed or engaged in summer jobs, and when children's schedules are loosely structured. Regarding this traditional manner of organizing the school year, the Association wrote "It reflects the conception deeply imbedded in the minds of American people of what schools out to do and how schools ought to be operated *and for how long*" (p. 1).

The traditional school calendar does indeed reflect societies' acceptance of a nine-month in school, three-month out of school method of operation. In fact, the three-month break from formalized schooling is thought by many to be beneficial for children. Rubin (1995) emphasized the importance of this vacation by writing "Summertime has always been a lazy time-a time to reflect, to dream, to read, to wile away if a child so desired" (p. 10A).

Because numerous citizens, patrons, and educators want to retain the status quo of the traditional school calendar, opposition towards implementing year-round schedules has arisen. Worthen and Zsiray (1994) cited many of the opponents' arguments against YRE. Concerning student achievement, critics declare that "Students learn about the same-or even less-under YRE" (p. 2). Teachers and administrators may also be

negatively effected by the maladies of stress, frustration, and burn-out. Families are another entity that may suffer from YRE schedules since vacation schedules have to be altered to fit the changed school calendar. Other groups that may be unfavorably affected include those who organize or participate in “many traditional school and community activities (e. g., athletics, summer camps)” (p. 2). Finally, critics expressed that the implementation of YRE schedules does not guarantee fiscal savings, and “may actually cost more” (p.2).

Over the years, several school districts have implemented YRE programs and then later abandoned them. One such district was located in Knox County, Tennessee. Banta (1978) attributed the cause of cessation to be a lack of interest in the voluntary program. More specifically, this deficiency was linked directly to the belief of parents and students that “Summer is the time for vacation from school; it’s hard to change that habit and think of coming to school in the summer” (p. 117).

Another example of a school system that experimented with a changed calendar and thereafter eliminated it occurred in Jefferson County School District, Colorado. White (1992), the former assistant superintendent, concluded that the demise of the 14-year-old multi-track program occurred because of the following reasons:

- “A desire for neighborhood schools.
- A provisional commitment to year-round scheduling.
- Administrator burnout.
- Changing board priorities.
- Unperceived cost savings.
- Unrealized educational benefits.
- Differing needs of high schools and elementary schools” (p. 28 and 30).

Educators have also voiced their opposition towards year-round education. In addressing the question of whether or not year-round education will fail, Duncan (1975) wrote “The answer is yes, and I’ll tell you why: because it is being offered as a solution when we haven’t even agreed on what the problem is” (p. 10). Furthermore, opponents have asserted that “cosmetic changes like lengthening the school year, or breaking it in quarters or thirds” do not solve instructional problems that currently exist within the schools (Oxnard School District, 1990, p. 11).

Howell (1988) also cautioned school districts that are considering changing traditional schedules for YRE schedules. She declared that “converting to YRE creates many difficulties and shows no clear advantages” (p. 28). Furthermore, the writer warned that the only school systems to have “successfully implemented YRE for extended periods of time are those for whom overcrowding had become a devastating problem and no other solution was available” (p. 28 and 29).

In summary, the majority of school districts within the United States currently operate on a traditional school year calendar. Although this calendar was fashioned to meet the needs of an earlier agrarian society, it appears to adequately fulfill the present needs of many members of society. While some communities have sacrificed extended summer vacations for instructional or fiscal reasons, most communities have kept this time intact. For numerous groups of people, summertime for children, teachers, and administrators has evolved into a cherished commodity.

A Brief History of Year-Round Education

Presently, the most common form of calendar used by school districts located within the United States features a nine month attendance agenda followed by a three month break. However, Cammarota, Stoops and Johnson (1961) stated that "A study of the history of education in the United States shows that, at times, other organizational patterns have been in effect" (p. 2). What's more, "Americans have been adjusting the school calendar for more than a century, and it looks as though the end of innovation is not in sight" (Shepard and Baker, 1977, p. 1). Concerning previous innovations of the school calendar, Hermansen and Gove (1971) pointed out that "In the first half of the 19th century, the major cities all had school years approaching eleven months...By contrast, many rural schools were open for classes only six months out of the year" (p. 8).

Sanders (1991), in reference to the variances in the length of the school year and the length of school vacations prior to 1915, stated that the variances "could be accounted for by analyzing urban versus rural environments and their purposes for education" (p. 16). Several writers have elaborated on the rural influence upon school calendars. Schoenfeld and Schmitz (1964) depicted the time of planting and harvesting crops around which education and wars were scheduled as "an ancient Old World manifestation" (p. 9). In 1977, Richmond also commented on the rural influence by detailing that boys attended school during the winter months and were taught by male teachers. On the other hand, "female teachers and girls occupied the schools for educational purposes during the summer months" (p. 44). Additionally, Jackson (1918, cited in Scala, 1968) provided

insights regarding the rural control of early school calendars by writing “some remember the division of the school year into the winter term, when all the big boys attended and were the source of many disturbances, and the summer term, when only the little children were in school learning to read” (p. 41).

Conversely, Schoenfeld and Schmitz (1964) reported that an 1841 government study confirmed urban influences upon the school calendar. The study indicated that “11-month calendars could be found in use in such city schools as Baltimore, Buffalo, Cincinnati, Detroit, New York, Philadelphia, and Washington” (p. 36). Regarding the calendar configurations of these early urban schools, Shepard and Baker (1977) specified that

“The most popular school schedule of this time was known as the “12-1” plan. It divided the school year up into twelve-week terms with one-week vacations between each term. A modification of this, the “12-4” plan, closed the school for four weeks in August and ran consecutive twelve-week sessions the rest of the year” (p. 2).

Moreover, Richmond (1977) remarked on early records concerning the amount of time spent by teachers and students in schools. According to the writer, “The first recorded indication on the length of the school year was found in the Dorchester, Massachusetts Town Records of 1645” (p. 44). During the twelve-month school year, teachers and students attended schools ten hours for seven months and eight hours for five months. Additionally, Richmond noted that similar year-round schedules were found in the 1684 by-laws of the Hopkins Grammar School and in records of schools located within Georgia.

Hermansen and Gove (1971) attributed the longer school year in urban areas during the first half of the 19th century to the respective needs of the communities involved. For instance, many of the students attending schools during this era were from families where the parents were “first generation immigrants, who spoke no English” (p. 8). Therefore, the lengthened school year helped the children acquire knowledge of the English language. This acquisition in turn prepared students to join the American work force. Another need of urban communities was in the area of child care services. Basically, parents needed to insure that their children’s “activities could be accounted for” (Hermansen and Gove, 1971, p. 9).

Hermansen and Gove (1971) also portrayed the years following 1840. This was a time when “adequate schooling became the concern of state legislatures, and public education became the subject of increasing regulation in state constitutions and state school codes” (p. 9). Legislators determined that a standardized education for all students in the United States was needed consequent to the increase of industrialization and the greater availability of a college education (Hermansen and Gove, 1971). During this era of education,

“...cities gradually shortened the school year and increased the vacation period. At the same time, rural areas gradually lengthened the school year, until it approximated the shortened year in the cities. By 1915, most of the nation’s schools operated on a nine-month school year, although there were slight variations from one section of the country to another” (Varner, 1968, p. 6).

Clauson (1973) cited Education Digest’s (1972) article concerning the adopted nine-month school calendar as being in essence “a social phenomenon rather than a well-

researched educational development” (p. 13). This accusation was made since the calendar is based on the presumption that “nine months is an ample time in which to achieve desired levels of competence and knowledge for students over a 12-year span, and that the educational process generally benefits from a long summer vacation” (p. 13).

During the latter part of the 19th century, however, a few private and public schools located in cities still functioned on year-round schedules. The term “vacation school” was applied to this revision of the school calendar. Initially, vacation schools “were initiated by private social workers to counteract the bad environment of congested areas and to keep children off the streets” (Lane, 1932, p. 50). Lane further wrote that in 1866, “The first vacation school was started as a private undertaking at the First Church in Boston” (p. 50). Eventually, in 1885, “the Newark, New Jersey Board of Education authorized the first vacation school program organized and conducted by the public schools” (Deason, 1975, p. 12). With regards to the curriculum offered in vacation schools, Lane (1932) stated that “Under professional direction the schools evolved from vacation schools into summer schools where the work offered was an approximation to that of the regular year” (p. 50).

Beginning in the early 1900s, several school systems began to adopt year-round school plans, “but fewer than 15 cities were operating year-round schools at any one time between 1900 and 1956” (Patton and Patton, 1976, p. 522). According to Thomas (1973),

“Unfortunately, the term, All Year School, became a catchall phrase which was used interchangeably to describe mandatory student participation and voluntary student participation plans. In many instances

the term applied to acceleration and non-acceleration plans which used different approaches to realize space, dollar, or educational objectives” (p. 19).

Bluffton, Indiana’s school system was one of the first districts after the turn of the century to initiate a new method of organizing the school year. In fact, Glines and Bingel (1993) noted that Bluffton’s school schedule was “the forerunner of the modern term. year-round education” (p. 3). According to Ross (1975), the school operated from 1904 to 1908. Furthermore, a four quarter plan was used that allowed students to chose their own nine-month attendance pattern. The demise of Bluffton’s year-round program came since “the entire system never succeeded in distributing enrollment evenly throughout the year (to create anticipated cost- and space- savings)” (p. 1).

Still another school system to institute a year-round calendar was located in Gary, Indiana. In 1905, Dr. William Wirt, the superintendent of schools, established a year-round school. Hermansen and Gove (1971) depicted Gary’s year-round school as being a voluntary summer school program. The objectives of the program were “to accelerate the movement of pupils through the grades, particularly nine through twelve, to enable them to enter the work force sooner; also to offer some degree of “enrichment” (p. 11). The demise of Gary, Indiana’s year-round program, however, came in 1907 after Dr. Wirt’s departure from the city.

Newark, New Jersey and Nashville, Tennessee were two other cities that incorporated voluntary year-round schooling during the early 20th Century. Concerning these two school districts, the American Association of School Administrators (1960)

established that Newark's program employed a year-round schedule from 1912 to 1931 and that the Nashville program operated from 1924 to 1932. Students attending schools in these two cities had the option of continually attending school until they graduated. According to the Association, however, these two programs were discontinued due to expenses and "because the serious complaint was voiced that high-school students graduating early as a result of acceleration were actually too young for regular employment and not old enough to succeed in college" (p. 10 and 11).

Hermansen and Gove (1971) expounded upon the above mentioned data regarding Bluffton, Gary, Newark, and Nashville by stating that

"The significant common denominator of the Bluffton, Gary, Newark, and Nashville programs was the primary objective of increasing the learning available to the student body-in particular to offset the educational disadvantages of children of minority descent. More schooling for the disadvantaged was a laudable goal, but it was not universally popular with taxpayers. It is important to note that all of these programs were abandoned at the onset of, or during, the "Great Depression" of 1933-1939. The public was not ready to pay for "enrichment with tax money" (p. 12).

Two Pennsylvania towns, Aliquippa and Ambridge, also began the operation of year-round education programs during the late 1920's. Thomas (1973) summarized many aspects concerning these two northeastern cities' revisions of the school calendar. According to the writer, Aliquippa established a multi-track four quarter plan in 1928-1929. The near-by town of Ambridge set up a similar program because of the scarcity of classroom space. Students in both towns were assigned to attend school during three of the four quarters. Dislike of the three-month mandatory vacation during the winter

months by many students, however. “was a factor which ultimately led to the building of desired school facilities and the return to the traditional ten month school year” (p. 20).

Hermansen and Gove (1971) noted that the new facilities needed in Aliquippa and Ambridge were realized due to the availability of financing through the United States Public Works Administration.

Other communities considered instituting year-round calendars following World War I. The factors that were responsible for these considerations included the movement of families into the nation’s industrialized sectors, enhanced birth rates, and rising construction costs (Shepard and Baker, 1977). Included among the school systems that actually incorporated year-round calendars using a rotating four-quarter plan during the first half of this century were “...Mason City, Iowa; Eveleth, Minnesota; Omaha, Nebraska; Albuquerque, New Mexico; Ardmore and Tulsa, Oklahoma; ...and Amarillo and El Paso, Texas; and in Bayonne, New Jersey, and Minot, North Dakota” (Varner, 1968, p. 11).

Chronologically, the decades following World War I have been periods of time when year-round schedules have either shown upsurges in use or descents. For example, during the decade between 1930 and 1940, a relatively stable birth rate helped to ease “the pressures of population on the school systems” (Hermansen and Gove, 1971, p. 18). Funds were also available from the Roosevelt Administration to aid in the financing of new school facilities. These moneys, however, were no longer available after the start of World War II because a moratorium was placed on the construction of new school

facilities. Therefore, during the War years, “overcrowding in schools was alleviated by the inauguration of double shifts” (Hermansen and Gove, 1971, p. 19). Nevertheless, the topic of operating schools on a year-round basis resurfaced once again following World War II.

Hermansen and Gove (1971) reported that one cause for the renewed interest in year-round schooling was an “upsurge of voter demand for relief from mounting school taxes” (p. 25). Shepard and Baker (1977) also remarked that this interval of time resembled the post-World War I period in attraction to year-round calendars. According to the writers, the interest was spawned by “an acute teacher shortage coupled with an escalating student population” (p. 3 and 4). Notwithstanding the interest in year-round schools, Patton and Patton (1976) detailed why many school systems rejected the concept. The reasons included scheduling difficulties and uncertainties of fiscal savings. Opposition was also voiced against using the summer months for anything other than a vacation period. Finally, “most school superintendents, key actors in earlier moves to year-round operation, were opposed to the idea” (p. 522).

In the late 1950s, however, talk concerning extending the school year was rejuvenated by a development on the international scene. Hermansen and Gove (1971) spelled out that on October 5, 1957, the sound of Russia’s first orbiting satellite, Sputnik, had a profound effect on “the scientific and educational thinking of the world” (p. 26). Subsequently, the United States Congress inaugurated The National Defense Education Act of 1958. This Act “infused the entire educational structure of the nation with funds

for innovations and equipment and learning resources” (p. 27). Furthermore, the traditional school calendar was scrutinized, and discussions concerning it continued “unabated for the next thirteen years” (p. 27).

Although the concept of year-round schooling was not officially implemented within any schools in the United States in the 1950s, several school districts considered the option during this era and into the next. These interested districts included the

“Long Beach Public Schools, Sacramento Unified District, San Diego, Contra Costa, Los Angeles City School District, San Mateo County, and Redwood City, California; Fairfield, Connecticut; Atlanta, De Kalb County, and Fulton County, Georgia; Montgomery County, Maryland; Jacksonville, Florida; and Dallas and Houston School Districts, Texas” (Citizens’ Committee of The Sequoia Union High School District, cited in Scala, p. 78).

In 1964, Schoefield and Schmitz explained basically that subsequent to “the Second World War, the all-year school has largely been realized through the frame of the extended summer system, and the argument for it has concerned itself chiefly with educational objectives” (p. 17). In fact, “Shedd surveyed 1,337 high schools in 1949 and reported that 637 out of the 895 districts that responded operated summer school programs. He found that the three general categories of summer school programs were remedial, recreational, and enrichment” (cited in McDaniel, 1976, p. 20).

The topic of year-round education escalated in the decade between 1960 and 1970. This period of time was marked initially by a gradual growth in the number of school districts incorporating year-round education and ended with the implementation of a new year-round calendar. Patton and Patton (1976) elucidated that “A few school

districts adopted the year-round schedule in the early 1960s. but many others found the plan economically questionable and the problems so great that they either postponed or dropped consideration of the idea” (p. 522).

More specifically, Montgomery County, Maryland produced a comprehensive study regarding the implementation of year-round schools, while a pilot program was begun in 1962 by the Department of Education of Florida State University, Tallahassee for all primary and high school students attending the Florida State University Laboratory School (Hermansen and Gove, 1971; Schoenfeld and Schmitz, 1964). Additionally, Nova High School located in Fort Lauderdale, Florida installed an ungraded, 220-day trimester school year (Hermansen and Gove, 1971). The state of New York also conducted pilot programs during the 1960s under the direction of George Isaiah Thomas (Hermansen and Gove, 1971). Thomas’s required objective was to develop and test alternative school calendars that would accelerate students through the educational process, thereby saving one or two years of traditional schooling.

By the closing of the 1960s and beginning of the early 1970s, however, “a new group of school districts had adopted year-round programs, including Valley View, Illinois; Atlanta Georgia; Pasco County, Florida; Hayward, California; Virginia Beach, Virginia; and Phoenix, Arizona” (Patton and Patton, 1976, p. 523). According to Thomas (1973), “One of the more exciting all year school programs to appear on the educational horizon during the late 1960’s was the Metropolitan Atlanta, Georgia Area Four Quarter School Year” (p. 20). The implementation of Atlanta’s plan had “one over-riding

purpose-to improve the educational opportunities of children” (Hermansen and Gove, 1971, p. 46). Atlanta’s secondary program allowed students to attend three of four required quarters, or they could attend all four.

In the late 1960s, a new calendar was developed by the Valley View School District called the 45-15 plan that has had a tremendous impact on the recent epoch of year-round education. According to Shepard and Baker (1977), “Not until 1968, with the development and implementation of the 45-15 plan in Valley View, Illinois, did YRS begin to achieve the broad-based support it has at present” (p. 7). Three major innovations of the 45-15 plan have contributed extensively to its expansion and acceptance. These innovations are: “a summer vacation for all children; a rescheduled school year that does not necessarily accelerate students out of a school system at too early an age; and a series of shorter and more frequent vacations than the traditional school schedule” (p. 8).

At almost the same time as Valley View’s implementation of its 45-15 district-wide plan, another community located in Missouri enacted a similar scheme (Hermansen and Gove, 1971). As in Valley View, space shortages required that reorganization take place at the Becky-David School in the Francis Howell School District, Missouri. Consequently, the administration developed a nine-week school, three-week vacation plan to accommodate the burgeoning school population. The success of the 45-15 plan led Shepard and Baker (1977) to write that “...YRS began to achieve legitimacy as a desirable and even preferable school schedule” (p. 8). Furthermore, “Districts that did

not need to revise their schedules began to do so anyway, and districts that were forced to implement a YRS plan discovered the plan's curricular benefits" (p. 8).

The late 1960s also saw the beginnings of an association of representatives concerned with the topic of year-round education. Shepard and Baker (1977) recorded that "In 1969, the first national conference on year-round schools was held in Fayetteville, Arkansas" (p. 8 and 9). Subsequently, in 1972 at the Fourth National Seminar, the National Council on Year-Round Education was organized. The Council was deemed necessary since discussions were occurring in all states within the nation concerning the traditional school calendar (McLain, 1973).

The decade between 1970 and 1980 was an era which saw a tremendous acceleration and then deceleration in the numbers of schools offering year-round education. Clauson (1975) noted that "In late 1971 it was reported that more than twenty-five school districts were either operating district wide year-round programs or pilot programs in one or two schools" (p. 17). In 1975, Ross explained that

"according to a New Jersey State Department of Education survey report (1974), there are 312 operating year-round programs in the United States, with an additional 82 studying or planning activities in various states. A total of 1,786,380 students involved in year-round operations were counted in the survey" (p. 2).

The incorporation of year-round education in the nation's school systems during the 1970's reached its apex during the 1976-77 school year with 539 schools operating on year-round calendars (National Education Association, 1987). The descent began the following school year, and according to the National Education Association (1987), a

steady decline was noted “in the number of year-round schools for all educational levels - elementary, middle, and high schools” (p. 8). By the end of the decade (1979-1980 school year), the number of schools operating on year-round calendar totaled 287.

The decade of 1980-1990, however, proved to be another period of rapid expansion in the number of year round schools in the United States. The number of schools implementing year-round education in the 1980-81 school year totaled 336 (National Education Association, 1987). By the 1989-1990 school year, however, 628 schools had year-round calendars (National Association of Year-Round Education, cited in Chen, 1994).

Another development that occurred during the 1980-1990 decade was the reorganization of the National Council on Year-Round Education (NCYRE) to the National Association for Year-Round Education (NAYRE). This reorganization occurred to recognize a change in status, from council to association (Glines & Bingle, 1993).

In the 1990s, figures showing the number of schools involved in year-round education have continued to rise. Statistics obtained from the National Association of Year-Round Education indicated that 872 schools incorporated year-round calendars during the 1990-1991 school year (Chen, 1994). In 1992, Balakas reported that the number of year-round schools for the 1991-1992 school year totaled 1,668 (cited in Marlow, 1993). In addition, “Fifty-six percent of these schools operate on a multi-track schedule with 44% on single track schedules” (Marlow, 1993, p. 38). More recently, the National Association for Year-Round Education (1995) reported that “37 states now have

YRE schools, involving 2,258 schools". Furthermore, records indicated that 1,649,380 students attend YRE schools. In 1996, NAYRE stated that 447 school districts nationwide offer YRE in 2,369 public schools. In addition, there are 47 private schools utilizing an altered calendar.

Types of School Calendars Utilized in Year-Round Education

Ballinger (1988) stated that "Year-round education takes many forms. In its broadest definition, it is redesign of the school year to make instruction more continual and the traditional summer period substantially less" (p. 60). Across time, school systems in the United States have implemented several different arrangements of year-round calendars. In fact, Richmond (1977) established that, "Officials of the NEA have reported that at least sixty different extended school year designs and variations of designs have been developed during the past three-quarters of a century" (p. 18).

According to Smith (1985), "Year-round educational programs have basically taken one of two approaches, one requesting voluntary participation and the other making participation mandatory" (p. 22). Furthermore, students may be obligated to attend schools that offer either single-track, multi-track or extended year programs. Hawkins (1992) defined single-track school calendar configurations as to when "All students and teachers in the school attend classes and have vacations on the same schedule" (p. 4). Multi-track calendars occur when "The student body is divided into several groups referred to as tracks. The instructional and vacation periods of each track are staggered so that at least one track is on vacation at all times" (Hawkins, 1992, p. 4). Extended year

programs, on the other hand, “aim at increasing the educational offering to students by lengthening the *amount* of time they attend (i.e., actually spend *in school*)” (Worthen and Zsiray, 1994, p. 5).

Throughout the years, single-track, multi-track and extended school year calendars have been implemented for various reasons. For instance, “The single track calendar is based on the philosophy that learning is sequential and continuous, and that the traditional summer vacation is disruptive to the learning process” (Glines, 1987; Ballinger, 1985; Ballinger, et al., 1987 cited in Moody, 1991, p. 4). In other words, “Year-round education has a better-paced delivery of instruction” (Ballinger, 1989, p. 2) than the traditional school calendar. Conversely, “Multi-track year-round education was originally designed to handle an over-enrollment of students in limited facilities...” (Ballinger, 1987, p. 17). Finally, Sanders (1992) explained that

“There are two basic types of applications for extended school year programs. One program is an effort to increase the educational offerings to all students by lengthening the number of days each year that students must spend in school...The second type of program is designed to offer extended learning time for only those students that need it for remediation or who want it for enrichment purposes” (p. 27 and 28).

As was previously stated, there are many variations of YRE calendars. Worthen and Zsiray (1994) found that, during the year 1992, the most common calendar types were 45-15, 60-15, 60-20, 90-30, and Concept 6. While several schools have operated these calendars on single-track schedules, others have adapted them for multi-track use. What follows is a brief description of the before mentioned modifications to the traditional school calendar and others.

45-15 Plan - "This plan divides the year into four week terms, separated by four three-week vacations or intersessions. Students and teachers attend school for nine weeks (45 days), then they take a three-week vacation (15 days). This sequence of sessions and vacations repeats four times each year, thus providing the usual 36 weeks or 180 days of school" (Ballinger, Kirschenbaum, and Poinbeauf, 1987, p. 16).

60-20 Plan - "This plan is a variation of the 45-15 schedule, with students attending school for 60 days and then vacationing for 20 days. Students rotate through the year until they have had three 60-day terms and three 20-day vacations" (Ballinger, et al., 1987, p. 21).

60-15 Plan - "This plan borrows from both the 45-15 and 60-20 plans in that the instructional period is 60 days and the vacation period is 15 days. By rearranging the instructional days, a common summer vacation of three to four weeks can be given to all students and faculty" (Ballinger, et al., 1987, p. 21).

90-30 Plan - "This schedule includes two 90-day semesters separated by a 30-day vacation period. Schools are closed during the traditional winter holiday period and spring vacation" (Ballinger, et al., 1987, p. 21 and 22).

Concept 6 Plan - "six 40-44 day learning blocks; students attend four of the six (two in succession) and have two separate 40-44 day vacation periods; this plan provides over-lapping days or longer school days to reach the 180-day requirement (Glines, 1987, p. 16).

Trimester Plan - "The Trimester Plan uses three instructional periods of 60 days each rather than two semesters of 90 days each. This plan is similar to the 60-20 Plan, but the vacation (intersession) periods are more flexible and may vary from two to six weeks, depending on the calendar adopted by the community" (Ballinger, et al., 1987, p. 22).

Quarter Plan - "The Quarter Plan divides the calendar into four 12-week periods in fall, winter, spring, and summer. Students may select, or be assigned to, any combination of three of the four quarters" (Ballinger, et al., 1987, p. 22).

Quinmester Plan - "The Quinmester Plan divides the school year into five parts, with students required to attend four of the five parts" (Ballinger, et al., 1987, p. 22).

Five Track, Five-Term Plan - "The Five-Track, Five-Term Plan divides the school year into five terms of 45 days each. There are five terms in each track. Students attend four of the five for a total of 180 days of instruction annually. This plan is used only on a multi-track basis. It provides for a common summer break of approximately three weeks for all students" (Ballinger. et al., 1987, p. 22).

Flexible All Year - school is open 240 days; students can select 180 of the 240, with the curriculum in small self-paced packages to allow for interrupted learning blocks and differentiated vacation periods - one day to several weeks at any time" (Glines. 1987, p. 16).

Personalized Continuous Year - a completely flexible, personalized calendar where students can come and go as desired on a daily basis; the curriculum is totally individualized" (Glines, 1987, p. 16).

Attitudes of Teachers Towards Year-Round Education

In the past quarter of a century, various studies have been conducted regarding teachers' attitudes towards year-round education. This research has been compiled by school districts, doctoral candidates, and state offices of education who have been concerned with the impact that the alterations of the school schedule have had on the teaching profession.

In some cases, data were obtained from teachers having no prior experience of teaching in year-round schools. In other cases, evaluations were made of teachers' perceptions towards YRE shortly after the initial implementation of the calendar changes. Conversely, data have been collected from professionals who have had several years of teaching experience in year-round schools. In 1983, Merino identified thirteen studies that systematically studied educators' attitudes toward year-round education.

Rao's (1971) study was the first analysis of teachers' attitudes towards year-round education that was uniformly conducted, as identified by Merino (1983). He compared the beliefs of a selected group of administrators (N = 74) and teachers (N = 128) toward traditional and year-round school organization in six public school districts in Nebraska. One of Rao's stated purposes was "to determine the readiness of these school districts to adopt some form of year-round organizational pattern to become more effective in terms of the needs of all youth" (p. 8). Results included a more favorable disposition toward year-round schools by administrators than by teachers. Both groups, however, endorsed the year-round school. Additionally, Rao (1971) remarked that administrators and teachers considered air conditioning of facilities to "be an essential need for year-round school organization" (p. 111).

In 1973, Webb identified concerns of 114 teachers who were preparing to instruct in year-round secondary schools for the first time in the Jefferson County Public Schools, Louisville, Kentucky. Additionally, information was gathered from 80 secondary teachers who had previous experience instructing in year-round schools in the Atlanta City Public Schools, Atlanta, Georgia. According to Webb (1973), the need for such data was important to "give direction to school systems and their administrators who contemplate a move" (p. 5) from the traditional calendar to implementing a year-round school program. Two paired questionnaires that reflected either anticipated concerns or experienced knowledge regarding economic status, professional status, and the educational program for the student population were administered to the two respective

groups of teachers. The subsequent data regarding economic status revealed that salaries would increase due to twelve-month teaching contracts, but not “as a result of enhanced retirement benefits” (Webb, 1973, p. 289). In addition, financial security was not guaranteed because of the uncertainty of summer employment.

With regards to professionalism, Webb (1973) found that experienced teachers did not realize an enhancement of their status for the following variables: attending graduate school, personal enrichment, community involvement, time for selecting teaching materials, teaching performance, inservice programs, educational planning time, and lower student-teacher ratio. Experienced teachers did indicate, however, that “teachers’ special skills and knowledge were better utilized as a result of the year-round school organization” (p. 291).

Regarding the educational program for students, Webb’s (1973) statistics indicated that year-round education showed improvement in “more meaningful summer activities, a greater choice of subjects, increased individualized instruction, more student interest in education, and fewer problems of truancy” (p. 293). Nonetheless, experienced teachers indicated that “student performance would not be improved as a result of the year-round school” (p. 293).

Clauson (1973) analyzed responses from two questionnaires to determine job satisfaction and opinions of 144 teachers instructing in four categories of extended year programs. The four categories of extended year programs were: “1. Extended Summer School, 2. Voluntary Fourth Quarter, 3. Rotating Quarter or Semester, and Mandatory

Fourth Quarter or Lengthened School Year” (p.iii). Teachers in high schools reported greater job satisfaction than those teaching in elementary or junior highs. In addition, teachers instructing in the Voluntary Fourth Quarter program were more satisfied. Planning of the extended year program and curriculum development also showed a correlation between the amount of time involved and job satisfaction. Other areas that showed a change were staff orientation procedures, flexibility of student schedules, student academic achievement, and student attitudes. Clauson (1975) added, however, that

“No significant differences were found between the job satisfaction of teachers in ESY programs with respect to: age, sex, years of teaching experience, amount of district planning, contract options, pattern of work year, salary benefits, or effects upon pupil-teacher relations” (p. v).

Miller (1974) surveyed 272 chief school administrators, board of education presidents, and education association presidents in the state of New Jersey to determine their current and past attitudes toward year-round education programs. A questionnaire was designed to elicit five types of information including educators' opinions concerning concepts of the year-round school. The survey determined that all three respondent groups “were favorable towards year-round school concepts” (p. 113).

Ashburn (1974) assessed both volunteer teachers' (N = 144) and students' (N = 979) affective perceptions towards a 45-15 pilot program instituted in four Virginia Beach City public schools. Data were collected so that “descriptive statements could be made about the subjective impact year-round schooling has had on the educational and personal lives of the pilot's student-teacher populations” (p. 1). Two questionnaires were

used in this study. One questionnaire was designed for administration to fourth and sixth graders, while the other questionnaire was designed for teacher use.

A summary of Ashburn's (1974) findings of teachers' attitudes in relation to the pilot program included a positive response toward the education of students on the year-round school schedule. In addition, teachers were favorable towards certain educational aspects of instructing in a year-round curriculum including less review time of materials following vacation breaks. Furthermore, teachers believed that the more frequent vacations increased students' concentration abilities, and the vacations decreased teacher fatigue. On the whole, however, teachers' disliked the multi-age, multi-grade groupings of students. Additionally, teachers indicated dissatisfaction in the areas of having to spend more time planning lessons, report cards, and other reports. Finally, negative feedback was observed in the area of being able to pursue a graduate degree.

Banta (1975) examined students', administrators' and teachers' attitudes towards a voluntary quinmester extended school year (ESY) program in Knox County, Tennessee shortly after it was implemented. Questionnaires were administered to 92% of the professional staff located within two primary schools, two middle schools, and one high school. Considering her data, Banta (1975) concluded that "Majorities of teachers at all levels favored ESY; however, approval was much greater among those who were involved in formulating objectives and writing curriculum modules" (p. ii).

Berger (1975) reported on a survey administered to 790 teachers instructing in the Pasco County Schools, Florida. Teachers were asked to respond to questions concerning

the mandatory installation of a 45-15 multi-track school year plan that was in its second year of operation in all of the county's 24 schools. Available figures indicated that 88% of the teachers were dissatisfied with the 45-15 program. Additional questionnaire items disclosed that 58% of the 790 respondents favored discontinuing the 45-15 plan, 38% favored the investigation of other year-round plans, and 20% favored the return to a traditional school calendar. Furthermore,

"63% of the teachers said it is more difficult for teachers to provide individualized instruction for students because of the multi-tracking procedures; 75% said the quality of instruction provided to students in the four tracks has been unequal; and 85% said multi-tracking has a negative effect on classroom instruction" (p. 421).

Deason (1975) conducted a nationwide study of secondary teachers' attitudes toward the 45-15 year-round school plan. All 160 teachers surveyed had at least two years of experience instructing in secondary schools using 45-15 calendars. The following six variables were investigated using a 24-item questionnaire: student achievement, student attitude toward 45-15, student extra-curricular activities, teacher working conditions, teacher inservice training and professional growth, and teachers' personal life style.

Deason (1975) concluded that the variety of courses in 45-15 year-round schools were similar to those found in traditional schools, program flexibility did not increase, and a disagreement as to whether or not the 45-15 plan was educationally superior existed among respondents. Additional areas in which disagreements were noted between teachers were in the areas of extra-curricular activities, student acceptance, discipline, and

teacher morale. Teachers also expressed concern in the areas of inservice training and furthering their graduate education. Finally, teachers indicated that their vacation plans and leisure time activities had changed.

Rice (1975) also assessed the attitudes of teachers instructing in 45-15 year-round schools in the United States. Unlike Deason's (1975) secondary study, however, Rice surveyed 556 instructors who taught in all grade levels (K - 12). A two section questionnaire was developed by the researcher "to determine which personal and situational variables were related to teachers' attitudes regarding year-round education" (p. 8). Results showed that teachers who responded favorably towards year-round calendars and programs felt they had high morale and were not personally fatigued. Teachers who were positive also thought the quality of the educational program was enhanced, fringe benefits were adequate, and adequate support staff had been provided. On the other hand, teachers who responded unfavorably cited more fatigue, less morale, and a backward movement of the educational program in association with the year-round calendar. Additionally, they indicated an inadequacy in support staff and fringe benefits. Finally, Rice concluded that the following personal and situational variables did not have a significant relationship to attitudes:

- a. Type of school calendar utilized prior to the year-round calendar.
- b. Number of students enrolled.
- c. Population density of the school-community setting.
- d. Sex.
- e. Age.
- f. Marital status.
- g. Total teaching experience.
- h. Teaching experience in year-round school.
- i. Teaching level.

- j. Calendar preference.
- k. Student-teacher ratio.
- l. Level of professional education.
- m. Degree of program development participation.
- n. Professional association membership.
- o. Options on contract length.
- p. Work participation option.
- q. Vacation option.
- r. Salary adjustment" (p. 80, 81).

Alm (1976) used the technique of a structured interview to assess "whether the citizens, parents, students, teachers, and staff in the Sylmar public schools were favorably disposed to year-round school (YRS) operation" (p. 7069-A). Out of the total population of 396 people who participated in this study, teachers numbered 211. Among Alm's findings were concerns "regarding vacations, curriculum, community recreation facilities, building use, early graduation, and a minimum level of achievement for graduation" (p. 7069-A). Overall, 69% of all surveyed preferred YRS operation, with 72% of teachers indicating an acceptance. Because of the support for year-round schooling indicated by the select group of citizens, Alm recommended that an optional or voluntary program be started in Sylmar's public schools.

McDaniel (1976) conducted a study concerning a selected group of 161 teachers', 18 administrators' and 74 citizens' opinions toward the year-round school concept in Onondaga County, New York. One stated need for the research was to develop an instrument that could be used by other school districts in assessing the feasibility of implementing year-round school programs. Results showed that, before the treatment, administrators and teachers were significantly negative towards the concept of year-round

education. However, once administrators and teachers read a simulated newspaper article concerning YRE, a highly significant change in attitudes was recorded.

Russell (1976) collected data to measure the attitudes of teachers, parents, students, administrators, and school board members toward split-shift and year-round calendars that were adopted in two southeastern schools. Forty-three year-round school teachers responded to a questionnaire designed to elicit attitudinal information. Findings revealed that a majority of YRS teachers believed that the altered calendar worsened student achievement, school spirit, student attendance, personal social and recreational opportunities, and personal opportunities for advanced education. Moreover, 63% of YRS teachers preferred a September-May method of organizing the school calendar. Two variables that did not show a majority consensus of YRS teachers were the effect of YRS on own family and student behavior.

Ottley (1978) examined "the personal impact on and attitudes of teachers, teaching specialists, and building principals participating in a 45-15 Year Round School during the 1977-78 school year in the states of Oregon and Washington" (p. 3). The total teacher population who responded to a 20-item questionnaire included 171 primary teachers and 137 intermediate teachers. This research determined that teachers favored the 45-15 plan more than the traditional schedule. Additional findings concerning personal impact on teachers included less "stress and strain", better personal schedules, and superior fringe benefits. With regards to general attitudes relative to year-round education, teachers indicated that "student behavior and learning were enhanced" (p.

118). Teachers also reported more satisfactory teaching loads using a 45-15 calendar, but there was more paper work and less trust between principals and teachers. Not affirmative, teachers reported that “less security and status existed” (p. 117).

Kreb (1973) investigated administrators' (N = 47) and teachers' (N = 135) attitudes toward staggered (multi-track) 45-15 year-round school programs in the state of California. Disclosed findings for teachers included positive attitudes toward the staggered 45-15 school program, directed self-interests, and morale. Additionally, teachers expressed that the 45-15 schedule was beneficial “as related to extending educational programs and increasing educational opportunities for students” (p. 77). Unfavorably, however, teachers indicated that the 45-15 calendar influenced job opportunities, fringe benefits, and family commitments.

Maynard (1974) conducted research with the stated purpose “to determine the preference of Oregon teachers for various school-year plans...” (p. 762-A). Five percent of Oregon public school teachers received questionnaires, and 919 responded. The findings revealed that “23.5 percent of the respondents preferred the traditional plans, and 76.5 percent preferred either the year-round (40.4 percent), extended (5.4 percent), or extended summer school-year plan (30.7 percent)” (p. 762-A). Furthermore, “Teachers expressed a strong preference for the school-year plans that allow the freedom of accepting or rejecting employment beyond the regular nine and a half-month school-year contract” (p. 763-A).

Smith and Glass (1976) studied 58 year-round and 48 traditional teachers in the Colorado Cherry Creek District 5 school system. They were interviewed using a prepared list. Year-round school teachers reported that less time had to be spent reviewing pre-vacation material, and that there was less loss of learning following vacations than traditional teachers. In addition, YRS teachers indicated that YRS students were better adjusted to school routines during the first week of school than traditional students. However, traditional teachers recorded more inservice courses, curriculum planning time, and professional association activities. Furthermore, traditional teachers had higher morale and less fatigue than YRS teachers.

In his often cited study, Pelavin (1978) addressed the concept of year-round education for the United States Department of Health, Education, and Welfare. A portion of this historical study dealt with the attitudes of three groups of teachers (N = 156) instructing within eight schools of the Pajaro Valley Unified School District, California. The three groups included faculty who instructed in year-round education, faculty who instructed in a year-round school on a traditional calendar, and faculty who instructed in a traditional school. When answers from a questionnaire were subjected to analysis, no significant demographic differences were found between year-round school (YRS) teachers and traditional calendar school (TCS) teachers. Based on his findings concerning teacher attitudes, Pelavin (1978) concluded that a majority of YRS teachers preferred the nontraditional calendar. In addition,

“the majority of YRS teachers considered the YRS program equal or superior to the TCS program in flexibility of work schedule, problems with student discipline, ease of providing remedial services, time lost in

getting students to settle down to work after vacation, tiring effect on students, educational value for the average students and especially for below-average and migrant students, and learning loss over vacation period...On the negative side, YRS teachers considered coordination of school activities more difficult under the YRS program and felt that teaching in the program was more tiring and difficult than teaching in the TCS program" (p. 9 and 10).

In the same year as Pelavin's (1978) research, another study was published by Evans, Reilly, Faust, Kinkel, and Bailey (1978). A portion of this study explored a total of 1,410 traditional and YRS teachers' attitudes toward the 45-15 plan in operation within the Prince William County Public Schools of Virginia. Findings included the fact that out of 717 year-round teachers, "49 percent (354) desired to change to the traditional calendar" (Evans, et al., 1978, p. 4). Furthermore, this group of dissatisfied educators consistently gave the least positive evaluations concerning the 45-15 plan and the factors of student behavior, work settings, student academic performance, student employment opportunities, and professional planning time.

The decade of the 1980's saw a continuation of studies being published concerning teachers' attitudes toward year-round education. Included among the early studies was a report prepared by Housden and Holmes (1981) that identified the attitudes of staff members of Mesa Verde High School located within the San Juan Unified School District, Carmichael, California. Since its incorporation in 1974, Mesa Verde High School had operated on a multi-track year-round school calendar. Tracks "A" and "D" served students striving towards a general education, while tracks "B" and "C" served students striving towards an accelerated or fundamental education, respectively. A

questionnaire was administered to all staff members at the school, and 62 members responded. Teachers represented 85% of the total number of respondents. A majority of staff members indicated positive attitudes in the following categories: year-round scheduling, tracking and intersession, student advising, student appearance, communication, staff members, school discipline, racial tension, student behavior, library services, cafeteria services, and student activities. Staff members also registered positive attitudes to all of the curriculum instructional areas excepting foreign language and home economics. Other areas in which staff members showed dissatisfaction included building and grounds, sports programs, and student government.

In 1981, Mussatti presented a paper at the Annual Meeting of the National Council on Year-Round Education based on his prior research concerning the feasibility of implementing year-round high school programs. In order to determine feasibility, Mussatti had used a questionnaire to gather data from 29 high schools who were either currently implementing or had implemented year-round programs. Afterwards, Mussatti listed the following six concerns regarding the teaching staff mentioned by school districts:

- “1. Above all, teacher opposition will kill a year-round program, so obtaining strong teacher support is of vital importance.
2. Although teachers favored expanded financial opportunities for extended contracts, they experienced “burn-out” with time and by the end of two years reduced the length of their contracts.
3. Specialists and specialty teachers tend to be spread very thin and become tired and less effective on a year-round schedule.
4. Lack of adequate inservice training and regular planning sessions reduces the effectiveness of teachers working in a year-round program.
5. Use of substitutes or “follow teachers” assigned to tracks results in problems with course continuity.

6. Educational growth was limited for teachers on year-round contracts due to conflicts with graduated courses and special institutes and work shops” (p. 9).

Mussatti also noted concerns of school districts in the areas of curriculum and instruction and facilities and maintenance. Curricular difficulties included sequencing and course continuity. Additionally, “Teachers find it difficult to develop a relationship with students in the shorter time period” (p. 6). Concerning facilities and maintenance, buildings receive more wear, and there is less time for preventative maintenance.

Young and Berger (1983) reported findings of an evaluation pertaining to a six year, 45-15 junior high school program completed by researchers from Washington State University. This evaluation was deemed necessary by the school board in Bethel School District, Washington because there were prospective funds for new buildings. Interviews and questionnaires were used to obtain information from teachers associated with the junior high school. From the sampled population, approximately two-thirds of the teachers preferred returning to a traditional school calendar. One advantage cited was the ability to spend more time with family and friends. A majority of teachers also indicated that the 45-15 calendar caused more stress, and it required better planning, organization, and preparation. Moreover,

“A majority believed also that under a traditional calendar it was easier to schedule daily activities, that student progress could be facilitated best in sequential courses (such as mathematics and foreign language), and that communication was better with other teachers in the grade level where they were teaching” (p. 58).

Teachers, however, did not have a majority opinion regarding what type of school calendar best facilitates learning for students of diversified competence levels.

Smith (1985) declared that the purpose of his study was “to investigate the relationship of parent and teacher attitudes to two types of school year calendars in selected elementary schools in the Los Angeles Unified School district” (p. 8). Seventy-five teachers representing three elementary schools responded to a 35-item comparative judgment questionnaire concerning 45-15 and traditional school year calendars. One finding of the study was that 59% of teachers preferred the 45-15 calendar. Other conclusions reached by combining teacher and parent responses were that

“...the combined groups felt strongly positive about pupil achievement, the use of school facilities, and overall attitudes. They felt moderately positive about the effect on pupil motivation, teacher satisfaction, parent involvement, teacher morale, vacation plans, and pupil attendance.

They demonstrated a weak perception of the effect on pupil behavior and teacher attendance, and were neutral to the effect on pupil attitude” (Smith, 1985, p. 74).

Walton (1986) inspected school-wide effects of a 60-15 mastery learning pilot program implemented at an elementary school in the Alpine School District, Orem, Utah. As part of the overall evaluation, faculty members (N = 26) were asked to complete a 49 item questionnaire and were later interviewed. Respondents indicated that the 60-15 educational program improved the way they taught, increased the amount of material taught, and improved student achievement. Additionally,

“The teaching act was made more satisfying to teachers by the Extended year program. Teachers knew more about their students’ needs and abilities. They found identifying needs, grouping students, and presenting lessons to be more satisfying than was the case before the Extended Year

program. The conclusion drawn about teacher impact is that the program, in spite of the additional stress it brought to the teachers is that it improved the teaching process in the minds of Orchard's staff" (Walton, 1986, p. 116).

Bradford (1987) provided results of a longitudinal study concerning an extended year quarter plan implemented in the City of Buena Vista (Virginia) Public Schools. High school students attended a voluntary, tuition-free fourth quarter for the purpose of either promotion, enrichment, acceleration, or remediation. Data was collected at 1-, 5-, and 10-year intervals to report different aspects of the secondary program. The total number of students electing to attend school during the fourth quarter was 23%, 47%, and 62%, respectively. Results of the study revealed that teachers consistently endorsed the continuance of the fourth-quarter plan and were generally satisfied working in the program. Faculty also indicated that they had accomplished as much or more during the summer school when compared to the winter school. Furthermore, a plurality of teachers had more time for individualized instruction. Other advantages cited by teachers included summer employment opportunities, a more interesting school environment for students, an enhancement of the instructional program, and opportunities for adequate classroom preparation. Negatively, teachers expressed more pressure instructing in the year-round school as well as more paperwork.

Costa (1987) compared traditional and year-round teachers' views concerning five Elements of Quality at "seventy-five elementary schools, sixth-grade centers, and middle schools in the Clark County School District in Las Vegas, Nevada" (p. 2496-A). Costa's

data revealed that teachers “showed no difference in favor of either type of program” (p. 2496-A).

Cruz (1987) looked at teachers’ perceptions of a 60-20 plan instituted by the James Monroe School, Madera, California. Due to a proliferation in the number of school children and a lack of building funds, the district elected to implement the alternative school calendar. Shortly after the school year began, a survey was administered to the teaching staff. The majority of teachers indicated being extremely satisfied with the new program. Additionally,

“They were particularly pleased with the open communication channels among administrators, parents, and teachers; the opportunity to actively participate in planning the program; and the open and supportive environment in which their opinions, ideas and concerns were discussed. Teachers were still concerned about class size, textbook distribution, the organization of reading groups within a track, the inability of teachers to take summer courses, problem students remaining on the same track, late busses, and the coordination of band and support service schedules” (p. 20).

Herman (1987) published a summary of a study performed to assess Concept 6 secondary schools within the Los Angeles Unified School District, California. Two aspects of the report dealt with quality of instruction and quality of worklife, and teachers were asked to complete a questionnaire that addressed these issues. Findings showed that as a result of additional minutes per day contributed by the Concept 6 calendar, the faculty were able to use this time “to provide additional practice, to give extended lecture and instruction, and to give more individual attention” (p. viii). Teachers, however, used the extra time least frequently to cover more course content. Other factors that enhanced

the quality of instruction included a greater continuity of instruction and the “availability of off-track regular teachers to serve as substitutes in their own school...” (p. ix). With regards to the quality of worklife, the Concept 6 calendar apparently did not embellish the status of the teacher.

Another often cited report concerning year-round education was completed by Quinlan, George, and Emmett (1987). The purpose of their research was to “analyze and synthesize information on all schools with year-round programs in California” (p. 1). One of the three sections of the study dealt with characteristics of the YRE program including teacher attitudes. As a result, 10% of all faculty members of year-round schools in the state were sent questionnaires of which 42% responded. The subsequent data revealed that “About 74 percent of the teachers said they preferred teaching in the year-round program. They also expressed strong satisfaction with both the duration and frequency of vacations, which they said relieved stress in a systematic way” (p. 5). Other positively mentioned areas included better quality of instruction due to program continuity, and increased opportunities afforded by intersessions. With regard to the curriculum, few revisions were needed, and the year-round calendar was deemed more flexible than the traditional calendar. Detrimental effects of year-round education, however, were noted in the following categories: storage of teaching materials, “roving” to different classrooms, and combined classes of various student grade levels.

Christie (1989) surveyed peoples’ attitudes who were directly involved in four-track year-round schools located in Cajon Valley, California. Teachers (N =90)

comprised one group inspected, and a 37 item questionnaire was administered for assessment purposes. The results disclosed positive perceptions of year-round education and its effects on student achievement, student attitude and interest, teacher work load, and resources. The only composite area showing a disapproving score was changing classrooms.

In 1989, the Utah State Board of Education published a summary concerning the state's year-round and extended-day schools. To obtain data, year-round teachers were administered two questionnaires, and a few were interviewed. The findings indicated that teachers "did not experience extreme stress except in certain areas including parent teacher conferences, paperwork, salary, and student-teacher ratio. Teachers indicated that the year-round schedule benefited student attitudes and achievement" (Utah State Board of Education, 1989, Document Resume).

Attitudes of teachers toward year-round education have been furthered studied in the 1990s. Moody (1990) published one of the first studies in this decade. Stated among several purposes of this research was one that sought to describe teachers' experiences with the YRE calendar. Data for the study was consolidated from three subsequent evaluations carried out in the state of Utah concerning YRE. The total number of teachers surveyed in the three studies equaled 661, while the number of teachers interviewed equaled 165. Findings of this study included a positive orientation toward YRE calendars by teachers. However, "Experienced teachers tend to be more positive towards the Year-Round calendar than teachers in their first year on the calendar" (p.

159). Dissension was noted, however, when teachers expressed objections with rotating rooms, storage, and record keeping.

The topic of Fardig's (1991) research was an evaluation of three year-round elementary schools located within the Orange County Public Schools, Florida. The evaluation was conducted both during and after the first year of implementation of a 60-15 single-track calendar and two 60-15 multi-track calendars. As part of the research, teachers of the respective schools were administered questionnaires and interviewed. Information from the resulting data included that a successful transformation had occurred at the three schools regarding curriculum, and that instructional methods had not changed. Additionally, teachers expressed satisfaction with their track assignments, vacation opportunities, and more frequent breaks. Disadvantages mentioned by a consensus of the instructors included opinions that "staff development and college courses were more difficult to attend on the YRE calendar than on the traditional calendar" (p. ix).

Gandara and Fish (1991) reported the findings of an experiment using the Orchard Plan (60-15 calendar) within four different school systems in California. All teachers at the multi-track schools completed surveys "at the end of the first year of implementation, and again several months into the second year of implementation" (Gandara and Fish, 1991, p. 14). For both years, a majority of teachers indicated that they were either satisfied or very satisfied with the altered curriculum. Extended contracts, that increased yearly salaries, were also well accepted by the teachers. Furthermore, the researchers

remarked that the higher salary rates contributed to the fact that 73% of the teaching faculty did not want to return to a traditional calendar.

Goren (1991) examined four schools in San Diego to ascertain the specific effects on the school site when implementing multi-track year-round school (MTYRS) calendars. Results of Goren's inquiry determined that "the relationships among school administration, faculty, staff, and community were essential components to how a school responded to the MTYRS schedule rather than solely how the principal embraced the policy" (p. 3139-A). An additional concern indicated by teachers was the need for "adequate and dependable space to accomplish their professional goals" (p. 3139-A). More specifically, faculty members thought that the accommodations provided for in MTYRS situations were a detriment "to the classroom environment and educational program" (p. 3139-A).

The main purpose of Loyd's (1991) research was to investigate "the effect of YRE on learning loss or retention of learning" (p. 3514-A). To accomplish this goal, the researcher identified a control group of students attending school on a traditional calendar and an experimental group of students using a 30-10 YRE calendar. All students attended an intermediate school in Texas. Another purpose of this research was to examine factors of YRE including "achievement, discipline, attendance, morale, vandalism, and operational costs" (p. 3515-A). Results obtained from the case study indicated that YRS students had higher achievement, better retention, and higher grades than traditional students. Furthermore, the majority of teachers' and students' attitudes

toward the YRE program were positive. Finally, discipline and attendance factors improved.

Barrett, Ferrett, and Beaty (1992) conducted an assessment of teachers' attitudes toward YRE after the first year of implementation at seven elementary schools in the Riverside Unified School District, California. Surveys were used to obtain data from the schools' staffs. The resulting data revealed that

“Ninety percent of the staff surveyed were satisfied overall with YRE. They also believe that the quality of the instructional program is good. Certified staff members felt that students tended to retain more owing to the shorter and more frequent vacations and were happy with this vacation schedule themselves. The areas of greatest concern for staff involved problems with rotating between classrooms and the related problem of storing instructional materials” (Barrett, et al., 1992, Abstract).

The purpose of Jones (1992) research was to “study the impact of the characteristics of four-track, year-round schools...on the work of teachers as they planned and implemented the curriculum, planned for the needs of students, facilitated classroom organization, and communicated” (p. 57). The subjects for this research consisted of 216 classroom teachers from seven elementary schools in the Long Beach Unified School District, California. Instructors were subdivided according to teaching experience, roving status, and primary and intermediate grades. All faculty (N = 216) completed a questionnaire, and a representative sample was later interviewed. The resulting data indicated that teachers were highly satisfied regarding their professional positions. Positive findings were also expressed with respect to vacations, increased income, and

continuous learning. Weaknesses, however, were noted in the categories of sharing classrooms and staff communication. In addition,

“Conclusions include that teachers planned curriculum based upon the length of “on-track” time, planned less review which allowed for coverage of more material, anticipated higher expectations for students because they were in a continuous school mode, used fewer resource materials because of sharing classrooms, and needed additional time between academic school years. Communication was good only between track teachers” (Jones, 1992, Abstract).

Sander’s (1992) research addressed Mississippi public school teachers’ attitudes toward year-round schools by using a questionnaire that included demographic information and 26 survey items. Seven hundred and fifty traditional calendar teachers, equally representing grades K-3, 4-8, and 9-12, were mailed a survey, and 345 instructors responded. Sander stated his findings as follows:

“Those variables that had a significant relationship with teacher perceptions of year-round school program were air conditioning in respondent’s school, preferred length of teaching contract, the use of summer employment for earning additional income other than teaching income, and rating of personal knowledge of year-round school programs” (p. 97).

Serow (1992) co-directed an evaluation that assessed teachers’ attitudes toward YRE in the Wake County Public School System, North Carolina. This research involved 34 faculty members who taught at a voluntary attendance elementary school in which a 45-15 multi-track calendar had been implemented. With reference to the major findings of this study, a preponderance of teachers found YRE befitting their lifestyle. In addition, a majority indicated that YRE programs “better meet the needs of children” and “better promotes the development of the whole child” (p. i). Furthermore, approximately two-

thirds of teachers “felt that extracurricular activities and special events were accommodated better in YRE” (p. i). A detrimental effect of YRE, however, was noted for the category of changing classrooms.

Boyles (1993) research concerned the attitudes of teachers who taught elementary courses in the Mooresville Graded School District, North Carolina. Two specific populations of teachers were surveyed. One group consisted of 15 YRE teachers, while the other group consisted of 29 traditional teachers who instructed courses within the same facilities as YRE teachers. A questionnaire that contained four fixed response items and one open-ended question was administered to the groups under study. The questionnaire required faculty members to respond in the contexts of “the past, the present, and the expected future” (Boyles, 1993, p. 133). The data representing the “present” category revealed that a majority of YRE instructors were highly satisfied with teaching, student achievement, instructional flexibility, and teaching effectiveness. Conversely, a majority of traditional teachers indicated only medium levels of satisfaction in the four previously mentioned categories.

As part of his multifarious research, Elsberry (1993) addressed YRE teachers’ attitudes concerning personal and professional scheduling and instructional effectiveness. The sample population of teachers included those instructing in an elementary YRE program. The reported findings included the following:

“No difference was found for teacher scheduling of personal and professional activities between calendars. Teachers perceived the year-round calendar to be more instructionally effective for students than the traditional calendar” (Elsberry, 1993, p. 4147A).

Teacher attitudes and teacher satisfaction toward year-round education were two variables studied in Marlow's (1993) research. Eighty-one YRE teachers from four experimental elementary schools in the Harlandale Independent School District, Texas were surveyed to obtain data. The results of the study indicated that most teachers endorsed year-round education. In fact, a majority of teachers "reported that they liked the year-round calendar better than the traditional calendar and wanted to see year-round education continue at their school" (p. iii and iv). Teachers also indicated that children's attitudes toward school had improved, less review time was needed, and student achievement levels did not suffer as a result of the YRE school calendar.

Chen (1994) assessed teachers' and administrators' perceptions regarding YRE by administering a questionnaire to educators working in three high schools within the Los Angeles Unified School District, California. All three schools used a Concept 6 3-track year-round schedule and had operated on the year-round calendar for at least ten years. The three-fold purpose of the investigation was to ascertain whether or not the educators believed that YRE resulted in "(a) a greater level of mastery among academically under-prepared students learning all school curricular offerings; (b) more satisfaction with their jobs, and (c) a more positive attitude toward a year-round school schedule than a traditional school schedule" (p. 54). Among the 181 total respondents to the questionnaire, teachers comprised approximately 87.3%. The results indicated that 75% of the teachers "with five or more years of year-round education experience preferred a year-round program, while 25 percent preferred a traditional schedule" (Chen, 1994,

Abstract). In addition, educators' reacted positively towards YRE and student employment, enrollment, enrichment, remediation, athletic programs, and family vacation schedules. However, "The disadvantages cited were that it disrupts family vacation plans if siblings are not on the same schedule, and it causes difficulties when students transfer between year-round and traditional schools" (p. 116 and 117).

DeJarnett (1995) conducted an evaluation project with the stated purpose to quantitatively verify the statement "year-round education is a valid component of school improvement" (p. 7). To accomplish his established objective, the researcher reviewed 57 studies concerning YRE and the variables of "Academic achievement, attendance, cost, discipline, parent attitudes, student attitudes and teacher attitudes" (p. 10). More specifically, 26 studies contained quantitative data concerning teachers' attitudes toward YRE. Out of the 26 articles,

"20 showed that teachers' attitudes were very positive about the year-round calendar in place in the school or district. Four cited no significant difference in attitudes; two reported that teachers' attitudes were more negative after the implementation of a year-round program" (DeJarnett, 1995, p. 139).

Furthermore, all variables concerning year-round education questioned by the researcher were positively validated by a calculation of vote scores. As a result of the findings, DeJarnett concluded that "year-round schools can have a profound effect on certain aspects of schooling, a possibly positive effect on other aspects, and a marginal effect on still other aspects of the educational process" (p. 145).

Physical Education and Year-Round Education

The restructuring of the traditional school calendar by school officials has an impact upon teachers who instruct curriculum courses, as well as, the curriculum. Currently, physical education is a curriculum course required in 47 of the 50 States throughout the nation (Pate et al., 1995). In fact, the School Health Policies and Programs Study (SHPPS) recently demonstrated "that physical education is an established component of the educational program in virtually (sic) states, districts, and schools in the United States" (Pate, et al., p. 317). With regards to course content and facilities and equipment, the physical education curriculum is unique. Literature regarding physical education and year-round education, however, is almost non-existent.

Dennard (1969) published a report concerning the restructuring of the physical education program that occurred after the implementation of a quarter system in the Fulton County and Metro-Atlanta, Georgia school districts. Curriculum changes mandated that secondary students earn a total of ten quarters in physical education. Additionally, students gained credit by attending either beginning, intermediate, or advanced level courses that were not segregated by grade level. Previously, the semester plan required students to attend corresponding grade level courses from grades 8 through 11. Dennard cited an advantage of the year-round schedule as being able to offer such courses at boating, swimming, and water-skiing. For other courses, however, time accommodations had to be made due to the summer heat and lack of air-conditioning of some buildings.

As was stated in the previous section of the review of literature, Mussatti (1981) gathered data from 29 high schools which were currently implementing or had implemented year-round programs. Although the researcher did not mention physical educators specifically, his data reflected a concern expressed by school districts that “Specialists and specialty teachers tend to be spread very thin and become tired and less effective on a year-round schedule” (Mussatti, 1981a, p. 9).

Housden and Holmes’ (1981) study was also referred to in the previous section of the literature review. A portion of their research dealt with parents and students who were surveyed regarding instructional effectiveness at the Mesa Verde High School located within the San Juan Unified School District, Carmichael, California. The responding parents and students “gave physical education the highest ratings” (p. 19).

Although many of the previously cited studies in the Review of Related Literature have undoubtedly included physical educators’ attitudes towards YRE, no effort has been made to distinguish their remarks from the remarks of classroom teachers. Since a trend exists towards the proliferation of schools incorporating YRE, research is needed to assess the perceptions of physical educators regarding the current status of physical education within YRE schools. Therefore, given the lack of research specifically targeting physical education teachers’ attitudes in regards to YRE, the present study was undertaken.

CHAPTER 3

Methods

Development of the Instrumentation

The instruments used in this study were constructed after reviewing several questionnaires and demographic data sheets pertaining to year-round education. More specifically, several statements from previous surveys regarding teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment were modified to reflect the domain of physical education. In part, questionnaire items were formulated from surveys by Smith (1985), Quinlan, et al. (1987), Moody (1991), and Serow (1992). Similarly, several demographic items were patterned from Marlow's (1993) Teacher Information sheet. Notwithstanding the before mentioned sources, some demographic and questionnaire items were created by the investigator.

Prior to the implementation of the study, the Year-Round Physical Education Teacher Data Sheet and the Year-Round Physical Education Teacher Questionnaire were reviewed by a committee of professional educators to establish validity of the survey items. This validation panel included three college professors, one public school teacher, the executive director of the National Association for Year-Round Education (NAYRE), and one statistician (see Appendix A). Changes to the Data Sheet included the rewording of questions 3, 6, 7, and 11; additional categories for questions 4 and 7; and the addition of a question concerning recreational activities. Changes to the Teacher Questionnaire

included the rewording of several items (2, 3, 5, and 9); the movement of several items to be answered by multi-track teachers only (17, 18, 25, and 26); and the elimination of survey item number 24. Furthermore, a sixth category (NA=Not Applicable) was added to the list of possible teacher responses.

The final survey instrument contained three components (see Appendix B). Part one consisted of a cover letter to the principal and physical education teacher of a selected school. Principals were asked to distribute the evaluation packet to a member of the physical education faculty. Physical education teachers were asked to complete and return the required data. The second part of the evaluation was a demographic data sheet that assessed teachers' personal and professional characteristics. Finally, part three consisted of a questionnaire that contained twenty-four items to be completed by the entire group of year-round physical educators and eight items that only multi-track teachers were asked to complete. Teachers were asked to respond to statements concerning year-round physical education by using a six-point Likert type scale. Specific categories assessed included teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment.

Data Collection Procedures

Preparations for the collection of data began in the winter of 1995-1996 after approval for the study was obtained from Middle Tennessee State University's Institutional Review Board (see Appendix C). Thereafter, the National Association for Year-Round Education (NAYRE) was contacted to purchase their publication *School by*

School Listing of YRE Programs for the 1995-1996 School Year. Upon receipt of the book, schools were classified according to elementary, middle school, or high school status. An effort was made to exclude special or atypical schools not clearly designated as either elementary, middle, or high schools from the sample. The types of excluded schools included the following:

- a. Elementary/Middle Schools
- b. Community Schools
- c. Academy Schools
- d. Alternative Schools
- e. Education Centers
- f. Center Schools
- g. Schools for the Arts or Fine Arts
- h. Magnet Schools
- i. Year-round Schools
- j. Continuation Schools
- k. Name Only Schools
- l. Learning Centers
- m. Charter Schools
- n. Learning Plaza Schools
- o. Independent Study Schools
- p. Private Schools

Subsequently, a stratified random sample was conducted to identify every third elementary (primary) school listed in NAYRE's publication. In addition, every middle and high (secondary) school was identified.

Following the selection of specific schools, each institution was assigned a code necessary for data calculations. Subsequently, evaluation packets that included a cover letter, a Year-Round Physical Education Data Sheet, and the Year-Round Physical Education Questionnaire were mailed to principals at the selected schools. The evaluation packets were sent directly to administrators since the specific names of physical educators were not mentioned in NAYRE's listings of schools. Upon receipt, principals were asked to distribute the evaluation packet to a physical education teacher at their school. In the event that more than one physical educator was on staff, principals were requested to present the packet to the teacher with the most seniority according to the number of instructional years in year-round schools. The initial mailings were sent to principals on March 28, 1996. Teachers were asked to respond by April 18, 1996. A follow-up letter to non-respondents was mailed on April 29, 1996 (see Appendix D). The final cut-off date for receiving data was set for May 15, 1996.

Subjects

Following a stratified random sampling of year-round schools based on grade level and school location, 992 year-round principals were mailed evaluation packets. The total number of schools reflected 629 elementary principals and 363 secondary principals.

The principal at each school was asked, in turn, to distribute the received packet to a physical education teacher working at his/her school.

Analyses of Data

Information received from the Year-Round Physical Education Data Sheet and Year-Round Physical Education Questionnaire were entered into a computer located in the office of Middle Tennessee State University Information Technology. Statistical Analysis Software Version 6.11 (SAS Institute, Cary, NC) was used to analyze the data.

The demographic Data Sheet was administered to year-round physical education teachers to assess demographic characteristics. The Questionnaire was designed to elicit information in six dimensions. Each dimension represented a different testing variable (see Table 1). Physical education teachers were asked to respond to questionnaire statements concerning year-round education by indicating one of six possible options. Response choices included strongly agree, agree, undecided, disagree, strongly disagree, and not applicable.

Frequency counts and percentages were used to answer research question one. The research question asked if year-round physical education teachers were more inclined to favor the year-round school calendar than the traditional school calendar with regards to individual questionnaire items in the dimensions of teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment.

Table 1
Teaching Variables Categorized by Item Loadings

Variable	Item loadings
Teacher satisfaction	1 - 2 - 3 - 4
Student achievement	5 - 6 - 7 - 8 - 9 - 10 - 11
Student discipline	12 - 13 - 14 - 15
Units of instruction	16 - 17 - 18 - 19 - 20 - 21 - *27 - *28 - *29 - *30
Staff development	22 - *25 - *26
Facilities and equipment	23 - 24 - *31 - *32

* Multi-track teachers only

Research questions two, three, and four were analyzed by using Stepwise Multiple Regression techniques and a Multiple Analysis of Variance (MANOVA). Research question number two asked if there was a difference in attitudes between physical education teachers on single-track versus multi-track calendars with regards to the six dimensions. Research question number three asked if there was a difference in attitudes between elementary and secondary teachers with regards to the six dimensions. Finally, research question number four asked if any other demographic characteristics were determining factors considering the dimensions.

Responses of Not Applicable were not used to determine statistics in the MANOVA analysis. Additionally, response values for Questionnaire items number 3, 15, 18, 19, 20, 23, and 24 were inverted to make them positively oriented towards year-

round education. Furthermore, questions answered by multi-track only teachers were not used in either the regression test or the MANOVA.

The 0.05 level of probability was used to determine significance. Wilk's Lambda Statistics were used to report statistics of the MANOVA. Reliability of the first 24 Questionnaire items answered by all of the teachers was determined by computing Cronbach's coefficient alpha.

CHAPTER 4

Results

Participant Completion

Following a stratified random sampling of 992 year-round schools, 393 data sheets and questionnaires (39.6 percent) were returned. Appendix E provides a state-by-state breakdown of the total number of questionnaires sent and accrued. Of the 393 accumulated surveys, 342 were entered into a data base. The remaining 51 surveys were deemed unusable for one of the following reasons:

- 1) Principals (N=24) returning surveys indicated that there was not a physical education instructor (teaching specialist) at their school.
- 2) Surveys (N=9) were returned after the deadline for acceptance.
- 3) Surveys (N=5) could not be delivered as addressed.
- 4) Physical education teachers (N=2) stated that the survey did not apply to their teaching situation.
- 5) One physical education teacher stated that he did not have enough experience in a year-round teaching environment in order to respond.
- 6) One survey was completed by 4 teachers.
- 7) Principals (N=9) indicated that their school no longer used a year-round calendar.

Reliability

The consistency of the first 24 questions answered by all the responding teachers on the Year-Round Physical Education Questionnaire was determined by computing Cronbach's coefficient alpha. The coefficient alpha obtained was 0.93, indicating that the first 24 questions on the instrument were reliable. The coefficient alpha of the last 8 questions answered only by multi-track teachers was 0.76. Reliability of this part of the questionnaire is limited due to the amount of people asked to respond to these questions and the limited amount of questions asked.

Frequencies and Percentages of the Year-Round Physical Education Teacher Data Sheet

Frequencies and percentages were computed for the Year-Round Physical Education Teacher Data Sheet. A total of 164 males (48 percent) and 178 females (52 percent) participated in the study. In Table 2, the highest level of education completed by the participants is displayed.

Table 2
Highest Level of Education Completed

Education Level	Frequency	Percent
Bachelor	46	13.5
Bachelor + Hours	156	45.7
Masters	49	14.4
Masters + Hours	78	22.9
Education Specialist	5	1.5
Doctorate	7	2.0

N.B., Response Missing = 1

The data also revealed that out of the 342 respondents, 307 (89.8 percent) were certified by the state in which they lived to specifically teach physical education. In addition, the total number of teachers instructing in single-track schools numbered 196 (57.3 percent), while teachers in multi-track schools numbered 146 (42.7 percent). Similarly, the survey was completed by 195 elementary and 147 secondary physical education teachers. Table 3 provides frequencies and percentages regarding the types of year-round calendars utilized in the school systems in which the teachers taught.

Table 3
Types of Year-Round Calendars Used

Calendar	Frequency	Percentage
25-5	5	1.5
30-10	5	1.5
45-15	81	23.7
60-15	24	7.0
60-20	65	19.0
90-30	34	9.9
trimester	18	5.3
quarter	7	2.0
Concept 6	11	3.2
Concept 6 modified	7	2.0
Five-track	8	2.3
Modified Traditional/ Year Round	47	13.7
Other	30	8.8

Approximately 50 percent of the teachers (N=172) commented that they instructed in year-round schools in which the total student population in physical education numbered 701 or more (see Appendix F). Appendix G addresses the specific grade levels of the responding physical educators. Additional professional information regarding the number of years taught in year-round schools and in traditional schools is contained in Table 4.

Table 4
Years Taught in Year-Round and Traditional Schools

Year-Round Experience			Traditional Experience		
#Yrs.	Frequency	%	#Yrs.	Frequency	%
00-04	235	69.1	00-04	96	31.1
05-09	78	22.9	05-09	72	23.3
10-14	8	2.4	10-14	55	17.8
15-19	9	2.6	15-19	33	10.7
20-24	3	0.9	20-24	27	8.7
25 + Yrs.	7	2.1	25 + Yrs.	26	8.4

N.B., YRE experience responses missing N=2; Teachers that indicated no traditional experience N=33

Demographic data concerning year-round physical education teachers also revealed that approximately 75% (N= 256) were not on an extended year contract. A total of eighty-five teachers, however, did indicate that they taught several days beyond their district's or state's minimum requirement. Forty-one teachers taught 10-20 days

extra, seventeen teachers taught 21-40 days extra, 21 teachers taught 41-60 days extra, and six teachers taught 61 or more days extra.

Regarding the total number of other physical education teachers at their school, 111 indicated that there were none, 74 indicated one, 38 indicated two, and 117 indicated three or more. The respective percentages were 32.5, 21.6, 11.1, and 34.2. Additionally, the majority of teachers returning the survey asserted that they would continue to teach in a year-round school (see Table 5).

Table 5
Plan to Continue to Teach at a Year-Round School

Continue	Frequency	Percentage
Yes	289	86.0
No	47	14.0

N.B., Responses missing N=6

The final three questions on the Year-Round Physical Education Data Sheet pertained to physical education courses during intersessions, recreational activities during intersessions, and year-round physical education curriculum guides. Two-hundred and sixty teachers (76 percent) disclosed that time was not devoted during vacation breaks or intersessions to offer physical education classes for remedial, enrichment, or accelerated purposes. Approximately two-thirds of the teachers (N=228) announced that their particular school did not offer recreational activities during vacation breaks or intersessions. Finally, 110 teachers (32.2 percent) responded that their school district

used a year-round physical education curriculum guide, while 232 teachers (66.7 percent) indicated that they did not have one.

Frequencies and Percentages of Year-Round Physical Education Teacher Questionnaire

In order to answer research question number one, frequencies and percentages were calculated for all survey items contained on the Year-Round Physical Education Teacher Questionnaire. Table 6 presents the frequencies and percentages for the six dimensions.

Table 6
Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA	A	U	D	SD	NA	Missing
Freq. (%)							

Teacher Satisfaction

1. I prefer teaching physical education using a year-round schedule more than a traditional schedule.

93	92	56	41	47	10	3
(27.4)	(27.1)	(16.5)	(12.1)	(13.9)	(3.0)	

2. After teaching in both traditional and year-round physical education programs, it is my opinion that morale is higher for physical educators in a year-round program.

75	79	56	51	48	30	3
(22.1)	(23.3)	(16.6)	(15.0)	(14.2)	(8.8)	

3. After teaching in both traditional and year-round physical education programs, it is my opinion that it is more stressful to teach in a year-round school.

49	59	27	83	94	28	2
(14.4)	(17.4)	(8.0)	(24.4)	(27.6)	(8.2)	

Table 6 - Continued
 Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA Freq. (%)	A	U	D	SD	NA	Missing
4. The more experience I gain from working in a year-round physical education program, the more I like it.	87 (25.7)	111 (32.7)	52 (15.3)	46 (13.6)	36 (10.6)	7 (2.1)	3
<i>Student Achievement</i>							
5. Year-round physical education programs, when compared to traditional programs, better meet children's social and emotional needs.	43 (12.7)	91 (26.8)	93 (27.4)	64 (18.9)	37 (10.9)	11 (3.2)	3
6. Developmentally, the traditional three-month summer break is too long for children not to receive a structured program of physical activity.	101 (29.7)	113 (33.2)	26 (7.6)	74 (21.8)	20 (5.9)	6 (1.8)	2
7. Children achieve at least as well in a year-round physical education program as they do in a traditional program.	91 (26.8)	174 (51.3)	31 (9.1)	24 (7.1)	13 (3.8)	6 (1.8)	3
8. Students attain higher levels of motor skill development in a year-round school than in a traditional year school.	37 (10.9)	88 (26.0)	112 (33.0)	75 (22.1)	18 (5.3)	9 (2.7)	3

Table 6 - Continued
Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA	A	U	D	SD	NA	Missing
Freq. (%)							
9. Students attain higher levels of physical fitness in a year-round school than in a traditional year school.	40 (11.8)	110 (32.4)	77 (22.7)	85 (25.1)	19 (5.6)	8 (2.4)	3
10. I am more likely to know what a specific student has achieved in a year-round school than in a traditional year school.	27 (7.9)	91 (26.8)	74 (21.8)	108 (31.8)	28 (8.2)	12 (3.5)	2
11. Students benefit from a more continuous learning environment established in a year-round physical education program.	65 (19.0)	152 (44.4)	41 (12.0)	61 (17.8)	19 (5.6)	4 (1.2)	
<i>Student Discipline</i>							
12. Student behavior is better in a year-round physical education program than in a traditional program.	39 (11.4)	75 (21.9)	101 (29.6)	86 (25.1)	31 (9.1)	10 (2.9)	
13. Students are more motivated to learn in a year-round physical education program than in a traditional program.	30 (8.8)	81 (23.8)	99 (29.0)	103 (30.2)	19 (5.6)	9 (2.6)	1

Table 6 - Continued
Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA Freq. (%)	A	U	D	SD	NA	Missing
14. Teachers and students seem to work more harmoniously in a year-round physical education program than in a traditional program.	37 (10.8)	88 (25.7)	79 (23.1)	103 (30.1)	27 (7.9)	8 (2.3)	
15. Following intersession breaks in year-round schools, students in physical education classes are disoriented and have to re-learn class procedures.	22 (6.4)	59 (17.3)	25 (7.3)	145 (42.4)	88 (25.7)	3 (0.9)	
<i>Units of Instruction</i>							
16. Little modification of the traditional physical education curriculum is necessary using a year-round calendar.	29 (8.5)	194 (56.7)	29 (8.5)	49 (14.3)	38 (11.1)	3 (0.9)	
17. Year-round physical education programs expand the types of instructional experiences that can be offered.	28 (8.2)	131 (38.3)	64 (18.7)	94 (27.5)	22 (6.4)	3 (0.9)	
18. It is more difficult to plan the physical education curriculum in a year-round program than in a traditional program.	45 (13.1)	68 (19.9)	16 (4.7)	152 (44.4)	56 (16.4)	5 (1.5)	

Table 6 - Continued
 Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA Freq. (%)	A	U	D	SD	NA	Missing
19. Year-round teaching decreases my preparation time for a given week of teaching, compared to a nine-month schedule.	10 (2.9)	33 (9.7)	46 (13.5)	187 (54.8)	56 (16.4)	9 (2.6)	1
20. Year-round physical education programs result in more time "team teaching" with other physical education teachers than traditional programs.	25 (7.3)	64 (18.7)	62 (18.1)	100 (29.2)	26 (7.6)	65 (19.0)	
21. Physical education teachers spend less time reviewing past work in the year-round school than in the traditional year school.	27 (7.9)	110 (32.2)	77 (22.5)	102 (29.8)	17 (5.0)	9 (2.6)	
Staff Development							
22. Year-round teaching increases teacher professionalism compared to the nine-month schedule.	19 (5.6)	52 (15.2)	101 (29.6)	114 (33.4)	41 (12.0)	14 (4.1)	1
Facilities and Equipment							
23. The lack of air-conditioning in a gymnasium can have a negative effect on the physical education program, especially during the summer months.	156 (45.7)	106 (31.1)	9 (2.6)	16 (4.7)	9 (2.6)	45 (13.2)	1

Table 6 - Continued
Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA Freq. (%)	A	U	D	SD	NA	Missing
24. Year-round maintenance of the playground and sports fields is a problem at my school.	65 (19.1)	89 (26.1)	18 (5.3)	119 (34.9)	41 (12.0)	9 (2.6)	1
<i>Multi-Track Teachers Only</i>							
25. Planning days are needed during the school year that would allow all physical education faculty members to attend department meetings as a team.	51 (35.9)	54 (38.0)	9 (6.3)	14 (9.9)	2 (1.4)	12 (8.5)	5
26. Sometimes, I miss important information because I am on break.	24 (16.9)	54 (38.0)	7 (4.9)	33 (23.2)	6 (4.2)	18 (12.7)	5
27. The multi-track system inconveniences physical educators by constantly requiring them to rotate teaching stations with other instructors.	19 (13.4)	27 (19.0)	19 (13.4)	36 (25.3)	14 (9.9)	27 (19.0)	5
28. Constant modifications have to be made to the physical education curriculum because of children going off-track while others are returning.	43 (30.3)	43 (30.3)	7 (4.9)	30 (21.1)	9 (6.3)	10 (7.0)	5

Table 6 - Continued
 Year-Round Physical Education Teacher Questionnaire Frequencies and Percentages

Question	SA Freq. (%)	A	U	D	SD	NA	Missing
29. The tracking system used at my school makes it necessary to combine various grade levels of students together for physical education classes.	34 (23.9)	36 (25.4)	3 (2.1)	31 (21.8)	16 (11.3)	22 (15.5)	5
30. Year-round education creates a greater workload of paper work and record keeping traditional schools.	34 (23.9)	37 (26.1)	14 (9.9)	42 (29.6)	11 (7.7)	4 (2.8)	5
31. In general, equipment used in the physical education program tends to "wear-out" faster in year-round schools than in traditional schools.	35 (24.6)	48 (33.8)	19 (13.4)	27 (19.0)	9 (6.3)	4 (2.8)	5
32. Year-round maintenance of the gymnasium is a problem at my school.	24 (16.9)	21 (14.8)	12 (8.4)	31 (21.8)	16 (11.3)	38 (26.8)	5

Stepwise Multiple Regression of Six Dimensions

Following the computation of frequencies and percentages, a stepwise multiple regression was performed on the data (see Appendix H). This test was carried out to

determine if a relationship existed between the six dimensions and the demographic variables.

For the dimensions of teacher satisfaction, student achievement, and student discipline, the results revealed that the demographic variables of type of school, track system, continue to teach, and curriculum guides were significant factors in relation to the three dimensions. The test also recognized that track system, continue to teach, and curriculum guides were important to the dimension of units of instruction. Meaningful variables for the dimension of staff development were type of school, track system, and curriculum guides. Lastly, the type of school and population of physical education students were significant for the dimension of facilities and equipment.

Multiple Analysis of Variance

Subsequent to the stepwise multiple regression test, a multiple analysis of variance (MANOVA) was performed. This test was necessary to help answer research questions 2, 3, and 4.

The demographic variables that had an effect across all six dimensions were type of school, track system, continue to teach, and curriculum guides. Furthermore, the MANOVA indicated that the interaction of type of school and continue to teach was significant for the six dimensions. Likewise, the interaction of track system and continue to teach was also significant for the six dimensions.

Table 7 displays MANOVA values for each demographic variable by dimensions. A lower numerical value for a statistical mean indicates a more favorable disposition

towards year-round physical education. Since some Data Sheets or Questionnaires had missing information, only 317 surveys were used in this analysis. Additional MANOVA statistics are displayed in Appendix I.

Table 7
Demographic Variables by Dimensions

Dimension	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>p</u>
Type of School					
	<i>Elementary</i> N=178		<i>Secondary</i> N=139		0.0008
1	2.442	1.146	2.803	1.263	
* 2	2.491	0.868	2.857	0.933	
3	2.683	0.903	3.023	0.919	
4	2.675	0.626	2.793	0.612	
5	3.179	1.036	3.503	1.079	
*6	3.500	1.016	3.773	0.944	
Track System					
	<i>Single-Track</i> N=284		<i>Multi-Track</i> N=133		0.0021
*1	2.396	1.126	2.883	1.269	
*2	2.563	0.920	2.774	0.894	
*3	2.710	0.946	3.001	0.869	
*4	2.579	0.546	2.931	0.663	
5	3.250	1.107	3.421	1.001	
6	3.489	0.990	3.800	0.973	

N.B., *p<.05

Table 7 - Continued
Demographic Variables By Dimensions

Dimension	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>p</u>
Continue to Teach					
	<i>Yes</i> N=271		<i>No</i> N=46		0.0001
*1	2.468	1.142	3.378	1.317	
*2	2.547	0.847	3.268	1.050	
*3	2.735	0.883	3.402	0.968	
*4	2.687	0.616	2.961	0.607	
5	3.276	1.058	3.586	1.086	
6	3.619	0.981	3.619	1.070	
Curriculum Guide					
	<i>Yes</i> N=99		<i>No</i> N=218		0.0147
1	2.352	1.084	2.713	1.249	
2	2.478	0.813	2.731	0.947	
3	2.563	0.848	2.954	0.933	
*4	2.564	0.542	2.801	0.642	
*5	2.959	1.115	3.486	1.003	
6	3.606	1.052	3.626	0.967	

N.B., *p<.05

Table 7 - Continued
Demographic Variables By Dimensions

Dimension	M	SD	M	SD	p
Type of School & Continue to Teach					
	<i>Elementary/Yes</i> N=157		<i>Secondary/Yes</i> N=144		0.0135
1	2.331	1.052	2.658	1.236	
2	2.424	0.815	2.716	0.865	
3	2.608	0.873	2.910	0.870	
4	2.633	0.606	2.761	0.625	
5	3.165	1.049	3.429	1.055	
*6	3.541	0.985	3.728	0.971	
	<i>Elementary/No</i> N=21		<i>Secondary/No</i> N=25		
1	3.273	1.476	3.466	1.191	
2	2.992	1.090	3.500	0.976	
3	3.238	0.953	3.540	0.978	
4	2.987	0.700	2.940	0.531	
5	3.285	0.956	3.840	1.143	
*6	3.190	1.209	3.980	0.796	

N.B., *p<.05

Table 7 - Continued
Demographic Variables By Dimensions

Dimension	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>p</u>
Track System & Continue to Teach	<i>Single-Track/Yes</i> N=150		<i>Multi-Track/Yes</i> N=121		0.0274
1	2.265	1.057	2.721	1.197	
*2	2.466	0.863	2.647	0.819	
*3	2.595	0.891	2.910	0.844	
4	2.536	0.541	2.874	0.654	
5	3.220	1.104	3.347	0.997	
6	3.463	0.972	3.814	0.962	
	<i>Single-Track/No</i> N=34		<i>Multi-Track/No</i> N=12		
1	2.975	1.253	4.520	0.678	
*2	2.989	1.048	4.059	0.539	
*3	3.220	1.023	3.916	0.547	
4	2.771	0.532	3.500	0.481	
5	3.382	1.128	3.347	0.997	
6	3.602	1.071	3.666	1.114	

N.B., *p<.05

CHAPTER 5

Discussion

The purpose of this study was to examine physical education teachers' attitudes towards physical education in year-round schools and its effects on the six dimensions of teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment. In addition, an effort was made to describe the relationship of the six dimensions according to demographic characteristics.

Results of this study indicated that significant differences existed across all six dimensions between physical education teachers' attitudes regarding year-round physical education programs and the type of school in which they instruct. Elementary teachers responded more favorably than secondary teachers towards year-round physical education programs. In addition, differences existed between whether physical education teachers instruct at a single-track or multi-track school. Single-track teachers responded more favorably than multi-track teachers towards year-round physical education programs.

Another category that revealed major differences was whether physical education teachers planned to continue instructing at a year-round school. Those who plan to continue working responded more favorably towards year-round education (YRE) than teachers who planned to discontinue instructing at a year-round school. Furthermore, physical education teachers who had access to a year-round physical education curriculum guide were more favorably oriented towards year-round physical education programs than those who did not have a curriculum guide.

The last two variables in which significant differences were illustrated across the six dimensions included the interactions of type of school and continue to teach and track system and continue to teach. Regarding the demographic variables of type of school and continue to teach, elementary physical education teachers who indicated that they planned to continue instructing in a year-round school had the most favorable scores toward YRE. The three groups that followed the most favorable group in descending order were secondary teachers who indicated that they would continue instructing, elementary teachers who indicated that they would discontinue instructing, and secondary teachers who indicated that they would discontinue instructing.

Similarly, for the demographic variables of track system and continue to teach, the most favorable group was single-track teachers who indicated that they would continue instructing. This group was followed by multi-track teachers who indicated that they would continue instructing, single track-teachers who indicated that they would discontinue instructing, and multi-track teachers who indicated that they would discontinue instructing.

As a result of the aforementioned findings, a further review of the data was undertaken to determine which demographic variables for each dimension were significant. These results are found in Appendix J as MANOVA by dimension.

Chi-Square values were also generated for all significant Questionnaire items according to the demographic variables of type of school, track system, continue to teach, and curriculum guides. The .05 level of confidence was used. Chi-Square values were

not produced for items when respondents marked Not Applicable. Appendix K contains Chi-Square values concerning the type of school. Appendixes L and M contain Chi-Square values regarding track system and continue to teach, respectively. Appendix N contains Chi-Square values for curriculum guides.

What follows is a discussion of Questionnaire items' 1-24 per dimension. In addition, frequency and percentage figures for all Questionnaire items will be mentioned. Since similar research of physical education teachers' attitudes toward year-round physical education is non-existent, accurate comparisons of findings cannot be made. Nevertheless, an attempt will be made to describe the data from this investigation in relation to the discoveries of prior attitudinal investigations conducted with populations of professional educators (predominantly classroom teachers).

Dimension 1 - Teacher Satisfaction

Concerning the dimension of teacher satisfaction, the results indicated that the demographic variables of track system, continue to teach, and the combined category of track system and continue to teach were meaningful. This dimension contained four Questionnaire items.

Overall, frequency and percentage results indicated that 185 of the physical education teachers (55 percent) surveyed either strongly agreed or agreed that they preferred using a year-round schedule more than a traditional schedule. However, Chi-Square analyses revealed that more than half of the teachers who did not plan to continue teaching at a year-round school preferred the traditional schedule. Nonetheless, nineteen

previous studies in the Review of Related Literature also revealed that their respondent populations preferred teaching using a year-round schedule more than a traditional schedule.

The second question asked whether teacher morale is better in a year-round physical education program than in a traditional program. No majority consensus was determined for physical educators regarding morale. However, multi-track teachers were less likely than single-track teachers to strongly agree or agree that morale is higher. For those planning to discontinue teaching, a sizable number indicated that morale was not higher. In Deason's (1975) study, morale was lower among all surveyed teachers. On the other hand, Kreb (1973), Smith (1985), and Marlow (1993) documented an increase in morale for teachers.

Another teacher satisfaction component concerned the issue of stress. Slightly over half (N=177) of the total number of respondents commented that teaching was not any more stressful in a year-round school than in a traditional setting. However, multi-track teachers were more likely than single-track teachers to indicate that it was more stressful. Two prior studies conducted exclusively on multi-track teachers split on this issue. In Ottley's (1978) study, the majority of teachers indicated less "stress and strain" considering the year-round calendar, while Young and Berger's (1983) population indicated more stress. Furthermore, Marlow (1993) found that a majority of teachers indicated that teaching was not any more stressful in a year-round school than in a

traditional setting. However, the type of track system used in the schools that she examined could not be established by reviewing her study.

The last item for teacher satisfaction pertained to teaching experience. One hundred and ninety-eight teachers (58 percent) were in agreement, that with increased experience in year-round schools, the more they liked it. Conversely, most teachers wishing to discontinue teaching in YRE disagreed. Comparable data for this Questionnaire item was found in Marlow's (1993) research. When asked the same question regarding increased experience, slightly more than two-thirds of the teachers answered affirmatively.

After inspecting the results concerning the dimension of teacher satisfaction, it became apparent that an attempt should have been made to determine whether the physical education teachers had voluntarily chose to teach in their respective YRE schools or had been compelled to instruct because of changes made to a pre-existing traditional calendar. Ashburn (1974) explained that teachers' attitudes towards YRE, for those who volunteer, can be rationalized according to the cognitive dissonance theory (Festinger, 1964). This theory is based on the contention that "once an individual commits himself to a course of action, he would be unlikely to find any fault with his decision" (Ashburn, 1974, p. 35). Therefore, teachers who voluntarily engage in working in year-round schools are likely to indicate satisfaction.

On the other hand, for those teachers not wishing to continue instructing in YRE schools, the decision to use a YRE format of operation may not have been their choice.

Their strong discord to almost every aspect of YRE attests to their disliking. This dissent also opposes Festinger's (1964) cognitive dissonance theory which emphasizes satisfaction from personal decision making.

Additional findings concerning teacher satisfaction included multi-track teachers were more likely than single-track teachers to indicate lower morale and an increased amount of stress in year-round physical education programs. Perhaps, these discoveries may be attributed to the greater number of students attending multi-track schools or to teachers possessing extended contracts. Future research, however, should be conducted specifically to ascertain the stresses that have an effect on physical education teachers in multi-track versus single-track schools.

Dimension 2 - Student Achievement

Results for the second dimension disclosed the demographic variables of type of school, track system, continue to teach, and the combined category of track of school and continue to teach to be significant. This dimension contained seven Questionnaire items.

Total questionnaire responses were divided regarding children's social and emotional needs being better met in a year-round physical education program. However, almost half of the elementary teachers (49 percent) either strongly agreed or agreed toward this question, while secondary teachers numbered less than a third (30 percent). Teachers planning to discontinue teaching at a year-round school showed disagreement towards this question. Despite the findings of the present study, data from Serow's

(1992) research revealed that 97 percent of his teacher population avowed that YRE better met children's social and emotional needs.

Most teachers (63 percent) indicated that developmentally, the traditional three-month summer break is too long for children not to receive a structured program of physical activity. About three-fourths of elementary physical education teachers (74 percent) were in agreement regarding this topic. On the other hand, secondary teachers (52 percent) indicated only partial agreement with the issue. Once again, teachers not planning to continue instructing at a year-round school showed disagreement. Other attitudinal studies did not address this issue.

Over three-fourths of all teachers (78 percent) remarked that children achieve was at least as well in a year-round physical education program as in a traditional program. Although a majority of teachers not planning to continue instructing agreed with this subject, they were more likely to disagree than those planning to continue. However, DeJarnett's (1995) synopsis of prior studies conducted concerning academic achievement positively validated that children achieve at least as well in year-round programs.

Another non-conclusive area regarding student achievement was whether students attain higher levels of motor skill development in year-round schools than in traditional year schools. Elementary teachers tended to answer more positively towards this topic than secondary teachers. Teachers planning to discontinue instructing in YRE alleged that skill development was better in a traditional school environment. Since

motor skill development is essentially a concern addressed solely in physical education classes. Other attitudinal studies did not investigate this topic.

Frequency and percentage counts for all teachers also failed to show decisiveness concerning whether children attain a higher level of physical fitness in a year-round school than in a traditional year school. Single-track teachers, however, were more inclined to agree than multi-track teachers. A majority of those wishing to discontinue teaching stated that children attain higher levels of physical fitness in a traditional year school. Again, this subject-matter was irrelevant to other studies.

Still another non-definitive Questionnaire item concerned being more likely to know what a specific student has achieved in a year-round school than in a traditional year school. Comparable data for this topic is also not available.

The final question connected with student achievement disclosed that a plurality of all teachers (N=217) believed students benefit from the more continuous learning environment established in a year-round physical education program. Elementary teachers tended to agree more than secondary teachers. A majority of those not desiring to continue teaching expressed disagreement. Regardless, educators in Jones's (1992) study positively identified the more continuous learning environment as being beneficial for children.

Results for the dimension of student achievement consistently indicated that elementary teachers were more inclined than secondary teachers to agree on several Questionnaire items. One possible reason for this occurrence might be that elementary

teachers are more accustomed than secondary teachers to working with matters pertaining to children's growth and development. Of other importance in this dimension is the finding that teachers perceive student achievement not to be lessened by a year-round calendar. However, investigations in the future should be performed to justify this claim, since teachers answered indecisively to the questions concerning motor skill development and physical fitness. Cognitive and affective learning in physical education should be explored, as well.

Dimension 3 - Student Discipline

Concerning the dimension of student discipline, the results indicated that the demographic variables of track system and continue to teach were consequential. This dimension contained four Questionnaire items.

Teachers did not answer as a majority on the first three questions regarding student discipline. The first question asked if student behavior is better in a year-round physical education program than in a traditional year program. The second question asked if students are more motivated to learn. The third question asked if teachers and students seem to work more harmoniously.

Significant differences, however, were determined for the third question between single-track and multi-track teachers. Single-track teachers tended to agree more than multi-track teachers that an increased amount of harmony exists in year-round schools between teachers and students. Predictably, a majority of the teachers who indicated that they would be changing jobs asserted that student behavior and student motivation are

better in traditional year schools. In addition, this group of dissatisfied physical educators remarked that a more harmonious atmosphere may be found in the traditional setting.

Contrary to the findings in this investigation for the first three questions regarding student discipline, several studies have documented that teachers perceive student behavior and student attitudes to be better in year-round schools than in traditional year schools. This body of research includes studies by Clauson (1975), Ottley (1978), Pelavin (1978), Housden and Holmes (1981), Smith (1985), Christie (1989), the Utah State Board of Education (1989), Loyd (1991), and Marlow (1993). Deason's (1975) research, however, varied from the above mentioned studies because teachers perceived student attitudes to be worse in year-round schools than in traditional schools.

Regarding the fourth question for the dimension of student discipline, responses of physical education teachers did produce a majority. More than two-thirds (68 percent) of the teachers expressed disagreement with the following statement: "Following intersession breaks in year-round schools, students in physical education classes are disoriented and have to re-learn class procedures". Once again, those who indicated that they were going to check for employment opportunities elsewhere took the opposing view. Corresponding data for comparison purposes could not be found for this Questionnaire item.

One conclusion realized from the preceding results was that physical education teachers in YRE do not have an obvious advantage compared to traditional teachers regarding student behavior, student motivation, and teacher/student atmosphere.

Furthermore, student discipline in physical education may not be as pronounced as it is in the classroom setting. This is evidenced by the numerous studies cited previously in the Review of Related Literature where primarily classroom teachers indicated student attitudes and behavior to be better in year-round schools.

An added discovery in this investigation within the dimension of student discipline was that children returning from intersession/vacation breaks are not disoriented and do not have to re-learn class procedures. This finding is important because many students in YRE schools experience more frequently occurring, but shorter duration intersession/vacation breaks than those found in traditional settings. Therefore, it is noteworthy that physical education teachers do not have to spend valuable class time on student discipline following the breaks.

Dimension 4 - Units of Instruction

Concerning the dimension of units of instruction, the results of this study indicated that the demographic variables of track of school, continue to teach, and curriculum guides were meaningful. This dimension contained six Questionnaire items. Corresponding studies for only two of the curriculum Questionnaire items were found.

Two hundred and twenty three teachers (65 percent) either strongly agreed or agreed that little modification of the traditional physical education curriculum is necessary using a year-round calendar. However, single-track teachers were much more

inclined to agree than multi-track teachers regarding this inquiry. Interestingly, those having access to year-round physical education curriculum guides were not as apt to agree as those without guides.

The second consideration for units of instruction was whether year-round physical education programs can expand the types of instructional experiences that can be offered. As a whole, physical education teachers did not answer as a majority on this subject. Nonetheless, most single-track teachers and teachers having curriculum guides did indicate that the types of instructional experiences could be expanded. Invariably, a conflicting view was taken by those planning to leave the YRE environment. Related literature from Krieb (1973) described an expansion in the types of instructional experiences that could be offered.

Another curriculum consideration was difficulty of planning. Reactions by the majority of teachers (61 percent) revealed that they did not believe planning the year-round curriculum was anymore difficult than in a nine-month schedule. One group of physical educators, however, showed a significant difference in their responses. More than half of the multi-track teachers (54 percent) agreed that planning a year-round curriculum was more difficult. In comparison, only 19 percent of single-track teachers agreed.

Preparation time per week was the final curriculum consideration on which a majority of physical education teachers signified conclusive agreement. Approximately 71 percent (N=243) of the teachers commented that the year-round schedule did not

reduce preparation time for a given week of teaching. Notwithstanding, multi-track teachers were less likely than single-track teachers to concede on this point.

The last two curricular items regarded team teaching and reviewing past work. Teachers were split in their responses concerning these two areas. However, teachers having curriculum guides indicated that they were more likely than those without guides to spend time “team teaching” with other physical education teachers in a year-round school. Furthermore, more than half of the teachers (54 percent) fortunate enough to have guides said they spend less time reviewing past work in the year-round school than in the traditional year school. In comparison, only 35 percent of those without guides indicated that they spent less review time. Surprisingly, more multi-track teachers (48 percent) than single-track teachers (36 percent) spent less time reviewing past work in a year-round school. The theme of less review time in year-round schools has been investigated by many researchers. Ashburn (1974), Smith and Glass (1976), Jones (1992), and Marlow (1993) have all documented that teachers proclaim less review time is necessary for subject-matter in year-round schools.

Several interesting points concerning the dimension of units of instruction were discovered in this investigation. First, the majority of teachers answered that little modification of the traditional physical education curriculum is necessary using a year-round calendar. Nonetheless, multi-track teachers and those having curriculum guides were more likely to disagree than their counterparts. This discrepancy may possibly be explained for multi-track teachers since students are continually going off-track while

others are returning, thus producing the need for modifications to the curriculum. The constant turnover of children may also account for why multi-track teachers indicated more difficulty in planning the physical education curriculum, less preparation time per week, and less time reviewing past work.

Perhaps, for those having year-round physical education curriculum guides, more modification of the traditional physical education curriculum is deemed necessary because these teachers also indicated that the types of instructional experiences could be expanded. Two other curriculum aspects were markedly different for those with curriculum guides versus those without. Those with guides were more likely to “team-teach” with other instructors and spend less time reviewing past work. This study revealed the need to inspect various year-round physical education curriculum guides. This critique may help to identify the types of expanded activities offered, how teachers work together to accomplish their goals, and why less review time of past work is needed.

Dimension 5 - Staff Development

The results for the fifth dimension disclosed that only one demographic variable was significant, curriculum guides. There was one question in this dimension. The sole question was, “Year-round teaching increases teacher professionalism compared to the nine month schedule.” The total group of teachers were divided in their responses to this question. Nevertheless, teachers possessing curriculum guides were more likely to agree with the statement than those without guides.

It is difficult to compare the findings in this dimension to those found by others because of the vagueness and limited scope of the question. However, Banta (1975) found that teacher approval of YRE was greater “among those who were involved in formulating objectives and writing curriculum modules” (p. ii). Sadly, no attempt was made in this present study to determine the extent of teacher involvement in writing the year-round physical education curriculum guides. In the future, it would be interesting to determine if a correlation exists between increased professionalism and the actual formulation of guides.

Other staff development topics need to be scrutinized in the future, as well. For instance, Webb (1973) questioned his teacher population in the following areas: attending graduate school, personal enrichment, community involvement, time for selecting teaching materials, teacher performance, and inservice programs. Furthermore, the supplementary area of coaching and teaching should be examined to determine if any problems exist for physical educators performing the dual roles in year-round schools.

Dimension 6 - Facilities and Equipment

Concerning the dimension of facilities and equipment, this investigation indicated that the demographic variable of type of school and the combined category of type of school and continue to teach were consequential. In this dimension, physical education teachers were asked whether the lack of air-conditioning in a gymnasium can have a negative effect on the physical education program, especially during the summer months. Over three-fourths of the teachers (77 percent) either strongly agreed or agreed that air-

conditioning was important. In fact, only 7 percent of the teachers (N=25) strongly disagreed or disagreed to this question. The need for air-conditioning of facilities was also emphasized in studies by Rao (1971) and Sanders (1992).

The last question pertaining to facilities and equipment concerned maintenance of playgrounds and sports fields. Teachers' responses were about evenly mixed regarding if maintenance of playgrounds and sports fields was a problem at their schools. This survey item was not relevant to other attitudinal studies published on YRE.

Concerning the dimension of facilities and equipment, the importance of having air-conditioning in a gymnasium was soundly endorsed by the year-round physical education teachers. Prior studies of predominantly classroom teachers accentuated this need also. Physical educators may perceive air-conditioning of facilities as a requirement since many of the year-round schools are currently located in the southern regions of the United States. In addition, the activity levels of children participating in physical education programs make air-conditioning a necessity, especially during the summer months. Unfortunately, several questionnaires were returned to this investigator by teachers who indicated that they did not have a gymnasium. Given the location of some of their schools and the average summertime temperatures, it is a wonder that physical education classes can be taught during this season in the outdoors.

Multi-track Teachers Only

Questions 25-32 on the Year-Round Physical Education Questionnaire were answered by the 147 multi-track teachers who completed the survey. There were eight

Questionnaire items in this section. Frequency counts and percentages will be used to present the findings, and related research will be mentioned as applicable.

One hundred and five teachers (74 percent) commented that planning days are needed during the school year that would allow all physical education faculty members to attend department meetings as a team. Furthermore, more than half of the physical educators (N=78) stated that sometimes, they missed important information because they were on break. Jones (1992) found similar staff communication problems for her sampled population.

When physical educators were asked if they were inconvenienced by constantly having to rotate teaching stations with other instructors, they did not signify as a group to any problems. Conversely, in other studies, teachers reported that the rotation of teaching stations has been a problem. These studies were completed by Quinlan, George and Emmett (1987), Christie (1989), Moody (1990), Barrett, Ferrett, and Beaty (1992), Jones (1992), and Serow (1992).

The next inquiry was whether constant modifications had to be made to the physical education curriculum because of children going off-track while others were returning. A majority of the multi-track teachers (61 percent) indicated that constant modifications had to be made.

Almost half of the multi-track teachers (49 percent) indicated that the tracking system used at their school made it necessary to combine various grade levels of students for physical education classes. However, no effort was made in this investigation to

determine whether teachers liked or disliked the multi-grade groupings. Nonetheless, teacher dislike for multi-grade groupings has been documented in studies by Ashburn (1974) and Quinlan, George, and Emmett (1987).

An increased workload of paper work and record keeping in year-round schools was the next topic of discussion. One half of the multi-track physical educators (50 percent) affirmed that there was an increased amount. Although a majority of teachers in the present study did not agree to this issue, other sampled populations of professional educators have noted an increased workload. These findings were specified by Ashburn (1974), Ottley (1978), Bradford (1987), the Utah State Board of Education (1989), and Moody (1990).

The last two questions on the Questionnaire were related to facilities and equipment. A consensus of physical education teachers (58 percent) stated that equipment tends to "wear-out" faster in year-round schools than in traditional schools. Finally, physical educators responded almost evenly to whether year-round maintenance of the gymnasium is a problem at their school.

Multi-track teachers in year-round schools are confronted with a few different concerns than those experienced by single-track teachers. In this investigation, multi-track physical education teachers voiced a clear appeal for improved staff communication channels. Another explicit matter was that constant modifications have to be made to the physical education curriculum because of children going off-track while others are returning. This subject was addressed earlier under units of instruction. Essentially, the

continual rotations have a relationship with difficulty in planning the curriculum, teacher preparation time, and review of past work. The last concern emphasized by multi-track teachers was that equipment used in the physical education program tends to “wear-out” faster in year-round schools than in traditional schools. This fact comes as little surprise since an increased amount of students use the equipment. However, this matter may need further examination to determine if physical education budgets in year-round schools are adequate to account for the increased amount of usage.

Conclusion

In conclusion, there were differences in physical education teachers’ attitudes towards year-round physical education. In addition, significant differences were noted across the dimensions of teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment for the demographic variables of type of school, track system, continue to teach, and curriculum guides.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. To further meet the needs of year-round physical education teachers, state-wide, district-wide, and school-wide studies should be conducted to determine specific concerns of physical educators that require assistance.

2. To ensure professionalism of year-round physical education teachers, states containing numerous YRE schools should develop courses in higher education that specifically instruct potential year-round physical education teachers.

3. Follow-up studies should be conducted to determine how to prevent the attrition rate of physical education teachers wishing to discontinue teaching in year-round schools.

4. Follow-up studies should be conducted to determine if physical education budgets are adequate in meeting the needs of year-round physical education programs, especially in multi-track schools.

5. Follow-up studies should be conducted to determine the types of year-round physical education curriculum guides. For those schools not having a guide, it is recommended that they develop one.

6. To further advance the foundation of knowledge concerning year-round physical education teachers, follow-up studies should be conducted to determine the effects of the dual role of teaching and coaching in year-round schools, especially in secondary schools.

7. To further advance the foundation of knowledge concerning year-round physical education teachers, follow-up studies should be conducted to more fully ascertain the effects of year-round physical education on staff development.

8. It is recommended that YRE schools develop adequate communication procedures, especially in multi-track schools.

9. To ensure the needs of children and the needs of teachers, efforts should be made to ensure that gymnasiums in year-round schools are air-conditioned.

10. To ensure the needs of children, efforts should be made by physical education teachers, parents, school faculties, and people in the community to encourage children to participate in structured programs of physical activity, year-round.

11. To ensure the needs of children, follow-up studies should be conducted concerning motor-skill development and physical fitness of children in year-round physical education programs. In addition, cognitive and affective learning should be explored.

**APPENDIX A
VALIDATION PANEL**

MEMBERS OF VALIDATION PANEL

Mr. Lee Allsbrook
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Health, Physical Education, Recreation, and Safety

P.O. Box 96
 Middle Tennessee State University
 Murfreesboro, Tennessee 37132
 (615) 898-2811

February 26, 1996

Validation Panel Member's Name
 Official Title
 School's/District's Name
 Address

Dear Dr., Mr., or Ms. _____,

Thank you for agreeing to examine my survey instruments regarding physical education teachers' attitudes towards year-round physical education.

The primary purpose of this investigation is to assess year-round physical education and its impact on teacher satisfaction, student achievement, student discipline, units of instruction, staff development, and facilities and equipment. A secondary purpose is to compile demographic data concerning personal and professional characteristics of year-round physical education teachers.

Please note that the following items on the questionnaire correspond to the variables in question:

	<u>Item No.</u>
Teacher satisfaction.....	1, 2, 3, 4
Student achievement.....	5, 6, 7, 8, 9, 10, 11
Student discipline.....	12, 13, 14, 15
Units of instruction.....	16, 17, 18, 19, 20, 21, 22, 23, *32, *33
Staff development.....	24, 25, *30, *31
Facilities and equipment.....	26, 27, 28, 29

*Questions for multi-track teachers only.

Please feel free to make any adjustments or additions to the questionnaire that you deem necessary. I know that your time is very valuable, but if possible, please return your comments before March 13, 1996. Again, thank you for your time and assistance.

Sincerely,

Peggy L. McGuire

MTSU is an equal opportunity, non-racially identifiable, educational institution that does not discriminate against individuals with disabilities.

YEAR-ROUND PHYSICAL EDUCATION TEACHER DATA SHEET

Directions: Complete each of the following categories by placing an "X" or a check mark on the line that corresponds to your response.

1. Are you Male or Female?
2. Highest level of education completed:

<input type="checkbox"/> Bachelors	<input type="checkbox"/> Masters	<input type="checkbox"/> Specialist
<input type="checkbox"/> Bachelors +Hours	<input type="checkbox"/> Masters +Hours	<input type="checkbox"/> Doctorate
3. Are you a certified teaching specialist in physical education?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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4. Indicate below the type of year-round calendar used at your school:

<input type="checkbox"/> 25-5	<input type="checkbox"/> trimester	<input type="checkbox"/> 90-30 Concept 6 modified
<input type="checkbox"/> 45-15	<input type="checkbox"/> quarter	<input type="checkbox"/> Five track, Five-term Plan
<input type="checkbox"/> 60-15	<input type="checkbox"/> quinmester	<input type="checkbox"/> Modified Traditional/Year Round
<input type="checkbox"/> 60-20	<input type="checkbox"/> Concept 6	<input type="checkbox"/> Other
5. Indicate below the appropriate level in which you teach physical education:

<input type="checkbox"/> Single-Track Elementary	<input type="checkbox"/> Multi-Track Elementary
<input type="checkbox"/> Single-Track Middle School	<input type="checkbox"/> Multi-Track Middle School
<input type="checkbox"/> Single-Track High School	<input type="checkbox"/> Multi-Track High School
6. Which specific grade levels do you teach?

<input type="checkbox"/> (K)	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	<input type="checkbox"/> (4)	<input type="checkbox"/> (5)	<input type="checkbox"/> (6)
<input type="checkbox"/> (7)	<input type="checkbox"/> (8)	<input type="checkbox"/> (9)	<input type="checkbox"/> (10)	<input type="checkbox"/> (11)	<input type="checkbox"/> (12)	
7. How many children do you presently instruct?

<input type="checkbox"/> 0-100	<input type="checkbox"/> 201-300	<input type="checkbox"/> 401-500
<input type="checkbox"/> 101-200	<input type="checkbox"/> 301-400	<input type="checkbox"/> 501 or more
8. How many years have you taught physical education in a year-round calendar school?

<input type="checkbox"/> 0 to 4	<input type="checkbox"/> 10-14	<input type="checkbox"/> 20 to 24
<input type="checkbox"/> 5 to 9	<input type="checkbox"/> 15 to 19	<input type="checkbox"/> 25 or more
9. Have you had experience teaching physical education in a traditional calendar school?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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If yes, how many years?

<input type="checkbox"/> 0 to 4	<input type="checkbox"/> 10 to 14	<input type="checkbox"/> 20 to 24
<input type="checkbox"/> 5 to 9	<input type="checkbox"/> 15 to 19	<input type="checkbox"/> 25 or more
10. Are you presently on an extended year contract?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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If yes, how many days beyond the traditional 180 day contract do you teach?

<input type="checkbox"/> 10 to 20 days
<input type="checkbox"/> 21 to 40 days
<input type="checkbox"/> 41 to 60 days
<input type="checkbox"/> more than 60 days
11. How many other physical educators teach at your school?

<input type="checkbox"/> None	<input type="checkbox"/> Two
<input type="checkbox"/> One	<input type="checkbox"/> More than Three
12. Do you plan to continue to teach at a year-round school?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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13. At your school, are vacation breaks or intersessions used to offer remedial, enrichment, or accelerated classes in physical education?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
14. Does your school district have a year-round physical education curriculum guide?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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YEAR-ROUND PHYSICAL EDUCATION TEACHER QUESTIONNAIRE

Directions: Please complete each questionnaire item by circling the abbreviation that corresponds to your response.

Abbreviations:

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1. I prefer teaching physical education using a year-round schedule more than a traditional schedule. | SA A U D SD |
| 2. The morale of physical education teachers is higher in a year-round school than it is in a traditional year school. | SA A U D SD |
| 3. Teaching physical education is more stressful in a year-round school than it is in a traditional year school. | SA A U D SD |
| 4. The more experience I gain from working in a year-round physical education program, the more I like it. | SA A U D SD |
| 5. Year-round physical education programs, when compared to traditional programs, better meet the physical needs of children. | SA A U D SD |
| 6. Year-round physical education programs, when compared to traditional programs, better meet children's social and emotional needs. | SA A U D SD |
| 7. Developmentally, the traditional three-month summer break is too long for children not to receive a structured program of physical activity. | SA A U D SD |
| 8. Children achieve at least as well in the year-round physical education program as they do in traditional programs. | SA A U D SD |
| 9. Motor skill development is greater in a year-round physical education program than in a traditional school program. | SA A U D SD |
| 10. I am more likely to know what a specific student has achieved in a year-round school than in a traditional year school. | SA A U D SD |
| 11. Students benefit from a more continuous learning environment established in year-round physical education programs. | SA A U D SD |

Abbreviations:					
SA=Strongly Agree	A=Agree	U=Undecided	D=Disagree	SD=Strongly Disagree	
12. Student behavior is better in a year-round physical education program than in a traditional year school.	SA	A	U	D	SD
13. Students are more motivated to learn in a year-round physical education program than in a traditional program.	SA	A	U	D	SD
14. Teachers and students seem to work more harmoniously in the year-round physical education program than in a traditional program.	SA	A	U	D	SD
15. Following intercession breaks, students in physical education classes are disoriented and have to re-learn class procedures.	SA	A	U	D	SD
16. Little modification of the traditional physical education curriculum is necessary using a year-round calendar.	SA	A	U	D	SD
17. The tracking system used at my school makes it necessary to combine various grade levels of students together for physical education classes.	SA	A	U	D	SD
18. Year-round education creates a greater workload of paper work and record keeping than traditional schools.	SA	A	U	D	SD
19. Year-round physical education programs expand the types of instructional experiences that can be offered, especially during the summer months.	SA	A	U	D	SD
20. It is more difficult to plan the physical education curriculum in a year-round program than in a traditional program.	SA	A	U	D	SD
21. Year-round teaching decreases my preparation time for a given week of teaching, compared to a nine-month schedule.	SA	A	U	D	SD
22. Year-round physical education programs result in more time "team teaching" with other teachers than traditional programs.	SA	A	U	D	SD
23. Physical education teachers spend less time reviewing past work in the year-round school than in the traditional year school.	SA	A	U	D	SD

Abbreviations:

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree

24. At my school, adequate time is devoted to staff development. SA A U D SD
25. Year-round teaching increases teacher professionalism,
compared to the nine month schedule. SA A U D SD
26. In general, equipment used in the physical education program
tends to "wear-out" faster in year-round schools than in
traditional schools. SA A U D SD
27. Year-round maintenance of the gymnasium is a problem at
my school. SA A U D SD
28. The lack of air-conditioning in a gymnasium can have a
negative effect on the physical education program, especially
during the summer months. SA A U D SD
29. Year-round maintenance of the playground and sport fields is
a problem at my school. SA A U D SD

Questions 30-33 are to be answered by multi-track teachers only.

30. Planning days are needed during the school year that allow
all physical education faculty members to attend as a team. SA A U D SD
31. Sometimes, I miss important information because I am
on break. SA A U D SD
32. The multi-track system inconveniences physical educators
by constantly requiring them to rotate teaching stations with
other instructors. SA A U D SD
33. Constant modifications have to be made to the physical
education curriculum because of children going off-track
while others are returning. SA A U D SD

Code No. _____

Note: Several questionnaire items were modified from previous surveys by Smith (1985),
Quinlan, George, & Emmett (1987), Moody (1991), Serow (1992), and Marlow (1993).
Modifications were made to reflect physical education teachers' attitudes towards year-
round education rather than educators' opinions in general.

**APPENDIX B
EVALUATION PACKET**

Health, Physical Education, Recreation, and Safety

P.O. Box 96
Middle Tennessee State University
Murfreesboro, Tennessee 37132
(615) 898-2811

March 28, 1996

Dear Principal or Administrator.

I am conducting a nation-wide investigation concerning year-round physical education teachers' attitudes toward year-round education. To complete this study, I am requesting your assistance.

Please distribute the evaluation packet to a physical education teacher on your staff. If there is more than one physical educator working at your school, please give the packet to the one with the greatest number of years teaching experience in year-round schools. Thank you for your time and assistance.

Peggy McGuire

Dear Physical Educator.

Your school was selected to participate in a study concerning physical education in year-round education schools. In order to compile the needed data, I need your voluntary help. Please complete the enclosed Year-Round Physical Education Teacher Data Sheet and the Year-Round Physical Education Teacher Questionnaire. Afterwards, return the survey instruments in the enclosed pre-paid envelope.

All individual teacher responses will be kept confidential. Following data compilation, all surveys will be destroyed. Please mail the documents prior to **April 18, 1996**. Thank you for your time and support.

Sincerely,

Peggy L. McGuire
Doctoral Candidate
Middle Tennessee State University
PO Box 96
Murfreesboro, TN 37132

MTSU is an equal opportunity, non-racially identifiable, educational institution that does not discriminate against individuals with disabilities.

YEAR-ROUND PHYSICAL EDUCATION TEACHER DATA SHEET

Code No. _____

Directions: Complete each of the following categories by placing an "X" or a check mark on the line that corresponds to your response.

1. Are you Male or Female?
2. Highest level of education completed:

<input type="checkbox"/> Bachelors	<input type="checkbox"/> Masters	<input type="checkbox"/> Specialist
<input type="checkbox"/> Bachelors +Hours	<input type="checkbox"/> Masters +Hours	<input type="checkbox"/> Doctorate
3. Are you certified by the state in which you reside to specifically teach physical education?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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4. Indicate below the type of year-round calendar used at your school:

<input type="checkbox"/> 25-5	<input type="checkbox"/> 90-30	<input type="checkbox"/> Concept 6 modified
<input type="checkbox"/> 30-10	<input type="checkbox"/> trimester	<input type="checkbox"/> Five track, Five-term Plan
<input type="checkbox"/> 45-15	<input type="checkbox"/> quarter	<input type="checkbox"/> Modified Traditional/Year Round
<input type="checkbox"/> 60-15	<input type="checkbox"/> quinmester	<input type="checkbox"/> Other (Specify type of calendar.)
<input type="checkbox"/> 60-20	<input type="checkbox"/> Concept 6	_____
5. Indicate below the appropriate level in which you teach physical education:

<input type="checkbox"/> Single-Track Elementary	<input type="checkbox"/> Multi-Track Elementary
<input type="checkbox"/> Single-Track Middle School	<input type="checkbox"/> Multi-Track Middle School
<input type="checkbox"/> Single-Track High School	<input type="checkbox"/> Multi-Track High School
6. Which specific grade levels do you teach? (Mark all that apply.)

<input type="checkbox"/> (K)	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	<input type="checkbox"/> (4)	<input type="checkbox"/> (5)	<input type="checkbox"/> (6)
<input type="checkbox"/> (7)	<input type="checkbox"/> (8)	<input type="checkbox"/> (9)	<input type="checkbox"/> (10)	<input type="checkbox"/> (11)	<input type="checkbox"/> (12)	
7. At your school, how many children comprise the total student population in physical education?

<input type="checkbox"/> 0-100	<input type="checkbox"/> 201-300	<input type="checkbox"/> 401-500	<input type="checkbox"/> 601-700
<input type="checkbox"/> 101-200	<input type="checkbox"/> 301-400	<input type="checkbox"/> 501-600	<input type="checkbox"/> 701 or more
8. How many years have you taught physical education in a year-round calendar school?

<input type="checkbox"/> 0 to 4	<input type="checkbox"/> 10-14	<input type="checkbox"/> 20 to 24
<input type="checkbox"/> 5 to 9	<input type="checkbox"/> 15 to 19	<input type="checkbox"/> 25 or more
9. Have you had experience teaching physical education in a traditional calendar school?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

If yes, how many years?

<input type="checkbox"/> 0 to 4	<input type="checkbox"/> 10 to 14	<input type="checkbox"/> 20 to 24
<input type="checkbox"/> 5 to 9	<input type="checkbox"/> 15 to 19	<input type="checkbox"/> 25 or more
10. Are you presently on an extended year contract? Yes No

If yes, how many days beyond your district's or state's minimum requirement do you teach?

<input type="checkbox"/> 10 to 20 days
<input type="checkbox"/> 21 to 40 days
<input type="checkbox"/> 41 to 60 days
<input type="checkbox"/> more than 60 days
11. How many other physical educators teach at your school?

<input type="checkbox"/> None	<input type="checkbox"/> Two
<input type="checkbox"/> One	<input type="checkbox"/> Three or more
12. Do you plan to continue to teach at a year-round school? Yes No
13. At your school, are vacation breaks or intersessions used to offer remedial, enrichment, or accelerated classes in physical education? Yes No
14. At your school, are vacation breaks or intersessions used to offer recreational activities? Yes No
15. Does your school district use a year-round physical education curriculum guide? Yes No

YEAR-ROUND PHYSICAL EDUCATION TEACHER QUESTIONNAIRE

Directions: Please complete each questionnaire item by circling the abbreviation that corresponds to your response.

Abbreviations:

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree NA=Not Applicable

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. I prefer teaching physical education using a year-round schedule more than a traditional schedule. | SA A U D SD NA |
| 2. After teaching in both traditional and year-round physical education programs, it is my opinion that morale is higher for physical educators in a year-round program. | SA A U D SD NA |
| 3. After teaching in both traditional and year-round physical education programs, it is my opinion that it is more stressful to teach in a year-round school. | SA A U D SD NA |
| 4. The more experience I gain from working in a year-round physical education program, the more I like it. | SA A U D SD NA |
| 5. Year-round physical education programs, when compared to traditional programs, better meet children's social and emotional needs. | SA A U D SD NA |
| 6. Developmentally, the traditional three-month summer break is too long for children not to receive a structured program of physical activity. | SA A U D SD NA |
| 7. Children achieve at least as well in a year-round physical education program as they do in a traditional program. | SA A U D SD NA |
| 8. Students attain higher levels of motor skill development in a year-round school than in a traditional year school. | SA A U D SD NA |
| 9. Students attain higher levels of physical fitness in a year-round school than in a traditional year school. | SA A U D SD NA |
| 10. I am more likely to know what a specific student has achieved in a year-round school than in a traditional year school. | SA A U D SD NA |

Abbreviations:

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree NA=Not Applicable

- | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|---|---|---|----|----|
| 11. Students benefit from a more continuous learning environment established in a year-round physical education program. | SA | A | U | D | SD | NA |
| 12. Student behavior is better in a year-round physical education program than in a traditional year school. | SA | A | U | D | SD | NA |
| 13. Students are more motivated to learn in a year-round physical education program than in a traditional program. | SA | A | U | D | SD | NA |
| 14. Teachers and students seem to work more harmoniously in a year-round physical education program than in a traditional program. | SA | A | U | D | SD | NA |
| 15. Following intersession breaks in year-round schools, students in physical education classes are disoriented and have to re-learn class procedures. | SA | A | U | D | SD | NA |
| 16. Little modification of the traditional physical education curriculum is necessary using a year-round calendar. | SA | A | U | D | SD | NA |
| 17. Year-round physical education programs expand the types of instructional experiences that can be offered. | SA | A | U | D | SD | NA |
| 18. It is more difficult to plan the physical education curriculum in a year-round program than in a traditional program. | SA | A | U | D | SD | NA |
| 19. Year-round teaching decreases my preparation time for a given week of teaching, compared to a nine-month schedule. | SA | A | U | D | SD | NA |
| 20. Year-round physical education programs result in more time "team teaching" with other physical education teachers than traditional programs. | SA | A | U | D | SD | NA |
| 21. Physical education teachers spend less time reviewing past work in the year-round school than in the traditional year school. | SA | A | U | D | SD | NA |

Abbreviations:

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree NA=Not Applicable

22. Year-round teaching increases teacher professionalism compared to the nine month schedule. SA A U D SD NA
23. The lack of air-conditioning in a gymnasium can have a negative effect on the physical education program, especially during the summer months. SA A U D SD NA
24. Year-round maintenance of the playground and sports fields is a problem at my school. SA A U D SD NA

Questions 25-32 are to be answered by multi-track teachers only.

25. Planning days are needed during the school year that would allow all physical education faculty members to attend department meetings as a team. SA A U D SD NA
26. Sometimes, I miss important information because I am on break. SA A U D SD NA
27. The multi-track system inconveniences physical educators by constantly requiring them to rotate teaching stations with other instructors. SA A U D SD NA
28. Constant modifications have to be made to the physical education curriculum because of children going off-track while others are returning. SA A U D SD NA
29. The tracking system used at my school makes it necessary to combine various grade levels of students together for physical education classes. SA A U D SD NA
30. Year-round education creates a greater workload of paper work and record keeping than traditional schools. SA A U D SD NA
31. In general, equipment used in the physical education program tends to "wear-out" faster in year-round schools than in traditional schools. SA A U D SD NA
32. Year-round maintenance of the gymnasium is a problem at my school. SA A U D SD NA

Note: Several questionnaire items were modified from previous surveys by Smith (1985), Quinlan, George, & Emmett (1987), Moody (1991), and Serow (1992).

**APPENDIX C
FOLLOW-UP LETTER**

Health, Physical Education, Recreation, and Safety

P.O. Box 96
Middle Tennessee State University
Murfreesboro, Tennessee 37132
(615) 898-2811

May 1, 1996

Dear Principal or Administrator.

This is a follow-up letter concerning the recent survey that I requested you give to a physical educator on your staff. I am again requesting that you distribute this letter to that same person. Thank you for your time and assistance.

Peggy McGuire

Dear Physical Educator.

I recently mailed a survey to you regarding physical education in year-round schools. If you have returned this survey, I am sincerely grateful. If you have not returned the survey, I am asking that you spend a few minutes and fill out the needed information.

I have chosen this topic to write my dissertation. The surveys I have received to date have been very informative. However, I have not received enough surveys to make the study valid.

If for some reason you need another copy of the survey, please contact me at the address listed below. If you prefer, fax a request for another copy at 1-615-898-5020 or call me collect any evening at 615-895-6583. I will be happy to fax you another copy if you can supply me with your fax number and school name.

A deadline for accepting all surveys has been set for **May 15, 1996**. Once again, thank you for your valuable time and assistance.

Sincerely,

Peggy McGuire
Doctoral Candidate
Middle Tennessee State University
PO Box 96
Murfreesboro, TN 37132

MTSU is an equal opportunity, non-racially identifiable, educational institution that does not discriminate against individuals with disabilities.

APPENDIX D
PERMISSION BY UNIVERSITY'S REVIEW BOARD TO CONDUCT STUDY



on-campus memo:

To: Peggy McGuire and Dr. Timothy Michael

From: Teresa L. Davis *TD*
Representative of College of Education
MTSU IRB

Re: "A Study of the Attitudes of Year-Round Physical
Education Teachers Toward Year-Round Education"
(Protocol #96-141)

Date: March 26, 1996

Since your research involves the use of survey procedures, the confidentiality of the participants is protected, and there is no risk to the participants, it is approved according to 45 CFR Part 46. This approval is granted for one year only and must be reviewed by the committee on an annual basis if the project continues beyond the next 12 months; likewise any changes in the protocol require resubmission of your project for the committee approval. Good luck on the successful completion of your project.

APPENDIX E
STATE-BY-STATE BREAKDOWN OF NUMBER OF SURVEYS MAILED AND
NUMBER OF RESPONSES

State-by-State Breakdown of Number of Surveys Mailed and Number of Responses

State	Total Surveyed	Number Returned	Percentage by State
Alabama	9 Elementary	4	44
	14 Secondary	4	29
Arizona	18 Elementary	9	50
	11 Secondary	8	73
Arkansas	1 Elementary	1	100
California	348 Elementary	86	25
	197 Secondary	78	40
Colorado	11 Elementary	5	45
	9 Secondary	2	22
Florida	50 Elementary	24	48
	18 Secondary	10	56
Hawaii	5 Elementary	2	40
Idaho	1 Elementary	1	100
Illinois	5 Elementary	4	80
Indiana	1 Elementary	1	100
Iowa	1 Elementary	0	0
Kansas	1 Elementary	1	100
Kentucky	2 Elementary	1	50
	3 Secondary	3	100
Louisiana	1 Elementary	0	0

State-by-State Breakdown of Number of Surveys Mailed and Number of Responses

State	Total Surveyed	Number Returned	Percentage by State
Maryland	1 Elementary	1	100
Michigan	4 Elementary 4 Secondary	2 2	50 50
Minnesota	1 Elementary 1 Secondary	0 0	0 0
Missouri	3 Elementary	2	67
Nevada	14 Elementary 9 Secondary	5 6	36 67
New Jersey	1 Elementary	0	0
New Mexico	3 Elementary	0	0
North Carolina	24 Elementary 16 Secondary	11 11	46 69
Ohio	3 Elementary 1 Secondary	1 0	33 0
Oregon	4 Elementary 1 Secondary	1 1	25 100
South Carolina	3 Elementary 1 Secondary	2 0	67 0
Texas	84 Elementary 67 Secondary	51 37	61 55
Utah	27 Elementary 3 Secondary	8 2	30 67

State-by-State Breakdown of Number of Surveys Mailed and Number of Responses

State	Total Surveyed	Number Returned	Percentage by State
Virginia	1 Secondary	0	0
Washington	3 Elementary	2	67
	7 Secondary	3	43

N.B., Elementary Schools Surveyed N= 629; Secondary Schools Surveyed N=363;
 Elementary School Respondents N= 225 (35.7 percent); Secondary School
 Respondents N=167 (46 percent)

APPENDIX F
TOTAL STUDENT POPULATION IN PHYSICAL EDUCATION

Total Student Population in Physical Education

Student Population	Frequency	Percentage
000-100	7	2.0
101-200	21	6.1
201-300	15	4.4
301-400	33	9.6
401-500	26	7.6
501-600	30	8.8
601-700	36	10.5
701 or more	172	50.3

N.B., Responses missing N= 2 (0.6 percent)

APPENDIX G
SPECIFIC GRADE LEVELS TAUGHT BY YEAR-ROUND PHYSICAL EDUCATION
TEACHERS

Specific Grade Levels Taught by Year-Round Physical Education Teachers

Grades	Frequency	Percentage
K-1-2	4	1.2
K-1-2-3	4	1.2
K-1-2-3-4	3	0.9
K-1-2-3-4-5	68	19.9
K-1-2-3-4-5-6	32	9.4
1	2	0.6
1-2-3	1	0.3
1-2-3-4-5	14	4.1
1-2-3-4-5-6	18	5.3
2	4	1.2
2-3	1	0.3
2-3-4-5	1	0.3
3	2	0.6
3-4	1	0.3
3-4-5	7	2.0
3-4-5-6	3	0.9
4	2	0.6

Specific Grade Levels Taught by Year-Round Physical Education Teachers

Grades	Frequency	Percentage
4-5	4	1.2
4-5-6	3	0.9
5	9	2.6
5-6	10	2.9
5-6-7-8	2	0.6
5-6-7-8-9-10-11-12	1	0.3
6	7	2.0
6-7	4	1.2
6-7-8	52	15.2
6-7-8-9-10	1	0.3
6-7-8-9-10-11-12	1	0.3
6-8	1	0.3
7	2	0.6
7-8	31	9.1
7-8-9	3	0.9
7-8-9-10	1	0.3
7-8-9-10-11-12	1	0.3

Specific Grade Levels Taught by Year-Round Physical Education Teachers

Grades	Frequency	Percentage
8	3	0.9
9	1	0.3
9-10	2	0.6
9-10-11-12	32	9.4
10-11-12	2	0.6

N.B., Responses Missing N=2 (0.6 percent)

APPENDIX H
STEPWISE MULTIPLE REGRESSION STATISTICS

Stepwise Multiple Regression Statistics

Teacher Satisfaction

Variable	DF	Parameter Estimate	Standard Error	Probability
Track System	1	0.642333	0.12860964	0.0001
Type of School	1	0.267611	0.12703062	0.0359
Continue to Teach	1	-0.919790	0.18206750	0.0001
Curriculum Guide	1	-0.385943	0.13622153	0.0049

Student Achievement

Variable	DF	Parameter Estimate	Standard Error	Probability
Track System	1	0.307988	0.09830906	0.0019
Type of School	1	0.279803	0.09698726	0.0042
Continue to Teach	1	-0.696347	0.13954290	0.0001
Curriculum Guide	1	-0.238416	0.10414458	0.0227

Stepwise Multiple Regression Statistics

Student Discipline

Variable	DF	Parameter Estimate	Standard Error	Probability
Track System	1	0.400612	0.09858838	0.0001
Type of School	1	0.252879	0.09733931	0.0098
Continue to Teach	1	-0.631080	0.14017143	0.0001
Curriculum Guide	1	-0.362594	0.10436542	0.0006

Units of Instruction

Variable	DF	Parameter Estimate	Standard Error	Probability
Track System	1	0.400740	0.06718557	0.0001
Continue to Teach	1	-0.293726	0.09544174	0.0023
Curriculum Guide	1	-0.281920	0.07081478	0.0001

Staff Development

Variable	DF	Parameter Estimate	Standard Error	Probability
Track System	1	0.250976	0.11991597	0.0372
Type of School	1	0.253647	0.11895024	0.0338
Curriculum Guide	1	-0.515067	0.12763080	0.0001

Stepwise Multiple Regression Statistics

Facilities and Equipment

Variable	DF	Parameter Estimate	Standard Error	Probability
Type of School	1	0.224332	0.11217900	0.0464
Population of Physical Education Students	1	0.352268	0.11104945	0.0017

APPENDIX I
MANOVA RESULTS FOR SIX DIMENSIONS

MANOVA Results For Six Dimensions

Variable	Value	F	Num DF	P
Type of School (Elementary or Secondary)	0.92712588	3.9432	6	0.0008
Track System (Single or Multi-Track)	0.93413625	3.5371	6	0.0021
Continue to Teach	0.89559575	5.8482	6	0.0001
Curriculum Guide	0.94912431	2.6891	6	0.0147
Type of School and Continue to Teach	0.94840826	2.7290	6	0.0135
Track System and Continue to Teach	0.95418276	2.4089	6	0.0274

APPENDIX J
MANOVA RESULTS BY DIMENSION

MANOVA Results by Dimension

Teacher Satisfaction

Variable	DF	Mean Square	F Value	Probability
Track System	1	18.82542238	15.68	0.0001
Continue to Teach	1	28.60306897	23.82	0.0001
Track System and Continue to Teach	1	7.36816411	6.14	0.0138

Student Achievement

Variable	DF	Mean Square	F Value	Probability
Type of School	1	4.04787035	5.68	0.0178
Track System	1	7.93536632	11.13	0.0010
Continue to Teach	1	18.35092282	25.75	0.0001
Track System and Continue to Teach	1	4.95741600	6.96	0.0088

Student Discipline

Variable	DF	Mean Square	F Value	Probability
Track System	1	4.94637670	6.78	0.0097
Continue to Teach	1	12.94426708	17.74	0.0001

Units of Instruction

Variable	DF	Mean Square	F Value	Probability
Track System	1	5.16631847	15.84	0.0001
Continue to Teach	1	2.58347781	7.92	0.0052
Curriculum Guide	1	1.55923839	4.78	0.0295

Staff Development

Variable	DF	Mean Square	F Value	Probability
Curriculum Guide	1	4.87012452	4.63	0.0322

Facilities and Equipment

Variable	DF	Mean Square	F Value	Probability
Type of School	1	8.54794230	9.16	0.0027
Type of School and Continue to Teach	1	5.90560525	6.33	0.0124

APPENDIX K
SIGNIFICANT QUESTIONNAIRE ITEMS BY TRACK SYSTEM

Significant Questionnaire Items By Track System

Question 2

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	22 17.05	32 24.81	26 20.16	18 13.95	31 24.03	129
Single-Track	53 29.44	47 26.11	30 16.67	33 18.33	17 9.44	180

N.B., Missing=33; Chi-Square Value=16.474; Prob.=0.002

Question 3

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	35 27.34	27 21.09	10 7.81	32 25.00	24 18.75	128
Single-Track	14 7.61	32 17.39	17 9.24	51 27.72	70 38.04	184

N.B., Missing=30; Chi-Square Value=28.981; Prob.=0.001

Question 9

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	11 7.86	47 33.57	36 25.71	33 23.57	13 9.29	140
Single-Track	29 15.18	63 32.98	41 21.47	52 27.23	6 3.14	191

N.B., Missing=11; Chi-Square Value=9.956; Prob.=0.041

Significant Questionnaire Items By Track System

Question 14

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	9 6.43	31 22.14	34 24.29	47 33.57	19 13.57	140
Single-Track	28 14.43	57 29.38	45 23.20	56 28.87	8 4.12	194

N.B., Missing=8; Chi-Square Value=15.924; Prob.=0.003

Question 16

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	11 7.64	60 41.67	16 11.11	29 20.14	28 19.44	144
Single-Track	18 9.23	134 68.72	13 6.67	20 10.26	10 5.13	195

N.B., Missing=3; Chi-Square Value=33.492; Prob.=0.001

Question 17

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	16 11.11	45 31.25	25 17.36	42 29.17	16 11.11	144
Single-Track	12 6.15	86 44.10	39 20.00	52 26.67	6 3.08	195

N.B., Missing=3; Chi-Square Value=14.736; Prob.=0.005

Significant Questionnaire Items By Track System

Question 18

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	37 25.87	40 27.97	4 2.80	46 32.17	16 11.19	143
Single-Track	8 4.12	28 14.43	12 6.19	106 54.64	40 20.62	194

N.B., Missing=5; Chi-Square Value=52.255; Prob.=0.001

Question 19

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	7 5.04	20 14.39	17 12.23	75 53.96	20 14.39	139
Single-Track	3 1.55	13 6.74	29 15.03	112 58.03	36 18.65	193

N.B., Missing=10; Chi-Square Value=9.578; Prob.=0.048

Question 21

Frequency Percentage	SA	A	U	D	SD	Total
Multi-Track	14 9.93	53 37.59	26 18.44	36 25.53	12 8.51	141
Single-Track	13 6.77	57 29.69	51 26.56	66 34.38	5 2.60	192

N.B., Missing=9; Chi-Square Value=12.487; Prob.=0.014

APPENDIX L
SIGNIFICANT QUESTIONNAIRE ITEMS BY TYPE OF SCHOOL

Significant Questionnaire Items By Type of School

Question 1

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	53 28.80	62 33.70	30 16.30	21 11.41	18 9.78	184
Secondary	40 27.59	30 20.69	26 17.93	20 13.79	29 20.00	145

N.B., Missing=13; Chi-Square Value=11.369; Prob.=0.023

Question 2

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	46 27.38	45 26.79	35 20.83	24 14.29	18 10.71	168
Secondary	29 20.57	34 24.11	21 14.89	27 19.15	30 21.28	141

N.B., Missing=33; Chi-Square Value=9.77; Prob.=0.044

Question 4

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	57 30.32	70 37.23	29 15.43	19 10.11	13 6.91	188
Secondary	30 20.83	41 28.47	23 15.97	27 18.75	23 15.97	144

N.B., Missing=10; Chi-Square Value=15.254; Prob.=0.004

Significant Questionnaire Items By Type of School

Question 5

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	24 12.97	67 36.22	51 27.57	32 17.30	11 5.95	185
Secondary	19 13.29	24 16.78	42 29.37	32 22.38	26 18.18	143

N.B., Missing=14; Chi-Square Value=22.849; Prob.=0.001

Question 6

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	71 37.57	68 35.98	12 6.35	33 17.46	5 2.65	189
Secondary	30 20.69	45 31.03	14 9.66	41 28.28	15 10.34	145

N.B., Missing=8; Chi-Square Value=21.928; Prob.=0.001

Question 8

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	25 13.30	60 31.91	57 30.32	39 20.74	7 3.72	188
Secondary	12 8.45	28 19.72	55 38.73	36 25.35	11 7.75	142

N.B., Missing=12; Chi-Square Value=11.051; Prob.=0.026

Significant Questionnaire Items By Type of School

Question 11

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	50 26.18	87 45.55	19 9.95	24 12.57	11 5.76	191
Secondary	15 10.20	65 44.22	22 14.97	37 25.17	8 5.44	147

N.B., Missing=4; Chi-Square Value=20.107; Prob.=0.001

Question 13

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	19 10.16	55 29.41	58 31.02	48 25.67	7 3.74	187
Secondary	11 7.59	26 17.93	41 28.28	55 37.93	12 8.28	145

N.B., Missing=10; Chi-Square Value=12.107; Prob.=0.017

Question 14

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	25 13.23	54 28.57	53 28.04	46 24.34	11 5.82	189
Secondary	12 8.28	34 23.45	26 17.93	57 39.31	16 11.03	145

N.B., Missing=8; Chi-Square Value=14.904; Prob.=0.005

Significant Questionnaire Items By Type of School

Question 17

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	18 9.33	80 41.45	42 21.76	46 23.83	7 3.63	193
Secondary	10 6.85	51 34.93	22 15.07	48 32.88	15 10.27	146

N.B., Missing=3; Chi-Square Value=11.614; Prob.=0.020

Question 21

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	16 8.56	76 40.64	42 22.46	44 23.53	9 4.81	187
Secondary	11 7.53	34 23.29	35 23.97	58 39.73	8 5.48	146

N.B., Missing=9; Chi-Square Value=14.755; Prob.=0.005

Question 24

Frequency Percentage	SA	A	U	D	SD	Total
Elementary	32 16.84	38 20.00	10 5.26	81 42.63	29 15.26	190
Secondary	33 23.24	51 35.92	8 5.63	38 26.76	12 8.45	142

N.B., Missing=10; Chi-Square Value=18.163; Prob.=0.001

APPENDIX M
SIGNIFICANT QUESTIONNAIRE ITEMS BY PLAN TO CONTINUE TEACHING

Significant Questionnaire Items By Plan To Continue Teaching

Question 1

Frequency Percentage	SA	A	U	D	SD	Total
Yes	83 30.07	82 29.71	51 18.48	30 10.87	30 10.87	276
No	10 21.28	8 17.02	4 8.51	9 19.15	16 34.04	47

NB., Missing=13; Chi-Square Value=23.166; Prob.=0.001

Question 2

Frequency Percentage	SA	A	U	D	SD	Total
Yes	68 26.25	71 27.41	51 19.69	39 15.06	30 11.58	259
No	6 13.64	8 18.18	3 6.82	9 20.45	18 40.91	44

N.B., Missing=33; Chi-Square Value=28.288; Prob.=0.001

Question 4

Frequency Percentage	SA	A	U	D	SD	Total
Yes	81 28.83	101 35.94	44 15.66	36 12.81	19 6.76	281
No	6 13.33	8 17.78	7 15.56	8 17.78	16 35.56	45

N.B., Missing=10; Chi-Square Value=37.980; Prob.=0.001

Significant Questionnaire Items By Plan to Continue Teaching

Question 5

Frequency Percentage	SA	A	U	D	SD	Total
Yes	38 13.77	86 31.16	79 28.62	50 18.12	23 8.33	276
No	5 10.87	4 8.70	12 26.09	12 26.09	13 28.26	46

N.B., Missing=14; Chi-Square Value=22.762; Prob.=0.001

Question 6

Frequency Percentage	SA	A	U	D	SD	Total
Yes	92 32.74	97 34.52	23 8.19	60 21.35	9 3.20	281
No	8 17.02	13 27.66	3 6.38	13 27.66	10 21.28	47

N.B., Missing=8; Chi-Square Value=27.419; Prob.=0.001

Question 7

Frequency Percentage	SA	A	U	D	SD	Total
Yes	85 30.36	147 52.50	24 8.57	16 5.71	8 2.86	280
No	6 12.77	22 46.81	6 12.77	8 17.02	5 10.64	47

N.B., Missing=9; Chi-Square Value=18.639; Prob.=0.001

Significant Questionnaire Items By Plan To Continue Teaching

Question 8

Frequency Percentage	SA	A	U	D	SD	Total
Yes	33 11.87	78 28.06	103 37.05	52 18.71	12 4.32	278
No	4 8.70	7 15.22	9 19.57	20 43.48	6 13.04	46

N.B., Missing=12; Chi-Square Value=22.630; Prob.=0.001

Question 9

Frequency Percentage	SA	A	U	D	SD	Total
Yes	36 12.86	98 35.00	72 25.71	63 22.50	11 3.93	280
No	4 8.89	9 20.00	5 11.11	20 44.44	7 15.56	45

N.B.,

Missing=11; Chi-Square Value=23.409; Prob.=0.001

Question 11

Frequency Percentage	SA	A	U	D	SD	Total
Yes	57 20.00	137 48.07	38 13.33	42 14.74	11 3.86	285
No	8 17.02	11 23.40	2 4.26	19 40.43	7 14.89	

N.B.,

Missing=4; Chi-Square Value=32.00; Prob.=0.001

Significant Questionnaire Items By Plan To Continue Teaching

Question 12

Frequency Percentage	SA	A	U	D	SD	Total
Yes	34 12.19	70 25.09	89 31.90	66 23.66	20 7.17	279
No	5 10.64	4 8.51	9 19.15	19 40.43	10 21.28	47

N.B., Missing=10; Chi-Square Value=20.165; Prob.=0.001

Question 13

Frequency Percentage	SA	A	U	D	SD	Total
Yes	27 9.68	75 26.88	86 30.82	80 28.67	11 3.94	279
No	3 6.38	4 8.51	12 25.53	21 44.68	7 14.89	47

N.B., Missing=10; Chi-Square Value=18.514; Prob.=0.001

Question 14

Frequency Percentage	SA	A	U	D	SD	Total
Yes	33 11.70	77 27.30	71 25.18	83 29.43	18 6.38	282
No	4 8.70	9 19.57	6 13.04	19 41.30	8 17.39	46

N.B., Missing=8; Chi-Square Value=11.539; Prob.=0.021

Significant Questionnaire Items By Plan To Continue Teaching

Question 15

Frequency Percentage	SA	A	U	D	SD	Total
Yes	16 5.59	42 14.69	22 7.69	125 43.71	81 28.32	286
No	6 12.77	15 31.91	2 4.26	17 36.17	7 14.89	47

N.B., Missing=3; Chi-Square Value=14.097; Prob.=0.007

Question 17

Frequency Percentage	SA	A	U	D	SD	Total
Yes	25 8.74	116 40.56	59 20.63	70 24.48	16 5.59	286
No	3 6.38	12 25.53	4 8.51	23 48.94	5 10.64	

N.B., Missing=3; Chi-Square Value=16.049; Prob.=0.003

APPENDIX N
SIGNIFICANT QUESTIONNAIRE ITEMS FOR YRE CURRICULUM GUIDES

Significant Questionnaire Items For YRE Curriculum Guides

Question 10

Frequency Percentage	SA	A	U	D	SD	Total
Yes	12 11.43	37 35.24	23 21.90	29 27.62	4 3.81	105
No	15 6.73	54 24.22	51 22.87	79 35.43	24 10.76	223

N.B., Missing=14; Chi-Square Value=10.437; Prob.=0.034

Question 12

Frequency Percentage	SA	A	U	D	SD	Total
Yes	15 14.15	35 33.02	32 30.19	20 18.87	4 3.77	106
No	24 10.62	40 17.70	69 30.53	66 29.20	27 11.95	226

N.B., Missing=10; Chi-Square Value=16.403; Prob.=0.003

Question 13

Frequency Percentage	SA	A	U	D	SD	Total
Yes	14 13.46	33 31.73	30 28.85	26 25.00	1 0.96	104
No	16 7.02	48 21.05	69 30.26	77 33.77	18 7.89	228

N.B., Missing=10; Chi-Square Value=14.439; Prob.=0.006

Significant Questionnaire Items For YRE Curriculum Guides

Question 14

Frequency Percentage	SA	A	U	D	SD	Total
Yes	18 17.31	28 26.92	27 25.96	29 27.88	2 1.92	104
No	19 8.26	60 26.09	52 22.61	74 32.17	25 10.87	230

N.B., Missing=8; Chi-Square Value=13.169; Prob.=0.010

Question 16

Frequency Percentage	SA	A	U	D	SD	Total
Yes	12 11.11	56 51.85	15 13.89	18 16.67	7 6.48	108
No	17 7.36	138 59.74	14 6.06	31 13.42	31 13.42	231

N.B., Missing=3; Chi-Square Value=10.980; Prob.=0.027

Question 17

Frequency Percentage	SA	A	U	D	SD	Total
Yes	16 14.68	47 43.12	17 15.60	28 25.69	1 0.92	109
No	12 5.22	84 36.52	47 20.43	66 28.70	21 9.13	230

N.B., Missing=3; Chi-Square Value=17.693; Prob.=0.001

Significant Questionnaire Items For YRE Curriculum Guides

Question 20

Frequency Percentage	SA	A	U	D	SD	Total
Yes	14 15.38	27 29.67	24 26.37	23 25.27	3 3.30	91
No	11 5.91	37 19.89	38 20.43	77 41.40	23 12.37	186

N.B., Missing=65; Chi-Square Value=19.320; Prob.=0.001

Question 21

Frequency Percentage	SA	A	U	D	SD	Total
Yes	17 16.04	40 37.74	17 16.04	28 26.42	4 3.77	106
No	10 4.41	70 30.84	60 26.43	74 32.60	13 5.73	227

N.B., Missing=9; Chi-Square Value=17.918; Prob.=0.001

Question 22

Frequency Percentage	SA	A	U	D	SD	Total
Yes	11 10.48	24 22.86	37 35.24	23 21.90	10 9.52	105
No	8 3.60	28 12.61	64 28.83	91 40.99	31 13.96	222

N.B., Missing=15; Chi-Square Value=20.017; Prob.=0.001

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