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**A Survey of the Status of the Lifetime Wellness
Course in Tennessee**

Bart Cagle

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

August, 2000

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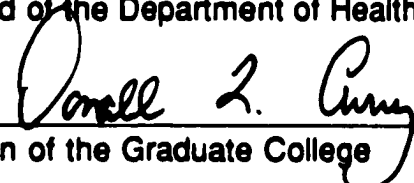
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ABSTRACT

A Survey of the Status of the Lifetime Wellness

Course in Tennessee

Bart Cagle

The purpose of this research was to determine the status of the Lifetime Wellness course which was being taught in the public high schools in Tennessee. The subjects for this study included 322 teachers who had taught the Lifetime Wellness course at least once. The scope of the research included the qualifications of those who are teaching the Lifetime Wellness course, the curriculum that was being taught, the methods used to teach the course, and the time allotted to teach the course.

Eleven research questions were posed for this study:

1. Are the teachers of the Lifetime Wellness course certified to teach in Tennessee?
2. Are Tennessee teachers of the Lifetime Wellness course endorsed in the appropriate areas to teach Lifetime Wellness?
3. At what grade level was the Lifetime Wellness course taught?
4. Did the teachers of the Lifetime Wellness course coach an athletic sport?
5. How many of the seven strands of the Lifetime Wellness course were taught in an academic year?
6. What types of physical activities did the students engage in during the Lifetime Wellness course?
7. What types of teaching methods were used to teach the Lifetime Wellness course?
8. What was the total amount of time that the students spent in the Lifetime Wellness course?

9. Did the teachers of the Lifetime Wellness course have adequate time to teach the seven strands within the curriculum?
10. Is there a difference between the number of strands that were taught in the Lifetime Wellness course when compared to the type of teacher endorsement (health and p.e., health only, p.e. only, family and consumer science only, or no appropriate area).
11. Is there a relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that that were taught?

The results of the research suggested that while 99 percent of the Lifetime Wellness teachers were certified to teach in Tennessee, only 76 percent of the teachers were endorsed to teach both health and physical education. The data also indicated that 24 percent of the Lifetime Wellness teachers had omitted at least one of the mandated strands within the curriculum. The total amount of time spent in the Lifetime Wellness course by the students varied, with some students receiving 83 total course hours while others recieved 195 total hours. Forty six percent of the Lifetime Wellness teachers reported that they did not have adequate time to teach all the components of the Lifetime Wellness course.

The conclusions of the researcher were that more Lifetime Wellness teachers need to be endorsed in both health and physical education, a higher percentage of the Lifetime Wellness teachers should be teaching all seven strands within the course, and the necessity of additional time within the Lifetime Wellness course to adequately teach all the components of the course.

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DEDICATION

This research is dedicated to my family: my three sons, Seth and Austin and Tanner, for their patience while dad “worked on his paper.” This is also dedicated to my parents, Paul and Roseanne, who instilled in me the value of hard work and education, and to the memory of my mother-in-law, Barbara, and her love for the family. Finally, this research is dedicated to my loving wife, Sabrina, for all of her love, support, patience, and sacrifice during this time.

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CHAPTER I

The health of people in the United States has been an important topic for many years (Superko,1988;Ike, Lampman, & Castor,1989). The relationship between a person's health and certain behaviors in which he / she engages has been emphasized by the American College of Sports Medicine (ACSM), the American Heart Association (AHA), and other leading health organizations (ACSM, 1995). The participation in healthy activities may directly affect the quality and quantity of life for these people (ACSM, 1995). Many of the leading causes of death in the United States, such as heart disease and stroke, have been associated with poor choices made concerning health habits (Berkman & Breslow,1983).

According to the National Center for Health Statistics (1993), 67 % of all deaths and serious illnesses in people aged 25 and older had only three causes: heart disease, cancer, and stroke. In people aged 5 to 24, most deaths occurred from accidents, homicide, and suicide. These major causes of death in ages 25 and older were related to the way in which people lived (Nash,1989). Therefore, certain behaviors or life-style factors can contribute to this problem. Some of the factors include intentional and unintentional injuries, tobacco use, alcohol use, drug use, unhealthy sexual behaviors, unhealthy dietary behaviors, and physical inactivity (Kann et al.,1995).

Studies have demonstrated the importance of regular physical exercise, proper diet, and other life-style factors which can improve a person's health and longevity (Nash,1989). Williams, Wood, Haskell, and Vranizan (1982) reported that moderate amounts of aerobic exercise can lower the risk of coronary heart

disease. Jogging for an average of 10 miles every week for nine months was enough to create a positive impact on the high-density lipoprotein cholesterol, (HDL-C). This did not apply only to jogging. The equivalent amounts of biking, swimming, dancing, cross-country skiing, or any other aerobic activity would also suffice (Nash, 1989). Additionally raising HDL-C levels will lower the risk of a heart attack (Manninen et al., 1988).

A person's diet can also affect his / her overall health. Superko (1988) studied the results of several clinical investigations which used a variety of variables to control blood lipids and lipoproteins in subjects with and without coronary heart disease. The therapy included a diet low in cholesterol and saturated fats, endurance exercise, and medication. The researcher suggested that this type of therapy be used to reduce the low-density lipoprotein cholesterol (LDL-C) in patients with coronary heart disease.

Adults are not the only group of people who have a poor level of physical fitness. Historically, young people in the United States have consistently been poor performers in terms of their physical fitness (Shephard, 1966; President's Council, 1984). Children at an early age have developed obesity and high levels of cholesterol which can increase the risk of developing serious health problems later in life (President's Council, 1984). Young people need to learn the benefits of exercise and to regularly engage in exercise to begin a good habit of physical activity (Pollock, 1979).

One of the opportunities for young people to learn proper health habits is through participation in school health and physical education (Centers for Disease Control [CDC], 1997). Most schools are required to provide their students with at least some kind of physical activity (Mitchell & Earls, 1987). For many years research has shown that in schools with good physical education

programs children have the opportunity to engage in regular physical exercise (Petal, 1978). If the physical education program is continued throughout a child's school years, it has the potential to positively affect him / her later in life (Pollack, 1979). For example, Cooper (1970) tested recruits at Lackland Air Force Base and found that men from California were rated the highest in endurance performance while men from southern states were rated the lowest. These differences had a positive correlation ($r=.74$) with the recruit's background in physical education classes in school. During that time, California required that all students participate in a physical education course every day. This applied to all students in grades K-12. Most southern states did not require daily physical education for their students during this time period. Results from this study suggested that a quality fitness program has the potential to make a positive impact on the fitness level of young people.

Recent research suggested that the youth of today are not fit and are continuing to make poor health choices (Kann et al., 1995). According to Kann et al., teenagers have continued to make poor choices in terms of health related issues. Studies have been conducted to monitor the lifestyle behaviors of teenagers through national and local surveys such as the Youth Risk Behavior Surveillance System. The Center for Disease Control (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS), a survey through which information was obtained about health related topics from teenagers from across the country.

In 1995, Kann et al. summarized the results from the YRBSS and its national, state, and local school-based surveys. Kann found that teenagers reported that they engaged in behaviors that may have increased their chances of death from the four most common causes among young people. Those four

causes included motor vehicle crashes, other unintentional injuries, homicide, and suicide. The study demonstrated that 19.1 % of high school teenagers rarely or never used seat belts, 22.1% had carried a weapon to school, 80.9% had drunk alcohol, and 8.6% had attempted suicide.

Teenagers also participated in other behaviors that could lead to social problems. The researchers showed that 53% of high school students had engaged in sexual intercourse, 47.2% did not use a condom during their last sexual intercourse and 32.8% had tried marijuana. Teenagers were found to engage in behaviors that would increase their likelihood of dying later on from heart disease, cancer, and stroke. It was reported that 30.5% of teenagers had smoked a cigarette during the past month, and only 15.4% had eaten five or more servings of fruits and vegetables during the previous day. This report suggested that teenagers have already begun practicing poor health habits that could eventually result in serious health problems or death (Kann et al.).

Educational Curricula

Programs have been designed to educate the public about these and other health related problems through the school system. Two courses which addressed this issue were health and physical education. Physical education and health were courses that had been taught in Tennessee's high schools for many years. In 1923, the school laws of Tennessee and the regulations of the State Board of Education made it mandatory that physical education be taught in all elementary and secondary schools (Tennessee Dept. of Ed., 1942). This regulation also required that all students must receive physical education as a part of their prescribed course of instruction. The students in the physical education class were mandated to receive grades for the course as in other courses or subjects, and the physical education class should form part of the

requirements for promotion or graduation. As late as 1993, Tennessee required one unit (credit) of physical education for all students at the high school level, grades 9 - 12. It also required a separate half unit (credit) of health for all students in grades 9-12. These courses were required in order for students to graduate (Tennessee State Board Of Ed., 1994).

In 1994, the State Department of Education in Tennessee mandated changes in some of the courses that were required for high school graduation. The health and physical education courses were changed from required courses to elective courses. The Department of Education also created a new course, lifetime wellness, which would be required for graduation. This change was in compliance with the new state mandate which required schools to offer a course in wellness instead of the separate health and physical education courses (Tennessee State Board of Ed., 1994). All students in grades 9 - 12 were required to complete one unit (credit) of wellness. The program was based upon the state curriculum framework and was intended to integrate concepts from the areas of health and physical fitness.

Lifetime Wellness

The Lifetime Wellness Curriculum Framework was composed of seven strands or topics: nutrition, personal fitness and related skills, safety and first aid, mental health, substance use and abuse, sexuality and family life, and disease prevention and control (Tennessee Dept. of Ed., 1994). Each strand had several overall goals and objectives for the students to accomplish after completing the course (See Appendix A).

The Tennessee Department of Education authorized a Lifetime Wellness Curriculum Framework Writing Committee to produce a resource manual for those who would be teaching the new course. In the summer of 1994 the

resource manual was distributed to teachers who attended state sponsored inservice about the Lifetime Wellness course. The information in the resource manual was not mandated by the state department, nor was it required to be used (Tennessee Dept. of Ed., 1994). The manual was provided as a resource only. The activities and concepts within the manual were to be implemented according to the level of comfort that the teacher felt with each particular subject or activity and along with the expectations of the school and community (Tennessee Dept. of Ed., 1994).

The Lifetime Wellness Curriculum Writing Committee made six recommendations about the Lifetime Wellness course concerning who should teach it and how it should be taught (Tennessee Dept. of Ed., 1994). The first recommendation was that the course should be taught with an integrated and interdisciplinary approach. Each of the seven strands should have involved and been related to the other strands. For example, the physical fitness strand played an important role with the nutrition strand, both being necessary to successfully maintain weight control. Each strand can be shown to play a role in each of the other strands.

The committee also recommended that an emphasis should be placed on physical activity throughout the course and with sufficient time allotted to demonstrate improvement in health related fitness areas. As students developed a habit of regular physical exercise from the beginning of the course they would have the opportunity to see the positive results which can occur.

The second recommendation stated that the Lifetime Wellness course should be taught by teachers who currently hold licenses which entitle them to teach physical education and / or health courses. Teachers need to be competent in both areas since they are required to teach the curriculum of both courses

(Tennessee Dept. of Ed.,1994).

The third recommendation stated that a personal wellness plan along with nutritional information should be an early component of the Lifetime Wellness course. These two strands are basic to the course and need to be stressed throughout the year.

The fourth recommendation by the committee stated that the Lifetime Wellness teachers should attempt to follow the wellness lifestyle and serve as role models for the students. Students are more likely to follow the wellness lifestyle if they see that it is important to the teacher and can see the positive benefits it has provided to the teacher (Tennessee Dept. of Ed.,1994).

The fifth recommendation concerning the Lifetime Wellness Course was that each teacher should have used all available resources in teaching the course by networking with professionals from within the school and surrounding community. Since each teacher probably was not an expert in each of the strands, he or she needed to be able to use other resources or people in order to fully explain the concepts in each strand.

The sixth recommendation by the committee suggested that the teachers needed to seek curriculum training as soon as it became available in wellness. This should have helped those teachers who did not have adequate knowledge in one or more subject areas. The training could have provided teachers with new ways to teach the material, such as cooperative learning or active learning strategies (Tennessee Dept. of Ed.,1994).

Lifetime Wellness Course Concerns

Teachers of the Lifetime Wellness course who had certification to teach both physical education and health education would seem to be better prepared to teach the Lifetime Wellness course. Certification in health or physical education

only were perceived as problematic for those teaching the Lifetime Wellness course. Teachers who were not certified to teach physical education often had negative attitudes when they were assigned to teach physical education courses (Faucette & Patterson, 1989). These teachers often did not value physical education as much as other academic courses and therefore did not spend the appropriate amount of time adequately planning for the course (Faucette & Hillidge, 1989).

Another concern for the Lifetime Wellness course was how the course was taught. According to Aichinena (1991) classroom methodology can influence student attitudes towards physical education at the elementary and secondary levels. Research by Mancini, Cheffers, and Zaichowski (1976) and Schempp, Cheffers, and Zaichowski (1983) found that allowing elementary students the opportunity for decision making resulted in more favorable attitudes toward physical education than did teacher centered methods of instruction which did not allow for student decision making.

Similar research by Stensaasen (1975) demonstrated that teacher centered methods of instruction and planning were identified by one-fourth of his sample of seventh, eighth, and ninth grade students as factors which made them feel negative about physical education.

The curriculum of the Lifetime Wellness course was a vital part of the state mandated change from Health and Physical Education to Lifetime Wellness. Rice (1988) studied the attitudes of high school students toward their physical education activities. The study included 602 subjects from five urban and two rural high schools in the mid-south. The results showed that the one item enjoyed about physical education classes was the inclusion of a variety of activities.

Brynteson, Hoag, and Schollmeier (1980) compared the lecture-laboratory course structure with the traditional physical education course structure. The subjects included 147 male and female students at Oral Roberts University. The researchers found that knowledge, fitness, and attitude toward exercise and physical activity all significantly improved as a result of one semester in their health-lecture-exercise-laboratory course.

The structure of the Lifetime Wellness course was another area of concern. One method of restructuring courses is through the use of block scheduling. The number of schools which have changed to the block schedule had increased in recent years. Bryant and Claxton (1996) surveyed 100 high schools in North Carolina and found that 65 percent were currently using the block scheduling. That research agreed with Fletcher (1997) who studied high schools in Tennessee and found that a majority of Tennessee high schools had currently used block scheduling.

Claxton and Bryant (1996) suggested that block scheduling could offer advantages to those teaching physical education. Because block scheduling offered an extended class period between 90 to 120 minutes, that would have allowed sufficient time to include the cognitive, affective, psychomotor, and fitness learning domains which have been identified as the foundation of physical education.

Statement of the Problem

The qualifications of the Lifetime Wellness teachers are an area of concern. Are the teachers licensed to teach and are they certified in the appropriate areas to teach Lifetime Wellness? The purpose of this study is to determine the qualifications of those who are teaching the Lifetime Wellness course, the curriculum that is being taught, the methods used to teach the course, and the

time allotted to teach the course.

Significance of the Study

Currently, there is no research which has studied the teachers, the curriculum, or the teaching methods of the Lifetime Wellness course. The results of this study could be used by colleges and universities to identify needs within their teacher preparation programs. For example, if certain strands within the course were not being taught it may be caused by a lack of preparation in that subject area (O'Sullivan, Sweeney, & Taggart, 1989). The Tennessee Department of Education could use the information from this study to evaluate the Lifetime Wellness course and the Lifetime Wellness teachers and to shape policies concerning the Lifetime Wellness course. Lifetime Wellness teachers could use the results of this study to improve their teaching methods. For example, teachers could see different ways to present the classroom curriculum and other ways to divide the time in the course between classroom work and physical activities.

Limitations

The limitations of the study were:

1. The honesty of the responses by the teachers to the questionnaire.
2. The teachers did not respond to the questionnaire on the same day or under the same conditions.
3. A review committee validated the research instrument.

Delimitations

1. The subjects consisted of 233 Lifetime Wellness teachers in the state of Tennessee.
2. Each subject must have taught the Lifetime Wellness course in the state

of Tennessee.

3. Each subject must have taught the Lifetime Wellness course for at least one year.

Research Questions

1. Are the teachers of the Lifetime Wellness course certified to teach in Tennessee?
2. Are Tennessee teachers of the Lifetime Wellness course endorsed in the appropriate areas to teach Lifetime Wellness?
3. At what grade level was the Lifetime Wellness course taught?
4. Did the teachers of the Lifetime Wellness course coach an athletic sport?
5. How many of the seven strands of the Lifetime Wellness course were taught in an academic year?
6. What types of physical activities did the students engage in during the Lifetime Wellness course?
7. What types of teaching methods were used to teach the Lifetime Wellness course?
8. What was the total amount of time that the students spent in the Lifetime Wellness course?
9. Did the teachers of the Lifetime Wellness course have adequate time to teach the seven strands within the curriculum?
10. Is there a difference between the number of strands that were taught in the Lifetime Wellness course when compared to the type of teacher endorsement (health and p.e., health only, p.e. only, family and consumer science only, or no appropriate area).
11. Is there a relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that

were taught?

Definition of Terms

1. Lifetime Wellness - A lifelong process of positive lifestyle management that seeks to integrate the emotional, social, intellectual and physical dimensions of self for a longer, more productive, and higher quality of life.

2. Certified (Certification) - Having a valid Tennessee teacher license and being endorsed to teach a specific area.

3. Teaching endorsement - A specific subject area or academic discipline, including a grade level, that a teacher is qualified to teach.

3. Lifetime Wellness Resource Manual - A suggested curriculum guide supplement that was developed for the Lifetime Wellness course.

4. Block Scheduling - A modification of the amount of time allotted to each class within a school. Other names for block scheduling included the Four-by-Four Plan, the Concentrated Curriculum, and the Semester Plan.

5. Lifetime Wellness Course - This course was developed for students in grades 9-12 in Tennessee schools and was envisioned as a one year continuous course for one unit of credit. It meets the one unit requirement for graduation for those students entering the 9th grade in 1994-95 and thereafter.

6. Nutrition - Eating the proper foods for growth and development.

7. Personal fitness - Includes the care of the body and the body's ability to meet the demands of daily living.

8. Safety and First Aid - The immediate and temporary care given to a person who has become sick or who has been injured.

9. Mental Health - The ability to like oneself, to be able to express emotions in an acceptable, healthy way, and to be able to face the problems and stresses of daily living.

CHAPTER II

Review of Literature

The review of the related literature will be discussed under the following categories: teacher characteristics, teaching methods and materials, curriculum, and course structure. The review of literature related to teacher characteristics included certification status, professional preparation, and coaching duties. The review of the teaching methods and materials used included the types of physical activities that the students engaged in and the classroom materials and teaching methods used. The review of literature concerning the curriculum included state mandated curriculum, use of fitness testing, and the specific topics which were taught. The review of the course structure included the use of block scheduling and the total amount of time allotted for teaching the course.

Teacher Characteristics

Several researchers have studied the area of teacher certification as it relates to teacher performance. Because the Lifetime Wellness course involved two different subject areas, those who had certification in both subject areas would seem to be better prepared to teach the course. Teachers who may have certification in one of these subject areas may have limited knowledge in the other subject area. Teachers who are not certified in either subject area would seem to have a great deal of difficulty in effectively teaching the course.

Research done by Peck (1989) examined the effect of certification status on the performance of mathematics teachers. He compared teacher's performance based upon four entries into teaching: college of education, college of arts and

sciences, adding an endorsement to certification, and an emergency certification. The subjects were 52 first and second year math teachers and 1,469 students in their classes. These entries into teaching were compared with five performance variables: teacher performance, student performance, student attitude, student perception of teacher effectiveness, and teachers' command of math content.

The results of the study suggested that no specific entry into teaching was significantly superior. Based upon the National Teacher Examination (NTE) scores, teachers from colleges of arts and sciences seemed to possess somewhat greater content knowledge and performed almost as well as the teachers from colleges of education. Teachers who had emergency certificates were found to have the least content knowledge.

A significant difference ($p < .05$) was found among the four areas of entry into teaching when compared to the students' perception of teacher effectiveness. Teachers from colleges of education and those who added an endorsement were reported to be significantly more effective in teaching than teachers from colleges of arts and sciences and those with emergency certificates.

Physical Education was required in the majority of elementary schools across the country (Mitchell & Earls, 1987). However, according to Coulon and Reif (1994), state mandates did not identify who should provide the instruction of physical education. While the course should have been taught by a physical education specialist, many school districts have relied upon regular classroom teachers to teach physical education (Coulon & Reif).

Several studies suggested that teachers who were not certified in a particular subject area were not as effective as certified teachers. Jones (1987) found that elementary classroom teachers reported that they felt ineffective in

teaching physical education. They reported that it was a direct result of their minimal preservice and inservice training. Their amount of training typically involved the completion of one college methods course in which little, if any, hands-on teaching occurred (Royall, 1987). The training they did receive was not transferred to the elementary instructional setting (Royall, 1987). This lack of training and knowledge of subject matter caused this type of teacher to use his or her past physical education experiences as a basis for his or her style of teaching (Harrison & Blakemore, 1989).

Another teacher characteristic that was studied related to the professional preparation of the teacher. This included all coursework which directly related to the subject area that was taught. Folsom-Meek and Nearing (1994) studied the relationship between the professional preparation level of preservice physical education teachers and their attitudes toward students with mild disabilities. The subjects included 399 preservice teachers who were enrolled in an introductory Adapted Physical Education course. One teacher characteristic that was studied was the amount of coursework by the subjects that directly related to their teaching assignment. This included the number of courses taken in physical education pertaining to individuals with disabilities and the number of courses taken outside of physical education pertaining to individuals with disabilities. Those subjects who rated their educational preparation as high also had very high positive attitudes towards teaching students with disabilities (Folsom-Meek & Nearing). Rizzo (1984) examined attribute variables of physical education teachers as predictors of attitudes and found that the amount of coursework and the age of the teachers were significant predictors of teachers' attitudes toward teaching students with disabilities.

The results of previous research have demonstrated that the attitude of the physical education teacher towards students with disabilities was a key variable which can contribute toward the success of these students in the regular physical education classes (Craft, Santomier, Hogan, Wughalter, 1985; Marston & Leslie, 1983).

Another studied indicated that professional preparation was an important factor in terms of teaching ability. Zakrajsek and Bos (1978) studied the teaching performance of three groups in a university's basic activity program. The three groups included: the main campus faculty, the regional campus faculty, and the main campus graduate teaching assistants. The groups were rated on knowledge, organization, teacher-student interaction, and general teaching ability. The results of the study suggested that the main campus faculty and the regional campus faculty were more effective than the graduate teaching assistants in the area of knowledge, clarity, and enthusiasm.

O'Sullivan, Sweeney, and Taggart (1989) studied the relationship of preservice preparation and the curriculum content in physical education programs. The researchers sent a questionnaire to 208 physical education teachers at senior high, junior high, and middle schools. The results showed that the more exposure teachers had to an activity in their preservice training the more likely they were to feel prepared to teach the activity and to spend significant time with the activity in their programs. The results also seemed to suggest that the more teachers felt prepared to teach an activity the more likely it was to be included as part of the curriculum and the more time the activity received in the curriculum (O'Sullivan et al.).

Another teacher characteristic which was studied related to the effects of coaching duties that were placed upon the teacher. Would the added

responsibility of coaching reduce the effectiveness of the wellness / physical education classes that the coach teaches? According to Siedentop (1987) high schools with quality physical education programs had several commonalities. One characteristic that most of these schools had was that very few of the teachers in these programs had major coaching commitments in the interscholastic program.

Kneer (1987) suggested that problems developed when high school physical education teachers attempted to coach a sport. The lack of adequate time was identified as the main problem. Coaching a major interscholastic sport required an enormous amount of time. The average teacher / coach required eight to 12 hours of practice time per week and, depending upon the sport, one to three contests per week for an eight to 12 week season (Kneer). This left little time to develop, plan, and implement a quality wellness / physical education program.

According to Sage (1987) several trends developed within universities which made it difficult to sustain the dual role of physical educator and coach. In past years, coaches were assigned to coach several sports each year or coach a sport during its season only. Currently, athletic departments force coaches to specialize in one sport for the entire year. The idea of an "off season" is no longer thought of for most athletic sports. Another trend was the de-emphasizing of the teaching performance by the coach. Colleges do not emphasize the teaching performance of their physical educator / coaches. Performance in the classroom became secondary to the success of the coaches on the athletic field for many institutions (Sage).

Sutliff and Solomon (1993) used student perceptions to determine teaching effectiveness between coaches and full-time faculty when teaching physical education activity classes. The subjects for the study included 1,154 students

who were enrolled in one physical education activity course at one of five state universities in Tennessee. The faculty were rated according to student evaluations. In recent years, many institutions have used student evaluations to measure teacher effectiveness (Sutliff & Solomon). This type of evaluation has been validated by McKeachie and Lin (1979), Marsh (1984), and Cranton and Smith (1986). Cashin (1988) determined that when measuring teaching ability that "student ratings tend to be statistically reliable, valid, and relatively free from bias, probably more so than any other data used for faculty evaluations."

The results of the study by Sutliff and Solomon (1993) suggested that full-time faculty were more effective in their instruction than coaches. The full-time faculty were perceived as more involved with the students, were better communicators, and were more enthusiastic during the class with the students. The authors of the study suggested that it may be time to move the coach out of the classroom and fill these positions with other qualified instructors (Sutliff & Solomon).

Teaching Methods and Materials

Another topic which was studied related to the teaching methods used by the Lifetime Wellness teacher and the instructional materials that were used. These factors have emerged as important influences on student attitudes toward physical education. Earl and Stinnett (1987) examined student attitudes toward physical education and health education in secondary schools. The number of subjects included 1,807 high school boys and girls. The researchers found that the number of students who took these courses dropped dramatically from grades 9 to 12. Those students who did not take the physical education or health education courses indicated that they would take the courses provided

that changes were made. These changes included modification to the program's content and modification by the teacher.

According to Luke and Cope (1994) the development of positive attitudes to physical activity was one of the major objectives of both elementary and secondary school physical education programs. Additional studies suggested that programs which instilled positive attitudes would increase the likelihood of young people adopting and maintaining an active lifestyle when a free choice was given (Pangrazi & Dauer, 1992; Hellison & Templin, 1991).

Figley (1985) studied the causes of positive and negative attitudes toward physical education by researching the K-12 physical education experience of college students. The results indicated that the teacher and the curriculum ranked as the top two factors determining both positive and negative attitudes. Teacher sensitivity and teacher encouragement were associated with positive attitudes and a lack of opportunity by the students for decision making was associated with negative attitudes.

Luke and Cope (1994) studied 386 students from grades 3, 7, and 10. All of the subjects were from the same school district. A questionnaire was given to the students in order to assess their attitudes toward teacher behavior and program content. The results indicated that teachers, teacher educators, and researchers should examine alternate approaches to teaching and evaluation of fitness so that student attitudes can become less negative to such a central part of physical education. The study also suggested that students would like to choose from a variety of fitness activities and not necessarily be forced into one type of activity (Luke & Cope).

Strand and Scantling (1994) researched the preferences of secondary students towards physical education. The participants in the study included 958

students from four high schools and three junior high schools in Northern Utah. The subjects were asked to choose from a list of 51 activities and record ten that they would prefer to have in the physical education program. Overall, 14 different individual and dual activities were listed while six team activities were listed. This seemed to suggest that many different activities should be included at both the junior and senior high school levels of physical education (Strand & Scantling).

Several studies have indicated that physical educators should change their methods of teaching physical education. Virgilio, Berenson, Serpas, and Harsha (1988) pointed out the negative trend in our country towards obesity and heart problems for school aged children. Therefore, schools needed to provide health and fitness intervention programs for these students. Gilliam, McKenzie, Cicero, and Ray (1988) suggested that physical educators should find new and creative ways to incorporate more fitness activities in physical education classes, including modifying the rules of traditional sports to provide more movement opportunities.

Other researchers have used an alternate approach to teaching physical education. The personalized approach to teaching physical education was an alternative to the traditional teacher centered or direct approach method (Mott, Virgilio, Warren, & Berenson, 1991). A personal fitness module involved establishing a fitness baseline, goal-setting, choice of activities, and evaluation based on progress toward pre-established goals.

In a study by Mott et al. (1991), the researchers compared the effectiveness of a personalized fitness module with a traditional teacher developed fitness unit. Each group was later tested for improvement using a one mile walk / run performance test. The results showed that the group which used the

personalized fitness module had significantly lower times than the traditional fitness group. The researchers concluded that students who were personally involved in developing fitness plans seemed to achieve fitness more quickly than those in a regular teacher centered program.

Another method of teaching, termed cooperative learning, has been used along with the traditional lecture method of teaching. A study by Herbster and Hannula (1992) compared the teaching methodology of cooperative learning to traditional lecture methods. The study used 85 students, primarily freshmen and sophomores, enrolled in a required course for teacher certification. During the first six weeks, instruction occurred primarily through traditional lecture methods. During the next six weeks, the cooperative learning style known as a jigsaw structure was used. Students were assigned to "teaching / learning" groups, and materials that were going to be taught were distributed. The "expert groups" consisted of one member from each "teaching / learning" group which met to discuss the content they were required to teach and their teaching strategy. Each person was required to teach in a "teaching / learning" group three times.

The results showed that 84 percent of the subjects saw cooperative learning as a positive experience. A majority of the subjects responded that they had made academic gains and that they would choose cooperative learning over traditional lecture methods if they were forced to choose one method (Herbster & Hannula, 1992).

Some of the strengths of cooperative learning as reported by the subjects included more interaction with their peers, practical teaching experience in a non-threatening setting, and increased involvement resulting in greater knowledge retention. Some of the weaknesses of cooperative learning as

reported by the subjects included frustration with unprepared group members, less thorough coverage of content, and dominance by an outspoken group member. The researchers concluded that while cooperative learning should not replace traditional methods of teaching, it has offered some advantages for instructors at all levels (Herbster & Hannula, 1992).

Nahas (1992) studied the knowledge and attitude changes of low-fit college students in a short-term fitness education program. The subjects in the study were 89 female college students enrolled in general physical education classes at a major university in Brazil during the fall semester of 1985. The educational program was presented in three forms: Group A was an experimental group which engaged in physical activity and received six 50-minute lectures. The lectures consisted of a 30-minute presentation by the instructor, followed by a 20-minute discussion of the fitness concepts. Audiovisual (AV) material was also used during the presentation. The AV material consisted of slides and transparencies. Group A also received six handouts concerning fitness topics. They were instructed to read and answer questions which related to the topics. The topics of the lectures and handouts included: lifestyle and positive health; cardiorespiratory fitness; musculoskeletal fitness; exercise, nutrition, and weight control; guidelines for correct exercising and principles of conditioning; and stress management and exercise.

Group B was another experimental group which engaged in physical activity and received the same six handouts as Group A. The students in Group B were instructed to read the instructional material in the handouts and to answer the review questions on each handout. This group did not receive any lectures or presentations. Group C was the control group. This group engaged in physical activities only without lectures or handouts. The results indicated that the

experimental groups A (lectures) and B (handouts) had significantly higher scores on their health-related fitness knowledge test than the control group C. Group A significantly improved their attitude toward physical activity based upon their survey answers. Although group B scored higher on the attitude survey than the control group, they did not score as high as group A, nor was it statistically significant.

According to Zeff (1985), teachers in physical education have used several instructional formats, called teaching models, to organize the structure of their classes in order to enhance student learning. For many teachers, the traditional skill-drill model (TSDM) of teaching has been the primary instructional format in secondary physical education (Dowell, 1975). The TSDM usually started with an introduction to a sport on the first day of class. The next series of lessons focused on learning the skills followed by drills. After several days of skills and drills, lead-up games were introduced. Finally, an actual game was played and sometimes a tournament would be played. The advantage of the TSDM was to provide adequate time to teach the skills of the game. The disadvantage of this model was that the skills were practiced and developed separately from game play (Zeff).

Another teaching model was the skill-play integration model (SPIM). This model distributed skill practice over a longer time for more learning. This was accomplished by integrating skill-drills and play into each day's lesson from the first day of class until tournament play (Gustafson, 1980). A typical lesson from the SPIM consisted of a demonstration of a new skill or review of a previously learned skill, followed by game-type drills to learn the skill. The game-type drills then integrated into a game activity. This model overcame the separation between skill development and game play which was found in the TSDM

(Gustafson). Research by McManus (1992) and Zeff (1985) found that the SPIM provided as much academic learning time as the TSDM without losing time in skill development.

Quinn and Strand (1995) compared the effectiveness of the SPIM to another model, the fitness skill-play integration model (FSPIM). The FSPIM was similar to the SPIM with the inclusion of a daily fitness component. Pangrazi and Darst (1991) suggested the use of a daily fitness component in daily lesson planning in physical education. This suggestion was made in response to the problem in our country of the lack of youth fitness.

Quinn and Strand (1995) compared the SPIM and the FSPIM teaching models to determine their effectiveness upon the aerobic conditioning and motor skill development of the subjects. The subjects included 60 male students aged 12 to 13 attending seventh grade physical education classes at a northern Utah middle school.

The results of the study indicated that both models were almost equally effective in terms of skill development. However, the FSPIM provided significantly greater time in a cardiovascular training zone than did the SPIM. The researchers suggested that the use of a FSPIM model of teaching had the potential for increasing the physical activity and cardiovascular endurance of children while also improving motor skill development (Quinn & Strand, 1995).

Strand and Reeder (1996) studied the problem of a lack of exercise in secondary physical education programs. They suggested that through integration of academics and fitness and by modifying teaching methods that greater increases could be made in knowledge retention and physical fitness.

Several researchers have studied the effects of instructional strategies and formats on variables such as heart rate, skill development, and student

attitudes toward activity (Anderson,1994; Quinn & Strand,1995; Strand,1995; Strand & Reeder,1993). From these studies, five major points were raised. The first was that a majority of secondary students failed to meet the American College of Sports Medicine (ACSM) minimum exercise standards. The second point was that middle school students were more engaged than high school students at both moderate and vigorous intensity levels. The third point was that through the implementation of various teaching strategies the amount of time within a predetermined training zone could be maintained without sacrificing skill development if the class was structured properly. The last point stated that in some cases, the cardiovascular workouts that students received from game play were as effective as those from specifically designed fitness activities (Strand & Reeder,1996).

Strand and Reeder (1996) used these data to fashion a fitness integration method of teaching. With fitness integration, seven planned phases were included in activity unit lesson plans: preclass activity, fitness lecture, skill development, integration game activity, traditional game play, fitness activities, and a closure activity.

According to the researchers, the amount of time that was allotted for each phase during a particular class period would depend upon several factors such as class length, grade level, and lesson objectives. They also emphasized that all phases did not necessarily have to be taught every day, nor in any particular order.

The first phase, called the preclass activity, was a planned activity for students who arrived early to class. This phase increased the amount of time engaged in physical activity and it prepared the students for more vigorous activities. The fitness lecture phase was designed to integrate the “why” and

“how” of fitness and to help students learn about lifetime fitness. By scheduling mini-lectures into the lesson plans, teachers could present fitness information on selected days.

The skill development phase was designed to modify some of the instructional practices of learning sport skills. To include these other phases, the skill development phase needed to be performed in less time than usual. One method of accomplishing this was to increase the number of students who participated in an activity and to decrease the number of students who were waiting to participate in an activity. Adding more stations or equipment would enable the class to complete this phase in less time.

The next phase was the game-like drill, or as it is called, the integration game activity (IGA). This occurred after the skill development phase and it was basically a minigame based upon the skill that was being developed.

The next phase was the traditional game play phase. When students had progressed to the point where they were proficient in most of the skills of a game, an actual game (played by the traditional rules) was initiated.

Fitness activities, or training routines, was the next phase. This phase was also known as a 10-minute ticker (TMT). These activities incorporated exercise principles and functioned as intense warm-ups (Strand & Reeder, 1996). The primary objective of each TMT focused on a specific type of health-related fitness or sport-related fitness.

The last phase was identified as the closure phase. This time could have been used to review the topics of the fitness lecture, to give feedback to the students concerning skill development, to remind students about future activities or homework, and to reinforce the value of physical education and physical activity.

Curriculum

The curriculum in physical education has been a topic with much controversy in recent years. Typically, the curriculum in physical education has consisted of traditional team sports such as basketball, softball, and volleyball (Ross and Gilbert, 1985). Recently, some researchers have questioned whether these activities should have top priority in physical education. According to Johnson (1985), some researchers believed that physical fitness should be the most important objective. Other researchers believed that sports and motor skill development have been and should continue to be the primary goal (Seefeldt and Vogel, 1987).

The current state of physical education in the United States has been criticized over the past several years, with some researchers who have even questioned the necessity of the course. Dodds and Locke (1994) have suggested that "physical education as it now exists in many American public schools is not worth saving." Siedentop (1981) agreed with this statement when he said:

I have no trouble envisioning the rapid extinction of high school physical education in the next two decades. As it is currently programmed and currently taught in most places, it probably deserves to die out... Too many students are apathetic about it. Too many students are disruptive within it. Too many students have already become cynical about it. The vast majority have learned to tolerate it, not to expect too much from it, and not to give too much to it.

Other researchers believed that physical education has made positive contributions to the growth and development of students and insisted that it remain part of the schools' curriculum (Corbin, 1987, Symons & Gascoigne, 1990 and Meredith, 1988). According to Mitchell and Earls (1987),

one area that demanded immediate attention in order to keep physical education in the schools involved the statement of missions, goals, and objectives of physical education. In order to evaluate and defend the physical education program there must first have been a clear understanding regarding what was (or was supposed to be) done in such programs (Mitchell & Earls).

Stillwell and Reneau (1992) examined the number of state education agencies that provided physical education curriculum materials and what types of curriculum materials were provided for its physical educators. The results indicated that four state agencies, those from Georgia, Massachusetts, Nebraska, and New Hampshire, provided no printed curriculum material for its physical educators. Twenty-nine of the 51 education agencies (57 %) have developed a curriculum guide. The curriculum guides varied in size from the five page Arkansas Public School Course Content Guide to the 1,057 page South Carolina Physical Education Guidelines.

There was a wide variety of the contents in the 29 curriculum guides. According to Willgoose (1984), a comprehensive curriculum guide should have contained the following information: a schools system's philosophy of physical education, its general physical education objectives, a scope and sequence of program content, expected student outcomes, and evaluation procedures. Only 17 of the 29 agencies included all five items in their curriculum guide. Some of the guides included additional information such as content rationale, staff development, public relations, and methods for integrating physical education with other subject areas.

Rice (1988) studied the attitude of high school students toward physical education and its curriculum. The subjects included 602 students from seven different schools in grades 9-12. The results indicated that a variety of activities

were taught at each of the seven high schools. All schools offered four team sports: volleyball, basketball, football, and softball or baseball. Only two individual sports were offered by all the schools, tennis and track / field. Six schools offered two additional individual sports of golf and table tennis. Five of the schools included fitness / jogging, gymnastics, and bowling. Only one school offered swimming, badminton, dance, and racquetball (Rice).

O'Sullivan et al. (1989) studied the impact of undergraduate professional preparation activity course on the content selection of physical education programs in secondary schools. They studied 118 senior high and junior high schools in a mid west state. Data were collected on 35 selected physical education activities which were considered to represent most of the activities that were taught. Of the 118 schools that responded, volleyball, basketball, softball, and soccer were the most frequently taught activities. Approximately 10 schools were teaching diving, lacrosse, backpacking, and cycling.

The results also indicated very similar curricula between the senior high schools and the junior high schools. The most common three activities for all the senior high schools were volleyball, softball, and then basketball. The most common three activities for all the junior high schools were volleyball, basketball, and then softball. These results seemed to agree with other research that physical education curricula are a repetition of introductory courses to students year after year with little opportunity for skill learning to occur (Siedentop, 1983; Taylor & Chiogioji, 1987).

In higher education, many undergraduate institutions have required students to complete a course in health / fitness as a part of the curriculum (Armstrong, 1993). This type of course, a lecture-laboratory combination, required students to learn about fitness through academic work and through

physical activity. Mowatt, DePauw, and Hulac (1988) suggested that this type of course was an excellent opportunity to examine a person's attitudes toward various physical activities, for the course would enable students to both discover the benefit of physical fitness activities and develop skill in performing these activities.

Slava, Laurie, and Corbin (1984) suggested that the objectives of this type of course help students develop a favorable outlook toward fitness-related activities and exercises because the lecture component provided students with knowledge about the benefits of regular physical exercise and the laboratory component provided students with opportunities for first-hand positive experiences with those exercises. Regan and Fazio (1977) used this claim when they contended that instruction in a lecture-laboratory course not only addressed the "why" of participation in physical activities, but it also allowed for direct experience with physical activities.

This type of course structure agreed with Rotter's (1975) Social Learning Theory for the potential for behavior to occur:

There are four classes of variables in the social learning theory: behaviors, expectancies, reinforcements, and psychological situations. In its most basic form, the general formula for behavior is that the potential for a behavior to occur in any specific psychological situation is a function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement.

When this theory was applied to physical activity and exercise behavior, it suggested that individuals may believe that participation in such behavior is within their control but will not perform the behavior unless they have learned to appreciate the benefits of the behavior (Noland & Feldman, 1984).

More recently, Mowatt et al. (1988) examined attitude changes as a result of subjects who had a lecture-laboratory course. The subjects were 564 male and female students enrolled in elective activities courses. One group received mini-lectures on the benefits of exercise and physical activity and participated in exercise and physical activities. The control group participated in exercise and physical activity without the lectures. The results indicated that the experimental group significantly improved their scores from the pretest to the post test in terms of positive attitudes. The control group had no significant differences from the pretest scores to the post test scores.

In contrast, Morrison (1986) found no significant differences in attitudes toward physical activities between a lecture-laboratory course and a traditional physical education course. The subjects included 63 students enrolled in a lecture-laboratory course and 55 students at another institution enrolled in a regular physical education activity course. Morrison concluded that neither type of course made significant gains in positive attitudes toward physical activity.

Lambert (1987) criticized the current secondary physical education programs. The researcher concluded that typical programs were highly sport centered (limited in scope), lacking in cohesion with lower grades, and redundant (same content taught in the same sequence year after year). The content of the programs should have included both fitness and skill development. The curriculum should also be cohesively designed with substantial input from all grade levels.

Typically, physical education courses have taught games and sports and, according to Masche (1970), students have enjoyed participating in these activities. The problem has been raised of how to improve the physical fitness of students but still retain sports and games in the curriculum. Gilliam,

McKenzie, Cicero, and Ray (1988) studied the curriculum of an elementary school physical education program. The purpose of their study was to compare a traditional physical education course to a course specifically designed to improve health-related fitness. The subjects included 56 fifth grade students (age range 10-12 years) from an elementary school in Alabama. Students were randomly selected and assigned by sex from four physical education classes to either the health-related or the traditional program.

During the first week of classes, the AAHPERD health-related physical fitness test (1980) was administered to measure the initial health and fitness level of the subjects. Both groups participated in their respective programs for 8 weeks, five days per week, for 30 minutes each day. The sport of basketball was selected as the exercise mode due to its potential for becoming an excellent cardiovascular fitness activity through modification of movement patterns. The traditional approach centered on the development of basic basketball skills. Lead-up games and drills on passing, shooting, and dribbling dominated the program. A traditional basketball game was played according to the standard rules.

The health-related approach focused on improving the cardiovascular fitness of the subjects through modification of the sport of basketball. The modifications included allowing only one shot in a certain amount of time and having the subjects who committed fouls to run a specified number of laps before returning to the game. These modifications to the game eliminated parts of the game that slowed down the participants. This continuous running action was used to improve the cardiovascular fitness of the subjects. The lead-up games and drills that would improve other physical fitness components were also used in the program.

When both programs were completed, the physical fitness levels of both groups were retested. The results indicated that the only significant improvement in fitness made within the traditional group was abdominal muscular strength and endurance. However, based on the nonsignificant changes in the other fitness test items, the traditional approach was not found to be an effective teaching method for improving the health-related fitness in the physical education programs.

In contrast, the health-related group improved their physical fitness in three out of the four tests items. Cardiovascular endurance improved 12 percent, muscular strength and endurance increased by 21 percent, and flexibility increased by 7 percent. The superiority of the health-related approach to the traditional approach appeared to be due to how the game of basketball was played. In the traditional approach basketball games and drills were usually anaerobic because they involved short duration, high energy movements. However, the health-related approach used games and drills that were aerobic because they were moderate in intensity, longer in duration, and continuous in their movements (Gilliam et al., 1988).

Robbins, Powers, and Ruston (1992) described a physical education fitness / wellness course that used a series of classroom lectures and laboratory activity sessions centered on a specific aerobic activity. One 50-minute class per week was spent in a large lecture (90 to 125 students). Twice per week, a student who was enrolled in the Physical Education Fitness / Wellness course (PEFWL) would engage in some physical activity depending upon which specific activity they had chosen for the semester. Activity selections included: physical conditioning, fitness walking, jogging, swimnastics, bicycling, rhythmic aerobics, and fitness swimming. The lectures provided students with information to help

make intelligent decisions about their health. The topics of the lectures included: self-responsibility, self-management, heart health, stress, and nutrition.

According to Robbins et al. (1992), this type of course, where students focused on one specific aerobic activity per semester, was superior to other fitness / wellness courses, which would change its fitness activities several times per semester. The researchers suggested that students who engaged in only one aerobic activity could develop expertise in that activity, something they could not have done with a sampling of various activities.

Hill, Randle, and Mullen (1992) addressed the problem of low fitness levels among youth and the potential for long range consequences. The subjects included 125 high school physical education teachers in Washington State. They suggested that physical education programs should incorporate additional fitness activities into their curriculum. The researchers examined current strategies that high school physical educators were using to promote fitness in their curriculum and strategies that the educators would recommend for fitness promotion.

The results indicated that the most commonly used fitness strategies in these schools were: jogging / walking, circuit weight training, fitness testing, fitness concept and instruction, modified rules with traditional sports, fitness station drills, aerobic dance, and personal fitness program design. The most highly recommended fitness strategies as reported by the teachers were: jogging / walking, circuit weight training, fitness concepts and instruction, fitness testing, and fitness station drills.

According to Strand, Scantling, and Johnson (1988), many colleges and high schools have started to offer a concepts-based physical education course.

This course was usually entitled "Lifetime Fitness," "Fitness for Life," or something similar. In this type of course the students engaged in physical activity two days per week and attended a lecture or lab one day per week.

Strand et al. (1998) identified a major problem with this type of concepts-based fitness (CBF) course. Many physical education teachers have struggled with it because they were not trained to teach a fitness course. Researchers have emphasized the importance of fitness and academic learning in order to enhance student learning (Pate & Holm, 1994). Pate and Holm stated,

In health-related physical education, skill acquisition is an objective, not a goal. The goal is promotion of lifelong activity and fitness, and this requires physical educators to promote relevant learning in the cognitive and affective domains. Most current professional preparation programs fail to develop these competencies. Health-related physical education will not become a professional norm until this changes.

Strand et al. (1998) presented five themes that form the foundational framework for this type of course. Within each theme, ideas and strategies were presented in order to help physical educators or preservice students to develop a CBF course.

The first theme involved a definition of fitness and gave a rationale for including CBF as a part of a school's physical education curriculum. According to Strand et al. (1998) the most effective approach in teaching fitness education involved a course that: had the students use a textbook, take part in lecture and lab experiences, complete homework and tests, participate in a variety of fitness activities, and learn how to design a personalized training program that they could take with them when they left the program.

The second theme was designed to help physical educators and preservice

students design a CBF course. This involved unit planning and examined the concepts curriculum model and showed how that type of model ideally suited a fitness education course. The educators or preservice students were given 10 components to be used to organize and design a CBF course. The components were: student performance standards, instructional formats, activity / exercise programs, academic programs, assessment programs, personal portfolios, incentive programs, exercise adherence and motivational strategies, school-family programs, and equipment / technology.

The third theme dealt with teaching the cognitive aspects of fitness education. This theme provided teachers and preservice students with the educational materials and strategies that should be used in teaching a CBF course. The three specific areas within this theme dealt with how to teach concepts in a classroom setting, how to develop lab experiences, and strategies for teaching specific CBF units.

The fourth theme involved the teaching of the physical aspects of fitness education. The goals of this theme included centering their activity program on a cross-training philosophy, helping preservice students design training routines and fitness protocols, and to teach preservice students how to properly teach strength training, jogging, and aerobic exercise.

The fifth and final theme concerned the promotion of fitness education. This included public relations and advocacy. This theme included the characteristics of an effective public relations program, how to plan a school public relations program, and public speaking tips.

Marincich and Peters (1993) described the implementation of a new physical wellness curriculum for grades K-12 of the Roslyn Public Schools in New York. This physical fitness unit was unique in that it provided knowledge to

the students concerning the development and maintenance of health-related physical fitness both in and out of school. In addition to physical activities, the unit teaches the interrelationship of physical fitness, exercise, and nutrition. It also requires each student to be responsible for his / her own fitness and wellness. The unit also includes a fitness evaluation that indicates the fitness range that each student should attain. Some of the teaching materials for the unit includes fitness evaluation reports, weekly workout program forms, a diet chart, fitness standard charts, and student reward certificates.

Course Structure

One of the most common methods that has been used to restructure courses was block scheduling. Block scheduling was a modification of time structure within a school. Some other names for it were the Four-By-Four Plan, the Concentrated Curriculum, and the Semester Plan. The block schedule divided the school day into four 90-minute classes per day (Claxton & Bryant, 1996). Block schedules were not uniform and the time range for this type of time structure could have extended from 80 minutes to 120 minutes per class.

The goal of block scheduling was to allow students to spend greater periods of time concentrating on fewer subjects during any one day. Cawelti (1994) surveyed high schools across America and found that 10 percent of the schools had instituted longer class periods and another 15 percent of schools had discussed the idea of changing to this type of class structure.

The number of schools which have changed to the block schedule had increased in recent years. Bryant and Claxton (1996) surveyed 100 high schools in North Carolina and found that 65 percent were currently using the block scheduling. That research agreed with Fletcher (1997) who studied high

schools in Tennessee and found that a majority of Tennessee high schools currently used block scheduling.

Canady and Rettig (1993) reported several reasons why schools had changed to a block schedule. Both students and teachers had to prepare for fewer classes per day, usually three or four rather than six or seven. The block schedule helped reduce discipline problems and increased instructional time by spending less time moving from one class to another. Teachers were also able to become more involved with the students and experiment with different teaching styles.

Fletcher (1997) surveyed approximately 280 teachers and 2,000 students from six high schools in the middle Tennessee area. The researcher found that both teachers and students were satisfied with the block schedule. Thirty percent of the total sample reported that grades had improved, and 40 percent reported an increase in paperwork. The majority of teachers reported that they needed to modify their teaching methods. The teachers and students indicated that block scheduling provided students with the opportunity for more in-depth study of the subject matter. However, the additional study time may decrease the possibility of covering more material.

Guskey and Kifer (1995) described the results of the Block Schedule Restructuring Program. The Governor Thomas Johnson High School in Frederick, Maryland was involved in the program. The school changed from seven, 48-minute class periods per day to four, 90-minute class periods per day. The classes were conducted on a semester plan, with 18 weeks of instruction per semester. The results indicated that the students' performance on several comprehensive academic examinations remained unchanged since the initiation of the Block Schedule Program. Student daily attendance and

student dropout rates did not change, but there was a dramatic decrease in student behavior problems since block scheduling had begun.

Several researchers have questioned the effect of block scheduling on physical education. Canady and Rettig (1993) suggested that physical education could become an equal partner with English, math, and science. This result would happen because physical education would occupy a full, extended period every day for a full semester. Miller (1992) reported the possibility of negative consequences on physical education from block scheduling. The researcher suggested that physical education may be treated as an expendable course, such as fine arts or advanced foreign languages, and be eliminated from a school entirely.

Claxton and Bryant (1996) suggested that block scheduling could offer advantages to those teaching physical education. Because block scheduling offered an extended class period between 90 to 120 minutes, that would have allowed sufficient time to include the cognitive, affective, psychomotor, and fitness learning domains which have been identified as the foundation of physical education.

With extended class periods, teachers would have enough time for physical activity and time to teach scientific foundations and principles of physical fitness in a classroom setting. More class time per day would also allow teachers to spend sufficient time on sport skill development and cardiovascular endurance. Claxton and Bryant (1996) also suggested that longer class periods would allow physical education teachers to have more access to off-campus facilities. Many schools have access to swimming pools, bowling alleys, and fitness clubs, but the traditional 50-minute period did not allow enough time for transportation and participation. The 90-minute block scheduling period would

allow sufficient time for the transportation of the students to and from the facilities and enough time to participate in the activities.

Bryant and Claxton (1996) studied the effects that physical education teachers felt that block scheduling had on their physical education classes and on the teachers who had used it. The researchers surveyed 85 high schools in North Carolina. The results indicated that 65 percent of the schools reported that they were using block scheduling. An additional six percent indicated that they were planning to implement block scheduling in the future.

All of the schools on the block schedule reported using block scheduling five days per week. All of the schools also reported using a block schedule with four class periods each day. The total amount of time that block scheduling provided for physical education (or any other class) was determined by the number of semesters and the number of days per week that the students were in physical education. Bryant and Claxton (1996) found that the majority (78 percent) of schools that used block scheduling reported that freshmen took physical education for one semester. A majority (75 percent) of the schools reported that students attended physical education five days per week. The teachers indicated that they had spent more time on many physical education objectives and teaching strategies used to meet those objectives.

Approximately 80 percent of teachers indicated that they spent more time on the following: individual instruction, teaching specific skills and techniques, and on teacher planning. Approximately 70 percent of teachers increased their time on: skills tests, teaching cognitive concepts, teaching sportsmanship and ethics, monitoring games and competitions, teaching health and safety, improving cardiovascular fitness, and teaching lifetime fitness concepts. Almost half (46 percent) of the teachers reported an increase in the use of off-campus

facilities.

The teachers reported that they perceived a moderate decrease in students absenteeism, a substantial improvement in class discipline and cardiovascular fitness, and a decrease in student apathy after the school changed to block scheduling.

Another topic which related to the course structure was the total amount of time allotted to teach the Lifetime Wellness course. Research by Mitchell and Earls (1987) examined state mandated time requirements for physical education for kindergarten through grade 12. An important finding from this research was the identification of trends of commonalities and differences across the country. The results indicated that when the states that did not require physical education was combined with those that provided no minimum standards for the time allotments for this subject, a poor profile emerged. In grades one through six, 56 percent of the states surveyed either had no time requirements or no guidelines for time requirements for a program of physical education (Mitchell & Earls). In the later years, grades 11 and 12, 75 percent of the states provided no standards for the time requirements for physical education in the curriculum.

The amount of time spent in physical education in grade K-12 was also examined. Thirteen percent of the states ranked in the highest range of total hours spent in physical education with 936 to 1,320 hours from grades K-12. In the middle range, 27 percent of the states required from 360 to 780 hours of physical education. In the low range, 44 percent of the states required from 120 to 270 hours of physical education in grades K-12. Lastly, 17 percent of the states did not specify any time requirements across any of the 13 grades of schooling (Mitchell & Earls, 1987).

Other troubling trends from these data were the wide range and number of different specifications both within and across grades from state to state. Students in kindergarten, depending upon which state they resided, may have been exposed to a range of 18 hours to 90 hours of physical education over the academic year (Mitchell & Earls, 1987). Students in grade 9 could have received between 30 and 240 hours of instruction.

In conclusion, the research has shown that teachers need to be licensed and certified in the subject area that they are teaching. The curriculum of the majority of physical education courses consists of traditional team sports. According to the literature, effective teaching requires the teacher to use a variety of teaching methods. The purpose of this study is to determine the qualifications of those teaching the Lifetime Wellness course, the curriculum that is being taught, and the methods used to teach the course.

CHAPTER III

Methods

The instrument used in this study was constructed after reviewing several questionnaires and surveys from similar research (Herbster & Hannula, 1992; Peck, 1989; Strand & Scantling, 1994). Specific examples include research surveys involving teacher attitudes, teaching methods and materials, curriculum, fitness activities, and certification status. Other questions were created by the researcher. Some of the questions were suggested by other health and physical education professionals.

Before the survey was conducted, the Lifetime Wellness Questionnaire was reviewed by a committee of health and wellness professionals to determine the validity of the survey questions (Appendix B). The committee included three college professors, a consultant to the Tennessee State Department of Education in Physical Education and Lifetime Wellness, and the director of secondary education for the Tennessee Department of Education. Due to the straightforwardness and objectivity of the questions, this type of validation was sufficient for this type of research (Dr. David Rowe, personal communication, July, 1998).

The final survey instrument consisted of two parts. Part one consisted of a cover letter which was addressed to the principal of each school (see Appendix C). The principals were asked to distribute the questionnaire to the wellness teacher at their school. In the event that there was more than one wellness teacher at the same school, two questionnaires were included in the packet to

the principal. If there were more than two Lifetime Wellness teachers at one school, the principal was requested to make additional photocopies of the questionnaire and distribute them to the other Lifetime Wellness teachers.

Part two consisted of the survey which contained 17 questions that pertained to the Lifetime Wellness course (see Appendix D). The survey asked teachers to identify certain characteristics concerning their profile, the curriculum, and various teaching methods and materials.

Data Collection Procedures

Approval for the study was obtained from Middle Tennessee State University's Institutional Review Board (see Appendix E). Patterson's American Education (1998) was used to obtain a list of all public secondary schools in the state of Tennessee. After the list of all public schools that taught the Lifetime Wellness course was obtained, each school was used in the sample. From a total population of 291 schools, 233 usable questionnaires were returned. Questionnaires that contained two or more unanswered questions were considered unusable.

After the schools were selected, each school was assigned a code number. Subsequently, the survey packets that included the cover letter and the questionnaire were mailed to the principals at the selected schools. The principals were asked to distribute the packet to the wellness teacher at their school. The initial mailings were sent to the principals on November 3, 1998. The teachers were asked to respond as soon as possible. A follow-up letter was sent to those who did not respond after three weeks. The final time for receiving the questionnaires was set after a total of six weeks.

Subjects

The majority of school systems in Tennessee offered the Lifetime Wellness

course at the ninth grade level. There was a total of 291 public schools in Tennessee which included the ninth grade. Some of these schools were traditional high schools which included grades 9-12. Some of these schools were junior high schools which included grades 7-9. The senior high schools which included grades 10-12 were contacted to see if they were teaching the Lifetime Wellness course to students at their school. If the Lifetime Wellness course was being taught, that school was included on the overall list of schools from which the sample was selected. The junior high schools which included grade nine were contacted to see if they were teaching the Lifetime Wellness course at their school. If the Lifetime Wellness course was being taught, that school was included on the overall list of schools from which the sample was selected.

Statistical Analyses

The questionnaire was used to gather data from four areas; teacher characteristics, curriculum, teaching methods and materials, and course structure. The frequency, mean, standard deviation, and percentages were analyzed to respond to the following research questions:

- 1. Are the teachers of the Lifetime Wellness course certified to teach in Tennessee?**
- 2. Are Tennessee teachers of the Lifetime Wellness course endorsed in the appropriate areas to teach Lifetime Wellness?**
- 3. At what grade level was the Lifetime Wellness course taught?**
- 4. Did the teachers of the Lifetime Wellness course coach an athletic sport?**
- 5. How many of the seven strands of the Lifetime Wellness course were taught in an academic year?**

6. What types of physical activities did the students engage in during the Lifetime Wellness course?
7. What types of teaching methods were used to teach the Lifetime Wellness course?
8. What was the total amount of time that the students spent in the Lifetime Wellness course?
9. Did the teachers of the Lifetime Wellness course have adequate time to teach the seven strands within the curriculum?
10. Is there a difference between the number of strands that were taught in the Lifetime Wellness course when compared to the type of teacher endorsement (health and p.e., health only, p.e. only, family and consumer science only, or no appropriate area).
11. Is there a relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that that were taught?

An analysis of variance test (ANOVA) was used to determine if there was a difference between the number of strands that were taught in the Lifetime Wellness course according to each type of teacher endorsement. The Pearson product-moment correlation test was used to determine if there was any relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that were taught. All statistical analyses were completed using the SPSS computer software program.

CHAPTER IV

Results

There were 291 schools in Tennessee that taught the Lifetime Wellness course. Each school in Tennessee that taught the Lifetime Wellness course received a questionnaire. From the 291 total schools that were included, subjects from 178 (61%) schools responded to the questionnaire. 46 percent of the schools had two or more respondents that completed and returned the questionnaire. The total number of subjects that responded to the questionnaire was 258. Twenty-five questionnaires were not used because of incomplete data. The total number of subjects used in the analysis of the data was 233.

Table 1

Endorsement Areas of the Lifetime Wellness Teachers (N=224)

Endorsement Area	Frequency	Percentage
physical education	38	17.0
health	9	4.0
vocational home economics	3	1.3
health and physical education	166	74.1
other	8	3.6

N.B. Nine of the subjects did not report any valid certification area.

Data were collected on the number of Lifetime Wellness teachers who had a valid teaching certificate in Tennessee. A total of 233 subjects responded to the question concerning teacher certification. 232 of the 233 Lifetime Wellness teachers (99.6%) reported that they had a teaching certification and were endorsed to teach in one or more areas.

Information was gathered on the specific endorsement areas of the Lifetime Wellness teachers. This information was needed because there is no specific endorsement for Lifetime Wellness in Tennessee. There are six different endorsement areas that will allow a teacher to teach the Lifetime Wellness course. They include: health and physical education K-12, vocational home economics, physical education K-12, health K-12, consumer homemaking, and health occupations. 225 of the 233 subjects (96.6%) were endorsed in at least one of the appropriate areas that would allow them to teach the Lifetime

Table 2

Grade Level Frequencies of the Lifetime Wellness Course (N=233)

Grade Level	Frequency	Percentage
9	170	73.0
10	25	10.7
11	1	.4
12	2	.9
combination	35	15.0
9 - 12	0	0.0

Wellness course. Table 1 indicated the frequencies and percentages of the teacher's endorsement areas. The results indicated that the majority of the Lifetime Wellness teachers were endorsed in both health and physical education. Eight Lifetime Wellness teachers did not have the appropriate endorsement areas although they taught the course.

Data were collected on the grade level that the Lifetime Wellness course was taught. Table 2 indicates that the majority (73%) of students were in the ninth grade while completing the Lifetime Wellness course. None of the students participated in the Lifetime Wellness course during all four years of high school.

The total number of strands that were taught during the Lifetime Wellness course was analyzed. Table 3 includes the frequencies and percentages of the

Table 3

Total Number of Strands Taught In The Lifetime Wellness Course (N=233)

Number of Strands Taught during the School Year	Frequency	Percentage	Cumulative %
1	1	.4	.4
3	2	.9	1.3
4	6	2.6	3.9
5	19	8.2	12.0
6	28	12.0	24.0
7	177	76.0	100.0

total number of strands that were taught. The majority of the Lifetime Wellness teachers taught all seven of the mandated strands of the Lifetime Wellness course. Surprisingly, almost one-quarter (24%) of the Lifetime Wellness teachers omitted at least one strand.

Information concerning the Lifetime Wellness teachers who may have coached an athletic sport while teaching was analyzed. 232 subjects responded to this question on the survey. The majority of the Lifetime Wellness teachers (85%) reported that they had coached an athletic sport while they taught the Lifetime Wellness course.

Information was also gathered on the number of Lifetime Wellness teachers who taught each specific strand. Table 4 indicates the frequencies and percentages for each individual strand that was taught. The results

Table 4

Percentage of Teachers Who Taught Each Strand (N=233)

Strand Taught	Frequency	Percentage
personal fitness	231	99.1
substance use / abuse	226	97.0
first aid / safety	219	94.0
nutrition	225	96.6
disease prevention	217	93.1
family life / sexuality	208	89.3
mental health	209	89.7

show that the most common strand that was taught in the Lifetime Wellness course was the personal fitness strand (99%). The two strands that were taught the least were mental health (89%) and family life / sexuality (90%).

Information was gathered concerning additional topics that may have been taught during the Lifetime Wellness course. 65 of the 233 teachers (28%) reported that they did teach additional topics in the Lifetime Wellness course. Some of the additional topics included: anatomy, death education, digestion, current events, consumer health, personal hygiene, and environmental protection.

Table 5

Total Number of Activities Taught in the Lifetime Wellness Course (N=231)

Number of Activities	Frequency	Percentage	Cumulative%
1	2	.9	.9
2	6	2.6	3.5
3	9	3.9	7.4
4	28	12.1	19.5
5	37	16.0	35.5
6	59	25.5	61.0
7	56	24.2	85.3
8	22	9.5	94.8
9	11	4.8	99.6
10	1	.4	100.0

Data were collected on the total number of physical fitness activities that the students engaged in as a part of the Lifetime Wellness course. Table 5 includes the frequencies and percentages for the total amount of physical fitness activities that the students engaged in. The results indicated that almost all of the Lifetime Wellness teachers (93 %) used four or more different types of physical fitness activities throughout the course. The majority of the Lifetime Wellness teachers (66%) used between five and seven types of physical fitness activities.

Table 6

Number of Teachers who used each Physical Fitness Activity (N=231)

Activity	Frequency	Percentage
Jogging / walking	223	96.5
Personal fitness program	152	65.8
Weight training	155	67.1
Individual sports	158	68.4
Dance / aerobic dance	74	32.0
Calisthenics	171	74.0
Aquatics	15	6.5
Fitness testing	174	75.3
Fitness trails	30	13.0
Other activities	22	9.5

N.B. Two of the subjects did not respond to this question.

Data were also gathered on the number of Lifetime Wellness teachers who used each specific physical fitness activity during the Lifetime Wellness course. Table 6 indicates the frequencies and percentages for the individual physical fitness activities. According to Table 6, the most popular physical fitness activity (97%) that the instructors taught was the walking / jogging activity. The majority of the Lifetime Wellness teachers also used the following physical fitness

Table 7

Total Number of Teaching Methods Used by the Lifetime Wellness Teachers
(N=233)

Number	Frequency	Percentage	Cumulative %
1	1	.4	.4
3	2	.9	1.3
4	5	2.1	3.4
5	12	5.2	8.6
6	31	13.3	21.9
7	52	22.3	44.2
8	51	21.9	66.1
9	41	17.6	83.7
10	21	9.0	92.7
11	13	5.6	98.3
12	3	1.3	99.6
13	1	.4	100.0

activities: team sports, calisthenics, fitness testing, weight training, individual sports, and personal fitness programs.

The number of teaching methods that were used to teach the Lifetime Wellness course were examined. Table 7 summarizes the total number of different teaching methods that were used by the teachers of the Lifetime Wellness course. The results indicated that the majority of Lifetime Wellness teachers used a variety of teaching methods in the course. 91 percent of the Lifetime Wellness teachers used six or more different types of teaching methods. Most of the Lifetime Wellness teachers (75%) used between 6 and 9 types of teaching methods. The results revealed a wide range in the number of teaching methods that were used to teach the Lifetime Wellness course. The research indicated a range from one to 13 different teaching methods used to teach the Lifetime Wellness course. Although there was a wide range in the number of teaching methods used, the overall percentage of the teachers who used an extremely high or low amount of teaching methods was very low (.8%).

Information was collected concerning the number of individual teaching methods used by the Lifetime Wellness teachers. Table 8 indicates the frequencies and the percentage of total teachers who used each specific teaching method. The data suggested that the most popular type of teaching method used was the lecture (99.6%). Other teaching methods used by most of the Lifetime Wellness teachers were videos (95.3%), worksheets (95.3%), and group work (93.6%). The majority of the teachers also used class discussions and guest speakers as part of their teaching methods.

The total amount of time spent by the students in the Lifetime Wellness course was another area of data analysis. Table 9 indicates the frequencies and the percentage of the total amount of time spent in the Lifetime Wellness course.

Table 8

Number of Lifetime Wellness Teachers Using Specific Teaching Methods
(N=233)

Method Used	Frequency	Percentage
Videos	222	95.3
Hands-on projects	135	57.9
Discussions	192	82.4
Worksheets	222	95.3
Interviews	32	13.7
Journals	91	39.1
Lecture	232	99.6
Group work	218	93.6
Group projects	137	58.8
Portfolios	26	11.2
Guest speakers	201	86.3
Role playing	102	43.8
Other methods	9	3.9

A total of 233 subjects responded to this question. A wide range of times were reported. The minimum amount was 83 total hours and the maximum amount of time was 195 total hours spent in the Lifetime Wellness course. A total of 25 different amounts of time were reported by the Lifetime Wellness teachers. 59 percent of the Lifetime Wellness teachers reported that the students spent between 130-139 total hours in the course. The other most common amounts of

Table 9**Amount of Time Spent in the Lifetime Wellness Nourse (N=233)**

Range of Time (Hours)	Frequency	Percentage
80-89	1	.4
90-99	1	.4
100-109	2	.9
110-119	1	.4
120-129	11	4.7
130-139	137	58.8
140-149	5	2.1
150-159	25	10.8
160-169	34	14.6
170-179	0	0.0
180-189	15	6.5
190-199	1	.4

time included 160-169 hours (15%), and 180-189 hours (6%). Only 9 percent of the students spent less than 135 hours in the Lifetime Wellness course.

Data were collected on whether the Lifetime Wellness teachers had adequate time to teach all seven mandated strands of the Lifetime Wellness course. A total of 232 subjects responded to the question which examined course time. 106 of the 232 subjects (46%) indicated that they did not have enough time to teach all seven strands of the Lifetime Wellness course.

Information was gathered to determine if there was a difference between the

number of strands that were taught and five different types of teacher endorsements. The five types of teacher endorsements included: health and physical education, health only, physical education only, vocational home economics only, and no relevant endorsements. A total of 227 subjects responded to the questions concerning endorsement areas and the number of strands that were taught in the Lifetime Wellness course. An ANOVA (Analysis of Variance) test was used to determine any significant differences between each endorsement area and the number of strands that were taught. The results indicate that there were no statistically significant differences ($p > .05$) in the number of strands that were taught when compared to the type of endorsement area by the Lifetime Wellness teacher.

Data were collected and analyzed on the possible correlation between the total amount of time spent by the students in the Lifetime Wellness course and the number of strands that were taught in the Lifetime Wellness course. The Pearson product-moment correlation test was used to examine the data. A total of 233 subjects were included in this analysis. The results indicate no correlation ($r = -.045$) between the total amount of course time and the number of strands that were taught.

CHAPTER V

Summary

The purpose of this study was to determine the qualifications of those who are teaching the Lifetime Wellness course, the methods used to teach the course, the curriculum that is being taught, and the time allotted to teach the course. Eleven research questions were used to gather the information within this study. To gather the information, a questionnaire was sent to each of the 291 public schools in Tennessee which taught the Lifetime Wellness course. The subjects used in this study were teachers with at least one year experience teaching the Lifetime Wellness course.

Discussion

The discussion of the data gathered in this research will focus on the eleven research questions within this study and the related literature. The research questions are:

Question One: Are the teachers of the Lifetime Wellness course certified to teach in Tennessee?

The data stated that 99.6% of the teachers were certified to teach in Tennessee. Research by Peck (1989) found that teachers who did not have a teaching certificate had less content knowledge than teachers with certification. Teachers who did not have teaching certificates were also perceived by students to be less effective than certificate teachers.

Question Two: Are Tennessee teachers of the Lifetime Wellness course

endorsed in the appropriate areas to teach Lifetime Wellness?

The results demonstrated that 95 percent of the Lifetime Wellness teachers were endorsed in the appropriate areas needed to teach the Lifetime Wellness Course (see Table 1). Studies by Jones (1987), Royall (1987), and Harrison and Blakemore (1989) indicated that teachers who were not endorsed in a particular subject area were not as effective as certified teachers.

Question Three: At what grade level was the Lifetime Wellness Course taught?

The majority of students (73%) completed the Lifetime Wellness course during the ninth grade only(see Table 2). Research by the Centers for Disease Control (1997) states that all schools need to require daily physical education in all grades and to promote physical activities that can be enjoyed throughout life. The results stated that the Lifetime Wellness course does not provide the needed daily physical education throughout each grade level in Tennessee high schools.

Question Four: Did the teachers of the Lifetime Wellness course coach an athletic sport while teaching the course?

The results showed that 85 percent of the Lifetime Wellness teachers had coached a sport while teaching the course. Research by Siedentop (1987), Kneer (1987), Sage (1987), and Sutliff and Solomon (1993) suggested possible problems when physical education teachers coached a sport. The lack of adequate time for both positions was identified as the major problem. The researchers also found that non-coaching teachers were rated as more effective than teachers who coached. Finally, the researchers indicated that one characteristic of schools with quality physical education programs was that

very few of these schools had teachers who coached. The results of this study demonstrated that the majority of the Lifetime Wellness teachers may not have had sufficient time due to their coaching assignments to be effective physical educators.

Question Five: How many of the seven strands of the Lifetime Wellness course were taught in an academic year?

76 percent of the Lifetime Wellness teachers taught all seven strands of the Lifetime Wellness course (see Table 3). The results of this research also demonstrated that 77 percent of the Lifetime Wellness teachers were endorsed to teach both health and physical education. These results agree with O'Sullivan, Sweeney, and Taggart (1989) which stated that teachers were more likely to teach a specific subject area when they had received training in that area.

The present research also revealed a difference in the percentage of individual strands that were taught. The family life / sexuality strand and the mental health strand were excluded by as many as 10 percent of the Lifetime Wellness teachers (see Table 4). O'Sullivan, Sweeney, and Taggart (1989) studied the relationship of preservice preparation and curriculum content of physical education teachers. The researchers suggested that the more exposure teachers had to an activity or subject in their training the more likely they were to feel prepared to teach the activity. As the teachers felt more prepared to teach an activity or subject, the more likely it was to be included as a part of the curriculum.

Question Six: What types of physical activities did the students engage in

during the Lifetime Wellness course?

The total number of physical activities that the students engaged in during the Lifetime Wellness course was examined. According to Table 5, 93 percent of the Lifetime Wellness teachers used four or more types of physical fitness activities. The results demonstrated that the Lifetime Wellness teachers were providing a variety of physical fitness activities for the students. Research by Luke and Cope (1994), Figley (1985), and Strand and Scantling (1994) studied the preferences of secondary students towards physical education. The researchers suggested that students would prefer to choose from a variety of fitness activities and not necessarily be forced into one type of activity. This method of student choice also increased student's positive attitudes toward physical education.

This research also studied the specific types of physical activities that were taught in the Lifetime Wellness course. Table 6 stated that the two most common activities used were walking / jogging (97%) and team sports (84%). Research by Ross and Gilbert (1985) agreed with these findings by reporting that the typical curriculum in physical education has consisted of traditional team sports such as basketball. Some researchers, such as Lambert (1987), have criticized the current secondary physical education programs. Lambert concluded that typical programs were highly sport centered and suggested that the content of the programs should have included both fitness and skill development. The results of this present study indicated that Lifetime Wellness teachers have included both sport skill acquisition and fitness components, to some degree, into the physical activity portion of the Lifetime Wellness course.

Question Seven: What types of teaching methods were used to teach the

Lifetime Wellness course?

The Lifetime Wellness teachers were using a variety of teaching methods in the Lifetime Wellness course. 91 percent of Lifetime Wellness teachers reported that they used six or more different teaching methods to teach the Lifetime Wellness course (see Table 7). Research by Herbster and Hannula (1992) and Nahas (1992) suggested that students may learn more effectively if the teachers used several types of teaching methods. The results of this present study demonstrated that Lifetime Wellness teachers are using the recommended number of teaching methods in the Lifetime Wellness course.

Data were also collected on the individual teaching methods used by the teachers in the Lifetime Wellness course. According to Table 8, the most common teaching methods used by the Lifetime Wellness teachers were: lecture (99.6%), worksheets (95.3%), videos (95.3%), and group work assignments (93.6%). These results agree with Nahas (1992), Slava et.al. (1984), and Robbins et.al. (1992) which stated that the use of lectures, handouts, and discussions can significantly increase student's levels of physical fitness knowledge when compared to students engaging only in physical activity.

Question Eight: What was the total amount of time that the students spent in the Lifetime Wellness course?

The data showed that the majority of teachers (59%) taught between 130-139 hours of instruction (see Table 9). There was also a very large range in the amount of total time spent in the Lifetime Wellness course. Some teachers taught as little as 83 hours in the Lifetime Wellness course while other teachers

spent as much as 195 hours in the Lifetime Wellness course. Mitchell and Earls (1987) researched time requirements for physical education and found similar results. Students receiving physical education in grade 9 could have received between 30 and 240 total hours of instruction.

The majority of the students (57%) received 135 total hours of instruction. In 1993, before the Lifetime Wellness course was created, students were receiving up to 180 total hours in physical education and up to 90 total hours in a health class. The Lifetime Wellness course, which integrated both health and physical education curricula, had less time allocated to it than the combination of the health and physical education time allocations. The results indicated that Lifetime Wellness teachers have a substantially lower amount of time to teach the present curriculum compared to the health and physical education courses.

Question Nine: Did the teachers of the Lifetime Wellness course have adequate time to teach the seven strands within the curriculum?

The Lifetime Wellness teachers were questionned concerning the amount of time they had to teach the curriculum of the Lifetime Wellness course. Almost half of all the Lifetime Wellness teachers (46%) reported that they did not have adequate time to teach the Lifetime Wellness course. The following statements by the Lifetime Wellness teachers were in response to an open-ended question: "I felt like we were pushed to cover all of this in one term.", "I could only teach 4 topics.", "there is not enough time!", "You must be kidding!", "No! Not near enough time to cover material and to exercise regularly". Even the Lifetime Wellness teachers who reported that they did have enough time to teach the Lifetime Wellness course included statements such as: "yes, but briefly.", "A

few topics we rushed a bit to finish.", "Yes, but had to move quickly and choose topics / information that I felt were most important.", "Yes, but to a minimum extent.", "Yes, by farming some (topics) out to the family life curriculum class." Others made suggestions and comments such as: "Need to require 2 credits of wellness or go back to one year of physical education and a half-year of health." Two semesters (of Lifetime Wellness) are required to graduate (at our school)." The research indicated that the Lifetime Wellness teachers did not have enough time to teach the seven strands and to provide regular exercise for the students.

Question Ten: Is there a difference between the number of strands that were taught in the Lifetime Wellness course when compared to the type of teacher endorsement?

This research examined the possibility of a difference between the number of strands that were taught in the Lifetime Wellness course by each type of teacher endorsement area. The endorsement areas were; health and physical education, health only, physical education only, vocational home economics only, or no appropriate area. An analysis of variance (ANOVA) test was used to identify any significant differences between each group. The results revealed no significant difference ($p > .05$) between the number of strands that were taught and the teachers' endorsement areas. The results contradict the research by O'Sullivan, Sweeney, and Taggart (1989) who stated that teachers were more likely to teach a particular subject area when they had received preservice training in that area.

Question Eleven: Is there a relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that were taught?

The last research area that was studied addressed the possible relationship between the total amount of time spent in the Lifetime Wellness course by the students and the number of strands that were taught. The Pearson product-moment correlation test was used to determine the strength of the relationship between these two variables. The results showed that there was no correlation ($r = -.045$) between total course time and the number of strands that were taught. The results disagree with research by Mitchell and Earls (1987) who stated that the amount of time allotted to each subject could determine, to some extent, what was or was not taught.

Recommendations

The following recommendations are made for continuing research into the Lifetime Wellness course in Tennessee:

- 1. Determine how extensively each strand of the Lifetime Wellness course is taught.**
- 2. Determine how much of the total time is devoted to teaching the seven strands.**
- 3. Determine how much of the total time is devoted to physical activities.**
- 4. How much time is devoted to each physical fitness activity?**
- 5. Does school size affect the number and types of physical activities used in the Lifetime Wellness course.**
- 6. Survey the students' attitudes towards the Lifetime Wellness course.**
- 7. Survey the Lifetime Wellness teachers' attitudes towards the Lifetime**

Wellness course.

8. **Survey the Lifetime Wellness teachers' attitudes towards requiring two units of Lifetime Wellness statewide.**
9. **Acquire more detailed information on the Lifetime Wellness teachers; such as age, gender, and experience.**
10. **If some of the strands are not being taught, determine why.**
11. **Determine the physical fitness level of the students in the Lifetime Wellness course.**

Appendix A
Goals and Objectives for the Lifetime
Wellness Course

Strand:**DISEASE PREVENTION****Course Goals:**

Understand attitudes and behaviors for preventing and controlling disease

Be able to evaluate and select health services, practices, and products

Terminal Objectives:

The student will be able to:

01. Determine hereditary, environmental, and lifestyle factors which place the student at risk for disease and develop a personal plan to reduce controllable risk
02. Differentiate between noncommunicable and communicable diseases
03. Identify communicable diseases:
 - a. Explain how the cycle of communicable disease can be broken and the spread of disease stopped
 - b. Identify how HIV/AIDS, STDs, and hepatitis are spread
 - c. Identify the warning signs and treatment for HIV/AIDS, STDs, and hepatitis
 - d. Identify responsibilities that each individual has toward communicable disease control and prevention, including
HIV/AIDS
STDs
Hepatitis
Diseases preventable by immunization
 - e. Discuss society's attitudes towards HIV/AIDS and persons living with HIV/AIDS
04. Identify noncommunicable diseases
05. Identify the prevention, possible causes, warning signs, and treatment of each of the following:
Coronary heart disease
Cancer
Diabetes
High blood pressure
Stroke

(Continued next page)

06. Identify responsibilities that each individual has toward disease control and prevention, including: 69
- Coronary heart disease
 - Cancer
 - Diabetes
 - High blood pressure
 - Stroke
07. Identify appropriate community resources that deal with communicable and noncommunicable diseases

Strand:**MENTAL HEALTH****Course Goals:**

Understand the importance of a positive self concept, interpersonal relationships, and the relationships of sound mental health practices to wellness

Be able to evaluate and select health services, practices, and products

Understand the consequences of personal and community decisions that affect the economy, cost, availability, and quality of health care

Terminal Objectives:

The student will be able to:

08. Identify basic human needs
09. Describe characteristics of good mental health
10. Practice appropriate coping and resistance skills
11. Understand the nature of stress and stressors
12. Identify stages of the grief process
13. Formulate personal stress management coping techniques
14. Identify socially acceptable ways of resolving conflict with others
15. Practice nonabusive behavior with others
16. Demonstrate effective listening and speaking skills
17. Recognize the signals of a potential suicide
18. Identify appropriate community resources that deal with mental health and suicide prevention

Strand:

NUTRITION

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Course Goal:

Understand the relationship of sound nutrition to total lifetime wellness

Terminal Objective:

The student will be able to:

- 19. Explain personal nutrient and energy needs**
- 20. Demonstrate understanding of nutrient and energy needs at various stages of the life cycle, including:**
 - a. pregnancy**
 - b. infancy**
 - c. adolescence [including the topics of weight control and eating disorders]**
 - d. adulthood**
 - early**
 - middle**
 - senior years**
- 21. Explain the role of the dietary guidelines for Americans as a foundation for maintaining healthy eating**
- 22. Assess personal dietary practices by comparing daily consumption of foods from each of the categories in the Food Guide Pyramid to the recommended number of servings and determine any needed adjustments**
- 23. Practice principles of food safety involved in food storage, cooking and sanitation**
- 24. Accurately interpret information provided on food labels**
- 25. Identify professional sources of information about food and nutrition**
- 26. Demonstrate the ability to make informed consumer decisions in regard to food and health related selections**
- 27. Describe personal changes that can be made in order to choose a healthful eating pattern in the face of environmental forces which encourage unhealthy eating patterns**

Strand:**PERSONAL FITNESS AND RELATED SKILLS****Course Goals:**

Understand the role of lifetime physical activity and the principles of safe and effective exercise, and be able to plan a personal fitness program

Demonstrate an appropriate level of physical fitness in cardiorespiratory endurance, body composition, flexibility, muscular strength, and muscular endurance

Demonstrate a variety of psychomotor skills used in lifetime physical activities

Be able to evaluate and select health services, practices, and products

Terminal Objectives:

The student will be able to:

28. Understand the concepts of physical fitness:

- a. Define physical fitness
- b. Identify and describe the health related components of physical fitness
- c. Identify and describe the skill related components of physical fitness
- d. Differentiate between health related and skill related components of physical fitness

29. Have an assessment of individual health related fitness levels:

- a. Determine the level of flexibility by an appropriate method and describe various methods of determining flexibility
- b. Determine the level of cardiorespiratory endurance by an appropriate method and identify various methods of determining cardiorespiratory endurance
- c. Determine the level of muscular strength and localized muscular endurance by appropriate methods and identify various methods of determining muscular strength and localized muscular endurance
- d. Determine the level of lean muscle mass and body fat by an appropriate method and identify various methods of determining percent of body fat

(Continued next page)

30. Design a personal fitness plan:

- a. Design a personal fitness plan that will lead to or maintain a satisfactory level of health related fitness based on individual needs of students
- b. Set fitness goals based on the health related fitness assessment results
- c. Design a personal fitness program using the following criteria:
 Scientific training principles
 Individual fitness levels
 Individual skill levels
 Personal goals
 Availability of resources
 Limiting physical conditions

31. Select cardiorespiratory endurance activities:

Understand basic skills needed for successful participation in lifetime activities including but not limited to the following:

Step aerobics
 Water aerobics
 Aerobic walking
 Running/jogging
 Dance aerobics
 Swimming
 Cycling
 Rhythmic movement
 Skating [ice, in-line, roller]
 Rope jumping activities
 Racquet activities
 Circuit training
 Rowing

32. Understand and apply the proper biomechanical and physiological principles related to exercise:

- a. Describe and demonstrate the proper warm up/cool down procedures when participating in physical activity
- b. Describe the proper exercise prescription of intensity, duration and frequency
- c. Describe how flexibility, cardiorespiratory endurance, muscular strength and muscular endurance are improved by application of training principles during physical activity

{Continued next page}

- d. Identify the biomechanical principles related to flexibility, cardiorespiratory endurance, muscular strength, and muscular endurance
 - e. Describe the training principles of overload, progression, and specificity
- 33. Understand and apply the proper safety practices as related to exercise:
 - a. Describe and demonstrate the proper safety procedures which should be followed when engaging in physical activity
 - b. Explain the proper methods of maintaining fluid balance during physical activity
 - c. Identify signs of heat illness caused by fluid loss
 - d. Identify precautions to be taken when exercising in extreme weather and/or environmental conditions
 - e. Identify personal safety precautions to be taken during the exercise process
- 34. Understand the problems associated with inadequate levels of fitness:
 - a. Identify the health related problems associated with inadequate flexibility, cardiorespiratory endurance, muscular strength, and muscular endurance
 - b. Identify health related problems associated with abnormal percentages of body fat
- 35. Understand the relationship between physical fitness and stress:
 - a. Understand the role of exercise as a positive strategy in coping with stress
- 36. Understand consumer issues related to physical fitness:
 - a. Distinguish between fact and fallacies as related to fitness
 - b. Determine the validity of media and marketing claims promoting fitness products and services
 - c. Select, purchase, and maintain the proper fitness equipment
 - d. Identify the dangers associated with the use of performance-enhancing drugs

- 37. Understand the values associated with participation in physical fitness activities:**
- a. Encourage positive attitudes towards exercise and physical activity**
 - b. Describe the benefits of achieving optimal fitness in a regular personal fitness program**
 - c. Identify the economical benefits of physical fitness**
 - d. Improve self image through success in physical activity**
 - e. Demonstrate social skills that promote positive relationships with others through participation in physical activity**
- 38. Assess individual lifestyles:**
- a. Identify the primary risk factors associated with disease, disability, and premature death**
 - b. Understand controllable and uncontrollable risk factors**
 - c. Identify risk factors that need to be reduced or modified to promote positive lifestyles**
 - d. Describe the relationship between lifestyle and the quality and quantity of life**
- 39. Exhibit improvement in physical fitness:**
- a. Demonstrate improvement in the health related fitness components**
- 40. Identify resources and facilities available in the community that relate to physical fitness and wellness**

Course Goals:

Understand appropriate care for injuries and sudden illness

Understand attitudes and behaviors for preventing accidents and injuries

Terminal Objectives:

The student will be able to:

41. Explain how one's attitudes affect one's personal safety behavior
42. Identify reasons why people take unnecessary risks
43. Outline the cost of accidents
44. Describe appropriate safety behavior on the road, at home, and during recreation
45. List precautions needed to prevent falls, poisonings, electrical shocks, and fires
46. Define first aid
47. Develop and identify the priorities in responding to medical emergencies
48. Differentiate between the types of wounds and know the first aid treatment for each one
49. Describe shock and its treatment
50. Describe proper first aid techniques for common emergencies
51. List the steps for aiding a choking victim
52. Demonstrate how to check for breathing and pulse
53. Describe the process for giving mouth-to-mouth resuscitation
54. Explain the steps involved in administering CPR to adults, children, and infants

Strand:**SEXUALITY AND FAMILY LIFE****Course Goals:**

Understand human reproduction and other components of human sexuality

Understand roles, responsibilities, contributions, and life cycles in family structures

Terminal Objectives:

The student will be able to:

55. Recognize abstinence from sexual activity as a positive choice and effective method of preventing HIV/AIDS and the only sure method of preventing pregnancies
56. Identify factors that promote a positive self image
57. Identify social, emotional, intellectual, and economic aspects of dating
58. Understand that relationships are based on respect, caring, trust, intimacy, etc.
59. Understand the privileges and responsibilities within a caring relationship
60. Describe appropriate actions to take with situations involving home violence and personal safety
61. Identify ways of resisting persuasive tactics regarding sexual involvement
62. Recognize how sexual decisions are influenced by group pressure
63. Recognize the nature of sexuality as a part of self which is related to total well being
64. Explain life saving information on sexually transmitted diseases, including HIV/AIDS
65. Define sexual harassment, promiscuity, and date rape and the effects of each
66. Describe gender differences, expectations, and biases
67. Understand how one's sexuality and sex role in the family are influenced by tradition, economic factors, religious beliefs, and social and cultural influences
68. Recognize that having children is best undertaken in marriage
69. Understand and explain human reproduction and the emotional components of human sexuality

{Continued next page}

70. Explore the alternatives to and consequences of teenage pregnancy, including adoption, abortion, single parenting, and teenage marriage
71. Compare and contrast various methods of contraception and the degrees of effectiveness or lack thereof
72. Discuss the lifelong responsibilities and requirements of being a parent

Strand:

SUBSTANCE USE/ABUSE

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Course Goal:

Understand appropriate and inappropriate use of chemical substances

Terminal Objectives:

The student will be able to:

- 73. Identify the relationship of drug use to related diseases and disabilities, including AIDS, learning disorders, handicapping conditions, birth defects, heart disease, lung disease, and suicide**
- 74. Understand that combining drugs, whether illicit or prescription, can be fatal**
- 75. Understand how alcohol, tobacco, and other drugs affect the fetus during pregnancy and the infant during lactation**
- 76. Understand the full effects and consequences of operating equipment and performing other physical tasks, such as sports, while using drugs.**
- 77. Identify the legal, social, and economic consequences of drug use, both for themselves and for others**
- 78. Develop an understanding of the importance of personal decisions related to use and abuse of substances**
- 79. Be prepared, where appropriate and supervised, to serve as peer leaders for younger children**
- 80. Be familiar with treatment and intervention resources**
- 81. Identify the procedure for securing assistance within the school and community environment**
- 82. Gain knowledge and develop basic skills for constructive leisure time activities**
- 83. Analyze the relationship between crime and economic issues and alcohol, tobacco, and other drugs**
- 84. Describe the proper and improper [legal and illegal] use of alcohol, tobacco, and other drugs**
- 85. Describe the personal legal consequences of using alcohol, tobacco, steroids, and other drugs**
- 86. Develop a commitment to a drug free lifestyle**

Appendix B
The Questionnaire Review Committee's
Letter of Approval



**TENNESSEE
STATE DEPARTMENT OF EDUCATION
OFFICE OF COMMISSIONER
NASHVILLE, TENNESSEE 37243-0375**

September 3, 1998

**Bart Cagle
91 Sherwood Circle
Crossville, TN 38555**

Dear Bart:

This correspondence is in reply to your request for a letter of validation for your dissertation survey. As we have discussed, the Lifetime Wellness manual is no longer in print since we now have an approved textbook list. Other than that, it appears your survey is a valid instrument.

If I may provide further assistance, please contact me by telephoning (615) 532-6277. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Mike".

**R. Michael White, Consultant
Physical Education and Lifetime Wellness**



TENNESSEE DEPARTMENT OF EDUCATION
Division of Curriculum and Instruction

Joel Walton, Director
Secondary Education

Phone 615-532-6293
FAX 615-532-8836

September 15, 1998

Mr. Bart Cagle
91 Sherwood Circle
Crossville, TN 38555

Dear Mr. Cagle,

In response to your letter concerning the revised dissertation, the questions in your survey instrument now seem to tie in with the emphasis of your study therefore there is validity.

If our office can be of further assistance please feel free to contact us.

Good luck as you proceed with this task.

Sincerely,

Joel Walton, Director
Secondary Education

JPW:SMG

Enclosure

Bart Cagle
91 Sherwood Circle
Crossville, TN 38555

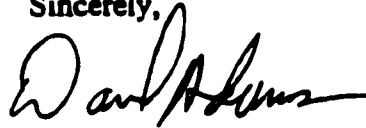
June 15, 1998

Dear Bart:

I have review your Lifetime Wellness Questionnaire and think it is a valid instrument. This information should be of value to the state department of education, as well as those of us who are preparing teachers in this area. Please send me a copy of your results.

Good luck with your study.

Sincerely,



Dr. David Adams

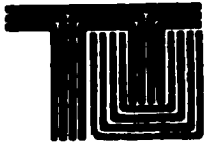
P.O. Box 96
Middle Tennessee State University
Murfreesboro, Tennessee 37132
Office: (615) 898-2811

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TO: Mr. Bart Cagle
FROM: Mr. Lee Allsbrook
Associate Professor
HPEERS Department
Middle Tennessee State University
DATE: March 29, 1997
RE: Dissertation Survey

In my opinion, your survey has a valid survey format.

I am pleased that you are doing this study. I believe it will provide needed professional information about the Lifetime Wellness courses being taught in the Tennessee secondary school curriculum.



To Whom It May Concern:

Mr. Bart Cagle of Crossville, Tennessee, a graduate student at Middle Tennessee State University, is gathering data relative to the Lifetime Wellness requirement for the state of Tennessee. In my professional and personal opinion Mr. Cagle's questionnaire is a valid instrument for compiling for this data.

Evans Brown, Ph.D.
Associate Professor
Health and Physical Education

Appendix C
Principal Consent Form to
Administer Questionnaire

From the office of:

Bart Cagle
91 Sherwood Circle
Crossville, Tn. 38555 (931) 788-1002

To: **Principal**

Hello. My name is Bart Cagle and I am conducting research on the Lifetime Wellness Course. I need to have all of the teachers who have taught the Lifetime Wellness Course at your school to complete a questionnaire. If you would permit this, then I would ask that you please distribute each stapled packet to each teacher who has taught the Lifetime Wellness Course. If you have more than two teachers who have taught the course, then please make additional photocopies as needed.

Thank You,

Bart Cagle

Appendix D
Lifetime Wellness Questionnaire

LIFETIME WELLNESS QUESTIONNAIRE

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This survey should be completed by someone who has taught the Lifetime Wellness course. Please read and answer the following 17 questions. All responses will be kept confidential. Please respond as soon as possible. An envelope is enclosed for the return of the questionnaire.

Thank you,

Bart Cagle

1. LIST ALL of the areas that you are endorsed (teaching certificate) to teach:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
 - g. _____
2. EXCLUDING your teaching endorsement areas, CIRCLE ALL other areas that you have participated in:
 - a. attended state sponsored Lifetime Wellness training
 - b. attended any other wellness training and / or inservice
 - c. college coursework in physical education
 - d. college coursework in health
 - e. college coursework in wellness / fitness / exercise science
 - f. college coursework in nutrition
 - g. training in safety or first aid
 - h. other (please list) _____
 - i. other (please list) _____
3. Were you an athletic coach and a Lifetime Wellness teacher?
 - a. yes b. no
4. LIST the approximate number of students enrolled in your school.
 - a. _____
5. State the number of days that the Lifetime Wellness course was taught each week:
 - a. _____
6. State the amount of time spent in the Lifetime Wellness course during each class meeting :
 - a. _____
7. State the number of total weeks spent in the Lifetime Wellness course.
(full year= 36 weeks)
 - a. _____

8. CIRCLE ALL topics (strands) that were taught during the Lifetime Wellness course.
- | | |
|--------------------------|-----------------------------------|
| a. personal fitness | e. nutrition |
| b. substance use / abuse | f. disease prevention and control |
| c. first aid / safety | g. family life / sexuality |
| d. mental health | |

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9. LIST all additional topics that were taught in the Lifetime Wellness course.

a. _____
b. _____
c. _____
d. _____

10. LIST the average number of days that the students spent participating in physical activities and / or exercise during the course per week.

a. _____

11. During the physical activity days (Question 10), state the amount of time per day that was spent engaged in physical activity.

a. _____

12. CIRCLE ALL of the types of exercise (fitness activities) used during the course:

a. team sports (basketball...)	e. individual sports	i. aquatics
b. jogging / walking	f. dance / aerobic dance	j. fitness testing
c. personal fitness program	g. calisthenics	k. fitness trails
d. weight training	h. other (list) _____	

13. CIRCLE ALL of the teaching methods and materials that you used during the course:

a. lecture	f. outside speakers / experts	j. worksheets
b. group work	g. videos or films	k. interviews
c. group projects	h. 'hands-on' projects	l. student logs/journals
d. portfolios	i. discussion / debate	m. role playing
e. other (list) _____		

14. Indicate if you used a textbook during the course:

a. no b. yes (please list Author and Title) _____

15. How frequently did you use the Lifetime Wellness Resource Manual during the course:

a. never b. daily c. occasionally d. rarely

16. List the grade level that the Lifetime Wellness course was taught at.

a. _____

17. Did you have enough time during the Lifetime Wellness course to adequately teach all seven topics (refer to question 8)?

a. yes
b. no

Appendix E
Institutional Review Board
Letter of Approval

P.O. Box 98
Middle Tennessee State University
Murfreesboro, Tennessee 37132
Office: (615) 898-2811
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To: Bart Cagle
Doug Winborn

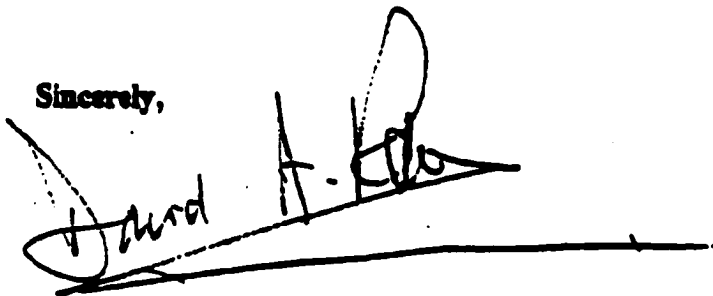
From: David Rowe
Institutional Review Board - College of Education representative

Date: 11/2/98

Re: IRB Protocol #99-056 : "Teaching methods, Teaching Characteristics, and the Content of the Lifetime Wellness Course"

The above named human subjects research proposal has undergone an expedited review and been approved. This approval is for one year only. Should the project extend beyond one year, or should you decide to change the research protocol in any way you must submit to your college's IRB representative a memo describing the proposed changes or reasons for extension. Good luck in the successful completion of your research.

Sincerely,



David A. Rowe, Ph.D.
Assistant Professor,
Department of HPERS,
Middle Tennessee State University

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