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Assessment of instructional cards on the California physical education standards

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**ASSESSMENT OF INSTRUCTIONAL CARDS ON THE CALIFORNIA
PHYSICAL EDUCATION STANDARDS**

A Thesis Project

Presented to

The Faculty of the Department of Human Performance

San Jose State University

In Partial Fulfillment

of the Requirement for the Degree

Master of Arts

by

Jean Lamson

August 2001

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DESIGN AND EVALUATION OF INSTRUCTION CARDS FOR PHYSICAL EDUCATION TEACHERS

By Jean Lamson

The study evaluated a set of instructional cards containing information related to the California Physical Education Framework and the California Challenge Standards for Physical Education. An evaluation instrument was developed by the researcher to conduct a survey of the quality and usefulness of the instructional cards. The study examined the value of the instructional cards for middle school physical education teachers. Six experts in the field reviewed a total of 18 cards, answered 15 questions, and provided comments and recommendations regarding the cards potential.

This study revealed that the instructional cards appeared to be a valuable teaching aid that will provide middle school physical education teachers a tool to incorporate the information in the California Framework for Physical Education and the California Challenge Standards for Physical Education into daily lessons.

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CHAPTER 1

INTRODUCTION

Physical inactivity is a serious national problem (United States Department of Health and Human Services, 1996). The United States Surgeon General has advocated increasing physical activity among youth in America. *Healthy People 2000* is an initiative that defines the nation's health agenda and guides policy that promotes health and prevents disease (USDHHS, 1992). *Healthy People 2010*, the second set of national physical activity and fitness objectives, provided a basis for monitoring and tracking our nation's health status. Because of the problem physical inactivity creates, *Healthy People 2010* (NASPE, 2000) has been presented to the American people by the U.S. Department of Health and Human Services as a follow up to the 1992 *Healthy People 2000* initiative. *Healthy People 2010* has refocused its efforts on the long-term investment of a lifetime of good health for children and adults.

Physical activity is one area specifically related to the objectives of *Healthy People 2010*. The 1996 Surgeon General's report also emphasized that inactivity among American youth is causing alarming increases in childhood obesity, increased levels of cholesterol, and increased risks of diabetes. The report claims that nearly 50% of early adolescents are not involved in vigorous physical activity for more than twenty minutes three or more times per week. The National Children and Youth Fitness Study that was conducted during the years of 1985 through 1987 also indicated that one-third of early adolescents, ages 12-14 years, are not vigorously active on a regular basis (Center for Disease Control, 1992). As a result, the Center for Disease Control and Prevention has reported that in the past three decades, the percentage of overweight children has doubled

(Perkins, 1996). In California schools, 80% of early adolescents are not fit enough to meet six out of six of the healthy fitness zone standards (California Physical Fitness Test, 1999). From these reports, it is clear that children and adolescents need to be educated as to the benefits of physical activity, as well as the risks associated with inactivity.

Early adolescence is a time when life-long patterns of healthy or harmful health behaviors are most likely to develop (Millstein & Litt, 1990). The foundation for good health lies in patterns of behavior learned as children, because habits and attitudes toward physical activity developed during childhood are most likely to continue through adulthood.

The current questions are not whether or not physical activity is beneficial to the health of youth or whether or not physical education should be a vital part of a school curriculum, but whether young people understand that sedentary lifestyles can lead to life-threatening health problems. In addition, it is questioned whether teachers are willing to change professional practice to assure that all students receive quality instruction in physical education. Increasing physical activity through quality physical education provides one way to meet the challenge of improving the lifestyle and health of our early adolescent students.

Influenced by recent social changes, youth of today face many different challenges. For instance, many parents who work are not at home when children come home from school. Given this current state of affairs, some children find themselves unsupervised. Adolescents are filling these unsupervised hours with television, computers, and unhealthy snacks (California Physical Education Framework, 1994). Although parents and families play an important role in increasing the activity levels of

children, schools can also play an important role in developing a more positive attitude about being physically active.

It is imperative that schools promote and provide quality physical education programs that teach the value of physical exercise for lifelong wellness. A quality physical education program must challenge each child physically, mentally, emotionally, and socially through planned physical activity. The more traditional form of teaching physical education typically focuses on team sports and games that are focused on competition for a few highly skilled students (McBride, 1990). This form of teaching encourages success for the highly skilled, but may exclude those who are less skilled or maybe less experienced to compete. If and when cooperation, rather than competition, is the focus of the physical activities presented in physical education class, attitudes about physical activity might become more positive for a greater number of adolescents as well as life-span with recreation involving physical activity (Ahlgren & Johnson, 1979).

By incorporating a variety of learning styles, the traditional forms of teaching physical education can be adapted to meet the changing needs of students. Physical education teachers must also be prepared with lessons and projects that encompass the “whole” student. Instructional choices must consider the physical, mental, emotional, and social development of the students. Continuing to move away from the traditional setting of physical education into a more contemporary view of living a healthy lifestyle may require teachers to think and plan differently about their work with students. Changing to a holistic model of physical education will require teachers to spend more time planning lessons and monitoring lessons toward a view of: (a) full student participation, (b) student achievement, and (c) meaningful social interactions.

Statement of the Problem

Early adolescents are less active, more sedentary, and unmotivated to be physically active during their leisure hours (Rowland, 1999). The problem lies both at home, where children spend long hours in front of television or computers, and in physical education classes, where the instructional emphasis is focused more on motor skill development through seasonal team sports, competition, and winning (California Physical Education Framework, 1994). This type of physical education class favors the students with more athletic ability and doesn't address the needs of all students.

Statement of the Purpose

The purpose of this project was to design and evaluate a series of eighteen instructional cards (Appendix A) that, when used by middle school physical education teachers during a physical education lesson, would reinforce the three goals of the California Physical Education Framework, and the Challenge Standards for Physical Education, which include movement knowledge, self-image and personal development, and social development. The instructional cards will cover information from four sub-disciplines of kinesiology: (a) exercise physiology, (b) motor learning, (c) sport sociology, and (d) sport psychology. The quality and usefulness of the instructional cards will be evaluated by a random sample of five middle school physical education teachers.

Research Questions

The following questions were addressed in this project:

1. Was the content of the instructional cards appropriate for middle school students?

2. Did the design of the instructional cards allow middle school physical education teachers to teach cognitive aspects of physical education?
3. How did teachers perceive the information on the instructional cards as supporting the instructional goals of the California Physical Education Framework?
4. How did teachers perceive the information on the instructional cards as meeting the Challenge Standards for middle school physical education programs?
5. Did the card design allow teachers to use the information on the cards effectively and efficiently?
6. Did the instructional cards appear to be usable by middle school physical education teachers?

Delimitations

The study was delimited to:

1. Middle school physical education teachers.
2. Professionals who have taught in the middle school setting in California.
3. Professional teachers who have instructed/presented at state physical education conferences or workshops and appear knowledgeable about the California Challenge Standards and California Framework for physical education.
4. The information on the instructional cards is based on the California Challenge Standards and California Framework for Physical Education.

Limitations

The limitations of the study included the following:

1. A smaller sample of 18 of the total 36 cards was evaluated.
2. A random sample of only five middle school teachers evaluated the cards.
3. Cards would not actually be used in the classroom as part of this project.

Assumptions

The following assumptions were made for the purpose of this project:

1. The middle school educators selected to evaluate the cards have knowledge and experience in implementing The California Physical Education Framework and the Challenge Standards for Physical Education.

Definitions

Adolescent - middle school junior high students ages 11-14 (Petersen & Epstein, 1991).

Cognitive – the intellectual aspect of human development (Bloom, 1956).

Competition – a contest or similar test of skill or ability (Berube, 1997).

Cooperation – willingness to work in a positive helpful way with one another (Bychinski, 1997).

Lifelong Wellness - optimal physical and mental well-being; a preventive way of living that reduces, and sometimes even eliminates, the need for remedies. It is a positive, day-to-day approach to a healthful way of life (Friedman, 1987).

Physical Activity – any body movement that increases energy expenditure above the resting level (Friedman, 1987).

CHAPTER 2

REVIEW OF LITERATURE

The review of literature is divided into subsections including: (a) physical inactivity, (b) the value and benefits of physical activity, (c) state and national documents supporting the reform movement in physical education, (d) physical education as an integral part of the school curriculum, and (e) the reform movement in physical education. The purpose of this project is to develop and evaluate a series of eighteen instructional cards that can be utilized by middle school teachers during physical education lessons to teach adolescents the benefits of living an active, healthy lifestyle.

Physical Inactivity

Today's children are living a lifestyle vastly different from twenty years ago. Today, it is a rare sight to see a gathering of children running and playing in a park. The results of the 1992 National Health Youth Survey, conducted by the Center for Disease Control, showed that nearly half of young people aged 12-21 years are not vigorously active on a regular basis. Life at home is different than it was a generation ago. Parents are more than likely working during the after school hours, television viewing is the primary form of adolescent entertainment, and everyone in the home is likely to lead a more sedentary lifestyle. Life in the neighborhood is different, too. People relocate more often, so children build fewer relationships with other children. Children at home alone, while their parents are at work, are often forbidden to leave the home to go to the park or play with friends.

Increasingly, life at school is different as well. The 1999 *California Physical Fitness Tests: Report to the Governor and Legislature*, prepared by the California

Department of Education Standards and Assessment Division, stated that nearly 80% of California's school children are not physically fit. In the 1960's, more than five out of every ten children walked to school, (Landry, 2000), a percentage far higher than today. Today, only one out of every ten children between the ages of five and fifteen years old walks to school. Cutbacks in funding have also contributed to the lack of physical fitness by eliminating extra-curricular activities and athletic programs from high schools and junior high schools. Without these types of planned physical activities, the options for a child's daily exercise decline dramatically.

Our nation is still attempting to achieve a more active lifestyle because of the decline in fitness of our youth. In 1979, the *Healthy People 2000* (USDHHS, 1992) initiative was created by the United State Department of Health and Human Services to increase the quality of life, increase lifespan, and eliminate health disparities. There has not been a significant improvement in the health of our nation since the *Healthy People 2000* initiative. The children of California have exhibited, through statewide health-related fitness testing, that they are living in an era in which stressful conditions and sedentary lifestyles have led to life-threatening health problems. Studies confirm that the health and fitness of our American school children, as well as adults, is on the decline. Since 1970, the percentage of American children considered to be overweight has more than doubled (Perkins, 1996). Rates of overweight have increased from 5.5% to 13.6% for children between the ages of 6 and 11 years old (Landry, 2000). Physical inactivity is the major contributing factor to this increase (Surgeon General's Report, 1996). The 1996 Surgeon General's Report indicates that the inactivity of our youth is causing

alarming increases in childhood obesity, increased levels of cholesterol, and increased risk of diabetes.

The Value and Benefits of Physical Activity

While our survival is no longer solely dependent upon our physical ability, human beings still have to be physically fit. The quality and longevity of our lives depends on it. From a medical point of view, lifestyle equates with lifespan: the healthier you live, the longer you live. Today, one in four Americans suffer from some form of cardiovascular disease. Physical activity reduces coronary heart disease, premature death, and the development of diabetes, cancer, and feelings of depression. Moderate physical activity lowers blood cholesterol while increasing high-density lipids that can help in controlling blood pressure. In addition, physical activity reduces a person's percent of body fat and promotes psychological well-being (U.S. Department of Health and Human Services, 1996). Physical activity, especially if it is habitual, is associated with a host of physical benefits and higher quality of life.

The quality of one's physiological life depends on one's level of fitness. Physical activity increases strength, endurance, and flexibility (Corbin, 1997). Increased physical performance can increase work capacity and therefore has the potential to add hours of productivity to one's day. Exercising on a regular basis can improve the quality of one's psychological life. Physical activity can reduce stress, and lessen negative feelings of anxiety, anger, hostility, and depression. Concurrent with lowering destructive feelings are gains in positive self-concept, self-esteem, self-confidence, and self-image (Berger, 1996). Physical activity promotes positive self-concepts and cooperation in dealing with social and emotional challenges in life. The quality of one's sociological life depends on

being physically fit as well. Sociologists argue that human welfare is no longer simply survival of the fittest, but rather “success to the fittest” (Sheehan, 1985, p. 210). Respect, teamwork, self-control, and self-discipline are just a few of many social skills strengthened during physical activity.

Personal values gained through physical activity include “feeling better,” physical strength, exhilaration and excitement of taking a risk, pursuing a variety of activities throughout one’s lifespan, and longevity (Berger, 1996; Chen, 1996). Jane English addressed the benefits of physical activity to one’s mind: self-respect gained by doing one’s best, incentive gained from having an opponent, and character developed through learning to be a “good loser” or “good winner” (English, 1978). Physical activity helps one learn to accept criticism and how to cooperate by working together. Sheehan (1985) emphasized the importance of a healthy, physically fit mind and body. This holistic concept of well-being reflects the importance of physical education for today’s student and parallels Pool’s (1995) position, which states that physical activity classes are a means to support the “healthy body, healthy mind”(p. 9).

National Physical Education Standards

The National Association for Sport and Physical Education appointed the National Outcomes Committee to answer the question: "What should students know and be able to do?" with regard to a physically educated person. The work of this committee culminated in the development of a definition of the physically educated person. *Moving Into the Future: National Physical Education Standards: A Guide to Content and Assessment* describes the five major focus areas, specifying that a physically educated person:

- Has learned skills necessary to perform a variety of physical activities.
- Is physically fit.
- Does participate regularly in physical activity.
- Knows the implications of and the benefits from involvement in physical activities.
- Values physical activity and its contribution to a healthful lifestyle (1995, p. 5).

This national document is for all physical education teachers to follow and is directly related to the national education reform movement, particularly with the efforts to establish national content standards for each of the areas of the school curriculum. The purpose of *Moving Into the Future* was to establish content standards for the physical education school program that clearly identified what a student should know and be able to do as a result of a quality physical education program. The document targeted teachers in order to establish teacher-friendly guidelines for assessment of the content standards.

The content standards reflected what a physically educated student should be able to do, including:

1. Demonstrates competency in many movement forms and proficiency in a few movement forms.
2. Applies movement concepts and principles to the learning and development of motor skills.
3. Exhibits a physically active lifestyle.
4. Achieves and maintains a health-enhancing level of physical fitness.
5. Demonstrates responsible personal and social behavior in physical activity settings.

6. Demonstrates understanding and respect for differences among people in physical activity settings.
7. Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction (1995, p. 1).

California Framework for Physical Education

The 1994 *Physical Education Framework for California Public Schools, Kindergarten Through Grade Twelve*, describes "a sequential, developmental, age-appropriate physical education program designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle" (p. v). This expansion of the 1986 *Handbook for Physical Education* promotes effective physical education programs that balance and contribute to children's academic learning. The document was targeted to educators to guide students to discover their talents and develop the knowledge and skills needed to use those talents in achieving personal health and fitness goals. Educators must recognize that students need to be as physically active as they are able to be in order to stay healthy. It is equally as important that students have the knowledge and understanding needed to participate in physical activities correctly, safely, and to the best of their ability (Healthy People 2000, 1992).

The purpose of the *Physical Education Framework for California Public Schools, Kindergarten Through Grade Twelve* (1994) was to establish a comprehensive, articulated physical education curriculum that would help children and youths achieve three goals: a) movement skills and movement knowledge, b) self-image and personal development, and c) social development. The three goals are said to have equal importance; each interacts continually with the others in a well-planned program. Within

each of these goals, this framework provides appropriate disciplines that are addressed to support the knowledge, skills, and attitudes desired for every student.

Movement Skills and Movement Knowledge

Disciplines included:

1. Motor Learning
2. Biomechanics
3. Exercise Physiologies and Health-related Physical Fitness

Self-Image and Personal Development

Disciplines included:

1. Human Growth and Development
2. Psychology
3. Aesthetics

Social Development

Disciplines included:

1. Sociology
2. Historical Perspective (1994, p. 6).

According to this framework, a physically educated person is one who has mastered the necessary movement skills to participate confidently in many different forms of physical activity, values physical fitness, and understands that both are intimately related to health and well-being (1994, p. 5).

California Challenge Standards for Physical Education

California Physical Education Challenge Standards (1998) is a document that was developed to organize the physical education curriculum into meaningful and useful

standards of performance. The purpose of this document is to provide the standards that all students must meet in physical education. This document promotes the idea that the value in teaching students to understand the importance of being physically active will encourage participation in physical activities and lead into lifelong wellness. According to the document, students who participate in quality physical education programs will receive a variety of benefits, including:

1. The development of a variety of motor skills and abilities related to lifetime leisure skills.
2. An improved understanding of the importance of maintaining a healthy lifestyle.
3. An improved understanding of movement and the human body.
4. An improved knowledge of the rules and strategies of particular games and sports.
5. Self-confidence and a sense of self-worth in relation to physical education and recreation programs (1998, p. vi).

Physical Education an Integral Part of the School Curriculum

Professionals involved in education have long understood the connection between physical fitness and overall health. As early as 1981, the California Supplemental Materials Commission appointed a committee to develop the *Handbook for Physical Education*, which was completed in 1986. The Physical Education Curriculum Framework and Criteria Committee, in cooperation with the California State Department of Education, developed and adopted the *California Physical Education Framework* in 1994. The primary purpose was to reform the scope of physical education as it was being

taught in the California schools. These resulting handbooks were seen to be a catalyst for change in physical education programs. These documents developed a more comprehensive, daily method of presenting lessons in physical education. Physical activity must truly be a lifetime activity, and learning basic knowledge about physical activity must begin in school. The California Department of Education's *Handbook for Physical Education* (1986) was designed to encourage teachers and administrators to view physical education as an integral part of the school's educational program. It was suggested that students not only learn the skills necessary to perform physical activities successfully, but also to understand the importance of those skills and transfer them to other areas of instruction.

The 21st century is the time to move beyond traditional physical education programs that have emphasized competition, games, sports, and have favored the athletically talented. Moving away from the traditional setting of physical education into a more contemporary view of living a healthy lifestyle will require teachers to think and plan differently about their work with students. A more contemporary model for physical education is for teachers to provide movement experiences for children and youth that focus on the whole person and the development of each student's physical, mental, social, and emotional well being. Physical education is not about helping students achieve excellence in games and sports; it is not about winning and losing. It is a continuous process of helping all students to develop skills, talents, attitudes, and behaviors related to making decisions concerning a healthy lifestyle. Physical education can encourage all students to become proficient in, and appreciate, a wide variety of physical activities. Physical education is for all children (not just the athletically gifted) regardless of their

talents, skills, or limitations. “The child who is well educated physically is likely to become a healthy adult who is motivated to remain healthy” (Framework, 1994, p. 1).

Today physical education is closely connected to and supports the work of other disciplines, and therefore should be considered an integral component of the school-wide curriculum. Physical education must also involve students in the process of thinking and feeling, creating meaning, being active, processing information, and learning how to learn. Physical education should emphasize self-improvement, participation, and cooperation rather than winning or losing (Framework, 1994). If students are taught why they are learning appropriate skills and how they are benefiting from them, they may be more likely to accept responsibility for improving skills on their own and enjoying the benefits of physical education over the long term. For the physically educated child, health and physical well-being are important personal values. A very important goal in school physical education is for physical education teachers to teach students the values associated with being physically active for a lifetime (National Association for Sport and Physical Education, 1995). If programs are developed appropriately, motivation and participation are optimized.

It is imperative that teachers differentiate their instruction to meet the needs of all students. Most teachers would agree that effective teachers get students actively involved in a planned learning sequence appropriate for the desired outcome (Shuell, 1986). Teachers build from students' experiences and students' findings and contribute to the growth of the subject-matter knowledge. Good teachers are those who get students actively involved in the learning process, not merely teachers who can articulate facts and ideas. Rovegno (1998) embraces a creative practice of teaching, which emphasizes

learning through experience. Physical education teachers should strive to create a curriculum that provides a quality learning experience engaging all students.

Educational Reform Movement in Physical Education

Painful memories flood the minds of many when asked about their physical education experience as a middle school student. Waiting in long lines, having short turns, calisthenics, being taunted, and being chosen last are among some reasons for these painful memories (Vail, 1999). Although traditional physical education has not been a total failure, physical education is reinventing itself through standards-based curriculum. Standards enhance the “old style” traditional education practices; they provide an approach to education that is purposeful, relevant, and engaging. “We’ve shifted from performance-related activities to reaching a level of fitness that supports good health,” says Judith Young, Executive Director of The National Association for Sport and Physical Education (Vail, 1999, p. 31). The interest in standards-based education spread from the White House to virtually every house in the country with President Clinton’s 1997 State of the Union Address. The intense commitment to standards is a strong nation-wide perspective, according to the American Federation of Teachers (AFT) (Marzano, 1999). The new mission of schools is to ensure that all students achieve defined and challenging performance standards (Hill & Crevola, 1999). At this time, schools focus on standards as a means of improving student learning outcomes. As a part of standards-based education, content standards define the “what” and the “when” of the curriculum (Hill & Crevola, 1999). The knowledge and skill levels expected of students are set forth by local, state, and national organizations. *California Physical Education Challenge Standards* (1998) organize physical education curriculum for grades

kindergarten through high school into meaningful and useful standards. Physical education standards support the three goals of physical education, movement skill and movement knowledge, self-image and personal development, and social development, set forth by the *California Physical Education Framework*. The standards movement is designed to contribute significantly to higher achievement (Foriska, 1998). For this movement to be successful, teachers must be willing to use multiple teaching strategies and must be able to match the strategies to the way students learn. The teacher's ability to assist students in meeting high standards requires motivation, which has to be both acquired and practiced (Darling-Hammond, 1998). Giving students a better idea of why they are learning the material helps students become more engaged in their learning and produces higher quality work (Rothman, 1996). Giving students the opportunity to discuss, evaluate, and give feedback on performance, as well as to have students think about what they have learned or accomplished, helps students to "buy in" to their own education and learning. The lifelong learning standard is not specific to any one discipline and therefore is useful in all academic areas to help all students become lifelong learners.

Summary

A review of the literature provides the impetus to complete a creative project that is designed to give middle school physical education teachers a daily tool for use in educating students. The cards created in this project will highlight the importance of physical activity and provide students with an understanding of the benefits of exercise and the consequences of a sedentary lifestyle. "Children need to know that physical activity can help them feel good, be successful in school and work, and stay healthy."

said. Senator Ted Stevens when he introduced a bill to increase the minutes in physical education (Vail, 1999, p. 33). Fortunately, children are naturally interested in physical activity. By incorporating this enthusiasm in our programs with lessons on life-skills, we can increase the interest in early adolescents to choose exercise on a regular basis outside of school because of its physical, mental, emotional, and social benefits.

CHAPTER 3

METHODS

Introduction

This chapter describes the procedures and methods that were used to develop and evaluate a set of instructional cards used by middle school physical educators. This chapter describes how the instructional cards were developed, what instrument was used to evaluate the instructional cards, how the evaluators were selected, and how that information was used to evaluate this project.

Development of the Instructional Cards

The purpose of this project was to develop samples of instructional cards that a middle school physical education teacher would use during the teaching of a physical education lesson. Eighteen instructional cards were developed to represent a sample of a total set of 36 cards, each intended for use during one week of the school year. Each card will highlight an aspect of physical, mental, social and emotional health, representing concepts outlined in the *California Framework for Physical Education* (1994), *Moving Into the Future: National Physical Education Standards: A Guide to Content and Assessment* (1995), and the *California Challenge Standards for Physical Education* (1998). The overall goal of the instructional cards was to bring to light the content and information related to these documents. The information on the instructional cards serves as an instructional aid for teachers to easily incorporate the total concept of “healthy lifestyles” within each daily lesson, which should encourage middle school students to live healthy and actively for lifelong wellness. The instructional cards were designed with a variety of information so that each student could learn about the value and benefits

of physical activity and learn how to develop the social skills needed to relate to others in a positive way.

The information on the instructional cards was gleaned, chapter by chapter, from information and curriculum suggestions written to the development of the middle school student in the *California Framework for Physical Education* (1994), *Moving Into the Future: National Physical Education Standards: A Guide to Content and Assessment* (1995), and the *California Challenge Standards for Physical Education* (1998). All of these documents guide practice in physical education and are closely related and linked to one another in terms of outcomes and goals. The cards were designed to provide middle school physical education teachers a simple teaching aid to easily incorporate the goals and objectives of the California Physical Education Framework and Challenge Standards. The framework encourages or suggests a comprehensive, sequential, planned program in every physical education classroom, statewide. Goals include movement knowledge, social development and personal awareness, incorporated within each daily lesson plan. The cards were planned so a teacher could read from the card cognitive information to their students about exercise physiology, motor learning, sociology and psychology of sport. The cards advocate physical activity, personal growth and development, and social growth. All of which are a part of a comprehensive physical education program according to the California Framework for Physical Education.

Using Adobe PageMaker 6.5 as a desktop layout and page design program, the instructional cards were created and formatted. The typography and graphics of each instructional card was designed by using the style palette and tool bar. A layout page was created to serve as a template for the eighteen instructional cards. Each instructional

card followed the same template. The concepts displayed on each instructional card were from multiple resources. The instructional cards provide appropriate information and knowledge related to the physical, mental, social and emotional benefits of being physically active.

Each instructional card was graphically designed using an icon to represent the four different sub-disciplines of kinesiology represented in the *California Framework for Physical Education* (1994), *Moving Into the Future: National Physical Education Standards: A Guide to Content and Assessment* (1995), and the *California Challenge Standards for Physical Education* (1998). The sub-disciplines represented are, physiology of exercise, motor learning, sport sociology, and sport psychology. The cards were divided into four sections, one section for each sub-discipline. Each sub-discipline represented graphically by a different icon. Within each section of the card, educational information, material, or quotes supporting that discipline were included. The instructional cards assist teachers in their ability to clearly communicate to students the expectation of what NASPE claims is a physically educated person. The cards provide the teacher with knowledge of each sub-discipline to be included within a daily lesson. The description of the instructional card that follows, describes the contents of the instructional card from the top to bottom of the card.

The weightlifter icon at the top of each card represents the exercise physiology discipline. Exercise physiology and other health-related physical fitness concepts and knowledge will relate to the Movement Skill and Movement Knowledge goal of the *California Physical Education Framework* (1994) and to two of the seven national standards that relate to exercise physiology: (a) exhibits physically active lifestyle,

(b) achieves and maintains a health-enhancing level of physical fitness (Mohnsen, 1998 p. 2-3).

The second section of the card, represented by the running figure icon, addresses the discipline of motor learning. Motor learning and other health-related physical fitness concepts relate to the movement skill and movement knowledge goal of the *California Physical Education Framework* (1994) and two of the seven national standards that relate to movement: (a) demonstrates competency in many movement forms and proficiency in a few movement forms, (b) applies involvement concepts and principles to the learning and development of motor skills (Mohnsen, 1998, p. 2).

In the third section of the card, the smile icon represents the sport sociology discipline. Sociology and other health-related physical fitness concepts are related to the social development goal of the *California Physical Education Framework* (1994), and three of the seven national standards that relate to social development: (a) demonstrates responsible personal and social behavior in physical activity settings, (b) demonstrates understanding and respect for differences among people in physical activity settings, (c) understands that physical activity provides opportunities for enjoyment, challenge, self expression, and social interaction (Mohnsen, 1998, p. 3-4).

Printed in italics at the bottom of the instructional card is a quote, which relates to the sport psychology discipline. Sport psychology and other health-related physical fitness concepts relate to the self-image and personal development goal of the *California Physical Education Framework* (1994) and three of the seven national standards that relate to psychological development: (a) demonstrates responsible personal and social behavior in physical activity settings, (b) demonstrates understanding and respect for

differences among people in physical activity settings, (c) understands that physical activity provides opportunities for enjoyment, challenge, self expression, and social interaction, (Mohnsen, 1998, p. 3-4).

The instructional cards were printed on hard cardstock, 5"x7" in size, in portrait orientation, with several different text boxes (see Appendix A for an example).

Project Design

Each evaluator was mailed eighteen instructional cards (Appendix A), an evaluation questionnaire (Appendix B), and a cover letter (Appendix C) describing the instructional cards and how to use the evaluation instrument. Demographic information about the participating teachers was collected on the demographic information form (Appendix D).

The evaluation instrument addressed the overall appearance of the instructional cards, the use of icons, and information and materials related to the sub-disciplines. In addition, evaluators were asked to respond to the usefulness of the content, whether the material was appropriate for middle school teaching, and the ease in which the instructional cards could be used within a teacher's physical education lesson. Each evaluator was requested to review and critique the instructional cards and make a judgement about the appearance, usefulness, and content of the cards. The evaluation instrument used a Likert scale ranging from "strongly disagree" to "strongly agree".

The Selection of the Evaluators

Evaluators were selected from teachers who currently teach middle school physical education or have had experience teaching middle school physical education. The selected evaluators had professional experience speaking at state physical education

conferences or workshops. The evaluators were knowledgeable about the California Framework for Physical Education and the California Challenge Standards for Physical Education. Five middle school teachers who agreed to participate were randomly selected from all the names of teachers found in the California Association for Health, Physical Education, Recreation and Dance convention booklets from 1996-2000 and from the teaching staff posted in the California Physical Education Workshop Brochures from 1996-2000. An initial letter and consent form (Appendix E) was sent to possible evaluators asking them to consider participating in the evaluation of the instructional cards. A post card (Appendix F) was returned to the investigator indicating interest to participate as an evaluator. If the potential evaluator chose not to participate, a space was provided for recommendations of additional possible evaluators. All affirmative responses were placed in a container and a random selection of five teachers was made. Five alternative evaluators were selected.

Data Collection

Eighteen sample instructional cards were developed and sent to the randomly selected evaluators. Each evaluator was given four to six weeks to review and evaluate the sample cards. At four weeks the evaluators were contacted if they had not yet returned the evaluation questionnaire. After six weeks two alternate evaluators received a sample of the instructional cards and a questionnaire. The completed evaluation instrument was returned to the researcher.

Data Analysis

The ratings for each evaluator were tabulated in order to determine the evaluator's overall perception of the instructional cards. Data suggested strengths and weaknesses in

the instructional cards and provided insight into solutions for areas of weakness. All of the comments made by the evaluators were summarized and are found in the following chapters.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter presents the results of the evaluation of the instructional cards and to what degree evaluators judged the quality of the cards. Each specific research question developed for the study is answered and discussed. The survey asked six expert middle school physical education teachers to answer fifteen questions regarding the quality of the instructional cards. The results for each question of the survey will be presented and graphed.

The initial intent of this study was to randomly select five middle school physical education teachers, experts in the field, to evaluate a set of 18 instructional cards related to the California Framework document. Two of the five evaluators did not return the survey in the time outlined in the proposal. Therefore, in accordance with the proposal, the researcher randomly selected two alternate evaluators. The alternates' evaluations were returned in a timely manner along with one of the original five, therefore providing the researcher with six evaluations of the instructional cards. All six evaluators answered all 15 survey questions. Not one evaluator strongly disagreed with any of the questions on the evaluation instrument. Only 33% disagreed ($n=2$) with one of the 15 questions, however, 67% of the evaluators ($n=4$) agreed and strongly agreed to the questions on the evaluation.

There were six research questions generated for this study. A 15-question survey provided data to answer the research questions.

An overview of all the data will be presented followed by the results for each survey question. Based on the positive evaluations provided by the six evaluators, the

instructional cards appear to be a valuable teaching aid that will allow teachers to incorporate the information provided in the California Framework for Physical Education and the California Challenge Standards for Physical Education into a physical education lesson.

Research Question 1: Was the content of the instructional cards appropriate for middle school students? Survey question 3 in the evaluation instrument provided information for this research question.

Survey Question 3 asked evaluators if the content of the instructional cards was appropriate for middle school teaching. Figure 1 shows that 67% of the evaluators (n=4) agreed and 33% of the evaluators (n=2) strongly agreed that the content of the cards was appropriate for middle school teaching. However 67% of the evaluators (n=4) expressed a concern that if the cards were designed to reach a linguistically diverse population, the instructional cards might need to be written in at least two languages; English on one side of the instructional card and Spanish on the reverse. One evaluator felt the vocabulary used on the cards would be a challenge for the English Language Learners, if not translated. Based on these data, the instructional cards were evaluated as appropriate to use with middle school students.

Research Question 2: Did the design of the instructional cards allow middle school physical education teachers to teach cognitive aspects of physical education? Survey questions 8 through 15 provide information about how the evaluators felt the instructional cards would assist teachers in teaching the cognitive aspects of physical education.

Figure 1. Survey Question 3: The content of the cards is appropriate for middle school teaching.

Survey Question 8 asked evaluators if the information within the weightlifter icon section of the instructional card accurately reflected the discipline of exercise physiology and the goals related to exercise physiology outlined in the California Physical Education Framework. Figure 2 shows that 67% of the evaluators strongly agreed ($n=4$), while 33% agreed ($n=2$) that the information within the weightlifter icon section of the card accurately reflected the discipline of exercise physiology and the goals of the California Physical Education Framework. Thirty-three percent of the evaluators ($n=2$) suggested adding an activity or exercise that would relate to the use of the muscle or bone on each card. One evaluator was enthusiastic about the bone and muscle section of the card and said that instructors could use the cards as part of their bulletin boards.

Figure 2. Survey Question 8: The information within the 'weightlifter' icon section of the card accurately reflects the discipline of exercise physiology and the goals of the California Framework.

Survey Question 9 asked evaluators if the information within the weightlifter icon section of the instructional card accurately reflected an understanding of how the body moves. Figure 3 shows that 67% of the evaluators strongly agreed ($n=4$), while 33% agreed ($n=2$) that the information within the weightlifter icon section of the instructional card accurately reflects an understanding of how the body moves. Seventeen percent of the evaluators ($n=1$) recommended simplifying the explanation of the bones so a teacher could just read directly from the card and students would understand.

Survey Question 10 asked evaluators if the information within the running figure icon clearly reflected the discipline of motor learning and the goals of the California Physical Education Framework. Figure 4 shows that 83% of the evaluators strongly agreed ($n=5$), while 17% agreed ($n=1$) that within the running figure icon section of the

Figure 3. Survey Question 9: The information within the 'weightlifter' icon section of the card accurately reflects an understanding of how the body moves.

Figure 4. Survey Question 10: The information within the 'running figure' icon clearly reflects the discipline of motor learning and the goals of the California Framework.

instructional card there was a clear reflection of the discipline of motor learning and goals of the California Physical Education Framework. One evaluator commented that the running figure icon section of the instructional cards was a “Great job!”

Survey Question 11 asked evaluators if the information within the running figure icon clearly supported the value and benefits of physical activity. Figure 5 shows that 83% of the evaluators strongly agreed (n=5), while 17% agreed (n=1) that the information within the running figure icon section of the instructional cards does clearly support the benefits of physical activity. One evaluator commented, “Some cards seemed to be written for the teacher to just read, and others referred to just encouraging students.” The evaluator felt it would be easier to use the cards if the terminology on the instructional cards was the same on all cards.

Survey Question 12 asked evaluators if the word within the smile icon was relevant to the discipline of sport sociology and the social development goal of the California Physical Education Framework. Figure 6 shows that 100% evaluators strongly agreed (n=6) that the word within the smile icon section of the instructional card was relevant to the discipline of sport sociology and the social development goal of the California Physical Education Framework. Evaluators commented that the social development section of the cards was outstanding.

Survey Question 13 asked evaluators if the information within the smile icon clearly represented social behavior in a physical activity setting. Figure 7 shows that 100% evaluators strongly agreed (n=6) that the information within the smile icon section of the instructional card clearly represented the social behavior in a physical activity setting. Some of the evaluators’ comments included, “Good job!” “Great idea!”

Figure 5. Survey Question 11: The information within the 'running figure' icon clearly supports the value and benefits of physical activity.

Figure 6. Survey Question 12: The word within the 'smile' icon is relevant to the discipline of sport sociology and the social development goal of the California Framework.

Figure 7. Survey Question 13: The information within the 'smile' icon clearly represents social behavior in a physical activity setting.

Survey Question 14 asked evaluators if the information within the italic quotes clearly reflected the discipline of sport psychology and the personal development goal of the California Physical Education Framework. Figure 8 shows that although no one strongly disagreed or disagreed with the quotes reflecting the discipline of sport psychology, 17% of the evaluators were neutral ($n=1$), 50% agreed ($n=3$), and 33% strongly agreed ($n=2$) that the information within the italic quote does clearly reflected the discipline of sport psychology and the personal development goal of the California Physical Education Framework. Evaluators recommended that the quotes be related to the social development icon.

Survey Question 15 asked evaluators if the quote within the italic text section reinforced the development of positive attitudes necessary for enjoyment in physical activity. Figure 9 shows that although no one strongly disagreed or disagreed with the

Figure 8. Survey Question 14: The information within the italic quotes clearly reflects the discipline of sport psychology and the personal development goal of the California Framework.

Figure 9. Survey Question 15: The quote within the italic text section reinforces the development of positive attitudes necessary for enjoyment in physical activity.

quotes reflecting the discipline, 17% of the evaluators were neutral (n=1), 33% agreed (n=2), and 50% strongly agreed (n=3) that the quote within the italic text of the instructional cards does reinforce the development of positive attitudes necessary for enjoyment in physical activity. One evaluator, however, felt that the quotes did not “flow” and the evaluator was not sure of the purpose of the quotes.

Based on these data, the instructional cards would allow middle school physical education teachers to teach the cognitive aspects of physical education as outlined in the California Physical Education Framework.

Research Question 3: How did teachers perceive the information on the instructional cards as supporting the instructional goals of the California Physical Education Framework? Survey questions 2 and 6 provide information to how the evaluators felt the instructional cards supported the instructional goals of the California Physical Education Framework.

Survey Question 2 asked evaluators if the icons matched the information associated with the sub-discipline being conveyed on the instructional card. Figure 10 shows that 67% of the evaluators agreed (n=4) and 17% of the evaluators strongly agreed (n=1) that the icons matched the sub-disciplines. None of the evaluators strongly disagreed or disagreed that the icons matched the sub-disciplines and 17% of the evaluators were neutral (n=1). One evaluator felt that there could be separate icons for exercise physiology, one for the muscles, and a different icon for the bones. If this were the case, a teacher could organize the instructional cards so that all the muscle cards could be together and all the bone cards could be together.

Figure 10. Survey Question 2: Icons match the sub-disciplines and information they represent.

Survey Question 6 asked evaluators if the information presented on the instructional cards is supported in the California Framework for Physical Education. Figure 11 shows that all evaluators strongly agreed ($n=6$) that the information presented on the instructional cards is supported in the California Framework for Physical Education. One evaluator commented, “I feel that the cards helped me to understand the California Physical Education Framework.” Based on these data, the instructional cards were evaluated as supporting the goals of the California Physical Education Framework.

Research Question 4: How did teachers perceive the information on the instructional cards as meeting the Challenge Standards for middle school physical education programs? Survey question 7 in the evaluation instrument provided information for this research question.

Figure 11. Survey Question 6: The information on the cards is supported in the California Framework for Physical Education.

Survey Question 7 asked evaluators if the information presented on the instructional cards supported the California Challenge Standards for Physical Education. Figure 12 shows that all of the evaluators strongly agreed ($n=6$) that the instructional cards support the California Challenge Standards for Physical Education. One evaluator made a comment regarding the quality of the instructional cards supporting the California Challenge Standards for Physical Education, "I really liked the information on the warm-up and working out, it was concise and to the point." Based on these data, the instructional cards were evaluated as supporting the Challenge Standards for middle school physical education programs.

Research Question 5: Did the instructional card design allow teachers to use the information on the cards effectively and efficiently? The survey question 4 and 5 provide information for this research question.

Figure 12. Survey Question 7: The information on the cards is supported in the California Challenge Standards for Physical Education

Survey Question 4 asked evaluators if the point size of the font on the instructional cards was easy to read. Figure 13 shows that all the evaluators believed that the font size was appropriate, with 17% of the evaluators agreeing (n=1) and 83% strongly agreeing (n=5) that the size of the font was easy to read.

Survey Question 5 asked evaluators if the instructional cards would be easy to use by the teacher. Figure 14 shows that 67% of the evaluators strongly agreed (n=4), 17% were neutral (n=1), and 17% agreed (n=1) that the teacher could easily use the instructional cards. The cards would be easier for a teacher to use if the format of the cards was the same. It was suggested that the information be kept simple, even if that required dividing the information on one card into two separate instructional cards. One evaluator really liked the format of the cards. Based on these data, the instructional cards

Figure 13. Survey Question 4: The size of font is easy to read.

Figure 14. Survey Question 5: The would be easy to use by a teacher.

would allow a teacher to use the information on the cards effectively and efficiently during class.

Research Question 6: Did the instructional cards appear to be usable by middle school physical education teachers? The survey question 1 in the evaluation instrument provided information for this research question.

Survey Question 1 asked evaluators if the card stock paper was durable enough for a teacher to use the instructional cards during class time. Figure 15 shows that 50% of the evaluators agreed (n=3) and 17% of the evaluators strongly agreed (n=1) that the card stock paper was durable enough for a teacher to use the cards during class time. Four evaluators felt the cards would be more suitable for outdoor use, as well as indoor use, if they were laminated. Based on these data, the instructional cards were evaluated as usable by middle school physical education teachers.

Many additional comments were made by the evaluators that were unrelated to any specific survey question. Fifty percent of the evaluators commented, “Outstanding!” “Wonderful idea!” The instructional cards were viewed favorably by the evaluators. Evaluators recognized the value of the instructional cards as an asset to use in their existing curriculum and programs.

Summary

The intent of this project was to provide middle school teachers with an instructional aid that would bring the goals of the California Physical Education Framework and the California Challenge Standards for Physical Education into their

Figure 15. Survey Question 1: Cardstock paper will be durable enough for teacher use during class time.

gymnasiums or playing fields. Evaluators were six middle school physical education teachers who either presented at a state physical education conference or taught at a physical education in-service workshop. All but one of the evaluators was involved in both professional activities and were considered by their colleagues to be experts in the field of middle school physical education. All evaluators agreed or strongly agreed on 66% of the survey questions. Evaluators strongly agreed on two of the survey questions that related to the information on the cards as supporting the California Physical Education Framework and the information supporting the California Challenge Standards for Physical Education. No evaluator strongly disagreed with any of the 15 survey questions regarding the appearance, content, or validity of the instructional cards. Based on the evaluations made by the evaluators, the instructional cards are to be considered a valuable teaching aid for middle school physical education teachers that could assist

teachers to connect the California Physical Education Framework and the California Challenge Standards for Physical Education to their teaching.

Based on the results of these evaluations, the following changes have been suggested to increase the usefulness of the instructional cards. First of all, one of the most critical changes that needs to be considered is to laminate the instructional cards. Teachers will be more willing to use the cards more often if the cards were protected from the wear and tear. Secondly, some quotes used in the social skill area need to be revised so that a closer match occurs between the quote used and the social skill emphasized on the instructional card. Third, a further review needs to be completed to determine if the amount of information on the instructional cards is too lengthy or provides too much information to include in one lesson. Given that review, it may be necessary to divide the information on the instructional cards into two or more separate cards. Fourth, the instructional cards should be written in two different languages. Given the type of language learners in California, one set of instructional cards should be written in English and another in Spanish. Fifth, on each instructional card an additional activity emphasizing the muscle or bone mentioned on the card needs to be included.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the study was to design and evaluate a set of 18 instructional cards for teacher use in a middle school physical education class. This chapter contains the summary, conclusion, and recommendations for future study.

Summary

Six middle school physical education teachers were randomly selected to evaluate a set of 18 instruction cards containing information supporting the three goals of the California Physical Education Framework and Challenge Standards. The evaluation instrument was a survey of fifteen questions regarding the quality of the instructional cards. The evaluators responded positively to the instructional cards. Sixty-seven percent of the evaluators agreed and strongly agreed to the questions on the survey. Overall, the evaluators felt that the information on the instructional cards was highly desirable and useful for middle school physical education teachers. The instructional cards appear to be a valuable teaching aid that will allow a teacher to incorporate the information in the California Framework for Physical Education and the Challenge Standards for Physical Education into a lesson.

Conclusion

Based on the reviews made by the evaluators of this study the following conclusions can be made:

1. The cards are useful for middle school physical education teachers to use as an instructional aid.
2. The cards should be laminated for durability.

3. The cards should be written in English on one side and Spanish on the reverse side.
4. The icon for “muscles” and “bones” should be two separate icons.
5. The muscle and bone section of the cards should be expanded to include an activity to coincide with the muscle or bone mentioned on the card.
6. The words used on the cards should be the exact words teachers can use with their students during a lesson.
7. Make sure the inspirational quote on each card is supportive and associated with the social word on the card.

Recommendations

Based on the evaluations of the instructional cards the following recommendations for the future can be made:

1. Evaluate the use of middle school physical education teachers’ use of the cards in their classes with students.
2. Survey students’ attitudes about physical activity before and after using of the cards during physical education classes.
3. Explore the possibility of developing instructional cards based on this study’s model for the elementary school physical education teacher.
4. Explore the possibility of developing instructional cards based on this study’s model for the high school physical education teacher.
5. Explore developing instructional cards that integrate other California Frameworks (i.e., Health, Reading, Mathematics, Science) with the Physical Education Framework.

6. Extend the instructional card to include the lessons as activities as they relate to the materials on the instructional card.
7. Secure a marketing company to explore the possibility of marketing the instructional cards.

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APPENDICES

APPENDIX A

THE CARD

GLUTEALS

The buttocks. Gluteus maximus (extends and laterally rotates the thigh) gluteus medius and minimus (abducts and medially rotates thigh).

HEART DISEASE

America's number one public health enemy is heart disease. Children are increasingly exhibiting high risk factors, such as obesity, elevated blood pressure, and high cholesterol levels. Too many children are not getting enough exercise to develop healthy hearts. Encourage children to make a choice for a healthier heart and a longer life, increase exercise, eat healthy foods and don't smoke. Reverse the disturbing behavioral trends amongst Americas youth. (Sedentary life-style, drugs, alcohol, tobacco, unwanted pregnancies, STD, stress, depression, suicide).

HONESTY

Telling the truth and being sincere. Speaking and seeking the truth. Your actions are also forms of speaking!

"There is no right or wrong, only consequences."
Dr. Robert Anthony

PECTORALS

The chest. Pectoralis major (flexes and adducts the arm) pectoralis minor (rotates the scapula downward and forward).

EXERCISE

Exercise will reduce coronary heart disease, lower cholesterol while increasing high-density lipids, and can help in controlling blood pressure. Exercise also reduces the percent of body fat and weight of children. Exercise does a body good! The activity of an exercise program will increase cardiorespiratory endurance, flexibility, muscular strength and endurance, while strengthening body composition. Exercise reduces stress, lessens feelings of anxiety and depression, & can bring a rise in self-esteem, self-image and confidence.

RESPONSIBILITY

Having a sense of duty to fulfill willingly the tasks you have accepted or have been assigned. Being accountable for your own actions; thinking before you act; accepting responsibility for the consequences of your choices.

"Whatever you can do or dream you can do, begin it. Boldness has genius, power, and magic in it." Goethe

HAMSTRINGS

The upper leg, posterior view. Biceps femoris (flexes and laterally rotates the leg), semitendinosus, semimembranosus (flexes the leg and extends the thigh).

WORKOUT

Start slowly! Give the soft tissues a chance to strengthen and become fully supportive. Don't over-do it! Ten minutes after exercise you should not feel your heart still pounding. You should be breathing normally. You want to feel energized after exercise, not exhausted. Muscle soreness is positive, not fatigue. Dress properly for your workout. Wear clothing supportive through various kinds of movement. Cottons or open weave fabrics breathe more easily than plastic or rubberized suits. Layer up so you can layer down. Research, evaluate, and buy a good quality pair of shoes.

RESPECT

Valuing people and things. Treating others with fairness and consideration. Responding sensitively to the ideas and needs of others without dismissing or degrading them.

"The weaker the body, the more it commands; the stronger it is, the more it obeys." Jean Jacques Rousseau

QUADRICEPS

The thigh. Rectus femoris (flexes the thigh and extends the leg), vastus lateralis, vastus intermedius, vastus medialis (extend the leg).

WARM UP

Warm up before your workout! Warming up is an appropriate term as the body's temperature actually rises several degrees. This body heat is the "oil" that allows muscle tissues to slide over bones and one another.

WHY ? - To prevent injury to muscles, to elevate heart rate for a stronger heart, and to maximize breathing capacity for stronger lungs.

HOW? - Warm up through jogging/walking, and stretching. Stretching will increase flexibility and increase performance.

TRUSTWORTHINESS

Warranting trust; reliability. Honoring your word and commitments, being dependable, keeping secrets of those who ask you to do so. Showing integrity, honesty, and loyalty.

"For I had a story that NO ONE could beat! And to think that I saw it on Mulberry Street!" Dr. Seuss

ABDOMINALS

The Stomach. Rectus abdominis (flexes the vertebral column, tenses the anterior abdominal wall, and assists in compressing the abdominal contents) and obliques.

EXERCISE PROGRAM

Workout more than three times a week for more than twenty minutes and you will increase your level of fitness and decrease your level of body fat. Working out enables you to maintain your cardiovascular efficiency. Choose a variety of activities you like and be consistent at doing them! Three basic factors of an exercise program: FIT - Frequency, the number of days per week you exercise. (minimum 3 X per week). Intensity, how hard you are exercising (measured by heart rate, 70-80% of maximum recommended). Time, the duration of your activity (20-30 minutes per day).

COOPERATION

Acting together willingly for a common purpose. Being friendly toward everyone in your group, encouraging all members to join in, doing your fair share.

"When we seek to discover the best in others, we somehow bring out the best in ourselves." William Arthur Ward

OBLIQUES

Externus abdominis (compresses the abdominal contents, flexes the vertebral column, and rotates the column to bring forward the shoulder on the same side as the active muscle); internus abdominis (brings shoulder forward on the opposite side of the active muscle).

COOL DOWN

Cool down to return the body to near rest condition-Resting Heart Rate (R.H.R.), to provide relaxation, and to reduce the likelihood of stiff muscles caused by the build-up of lactic acid. Cool down by lowering the intensity of the workout, faster paced movements made slower, large range movements made smaller plus floor stretches. Stretch at your ability during warm ups and cool downs! Everybody has limits to their range of movements, depending on the degree of suppleness in the muscles and tendons which move the joints.

FAIRNESS

Treating people equally. Taking turns and sharing. Making decisions without favoritism or prejudice, getting the facts before blaming or accusing.

*"What we see depends mainly on what we look for."
John Lubbock*

TRICEPS/BICEPS

TRICEPS - The upper arm, posterior view. Triceps brachii (extends the forearm) **BICEPS** - The upper arm, anterior view. Biceps brachii (flexes the arm, flexes the forearm, and supinates the forearm).

PULSE

Your Heart Rate (HR) is a measure of your level of fitness. Your pulse is the pumping process that moves blood carrying oxygen around the body. Your pulse is a good indication of the intensity at which you are exercising. Regulating the intensity of your activity will help ensure that your exercise program is **SAFE** and **PRODUCTIVE**. Your exercise HR is 220 minus age multiplied by 70% or 80% depending on the intensity you choose for your workout. To determine your resting pulse, lie flat on your back for ten minutes, then take a pulse check for 10 seconds and multiply by 6, or take your pulse before getting out of bed in the morning.

COURTESY

Using good manners. Being polite and civil to everyone.

*"Gratitude is the most exquisite form of courtesy."
Jacques Maritain*

DELTOIDS

The shoulder. Anterior deltoid (flexes the arm), middle deltoid (abducts the arm), posterior deltoid (extends the arm).

HISTORY

Every culture through the ages has expressed itself through MOVEMENT. The philosophy, the art, the life-style, the politics, and religion of the cultures, all have been translated into movement in games, sport, dance or rituals. In primitive times, a person's survival depended on being physically fit to hunt, to travel, to gather food, or to fend off the enemy. Physical activity for ancient civilization included survival skills with game, dance, and sport. The Olympian festival began as early as 776 B.C., and was a representation of the countries power and strength.

TOLERANCE

Respecting diversity, true respect and appreciation for all persons. Judging others on their character, abilities, and conduct without regard to race, religion, gender, residence, dress, or income.

"When you blame others, you give up your power to change." Anonymous

GASTROCNEMIUS

The calf, the lower leg posterior view. Gastrocnemius (plantar flexes the foot and flexes the leg).

PLAY

Everyone can play using some form of skill. **LOCOMOTOR SKILL** - Leaping, skipping, dancing, hopping, jumping, running, walking. (Modes of locomotion involve speed, velocity, acceleration.) **NONLOCOMOTOR SKILL** - Balancing, dodging, mirroring, swinging/swaying, bending/stretching, pushing/pulling, twisting/turning. (Modes of non-locomotion use gravity, friction, force.) **MANIPULATIVE SKILLS** - dribbling, passing, kicking, throwing, catching, bouncing, all deal with coordination, eye-hand or eye-foot.

INDEPENDENCE

Being self-reliant; managing your life so you are not dependent on others. Being able to think and act for oneself.

*"I will prepare and someday my chance will come."
Abraham Lincoln*

SARTORIUS

The inner thigh. Sartorius (flexes, abducts, and laterally rotates the thigh, and also flexes and rotates the tibia medially).

PHYSICAL ACTIVITY

Activities planned for exercise programs are dynamic exercises (ISOTONIC) or static exercises (ISOMETRIC). ISOTONIC exercises are muscle contraction accompanied by change in muscle length-usually rhythmic aerobic activities; running, cycling, swimming. ISOMETRIC exercises imply a change in tension of muscles-more anaerobic; weight lifting, wrestling. Aerobic exercises utilize oxygen in energy production to maintain a relatively long period of large muscle group movement, resulting in fat burning. Isolation exercises work a localized muscle area, nonfat burning.

COURAGE

Doing what is right and trying new things even when it is hard. Getting going and sticking with it , even when things become difficult.

"All dreams can come true if we have the courage to pursue them." Walt Disney

FEMUR

The femur transmits the weight from the ilium to the upper end of the tibia. This beautifully-shaped bone is the longest and strongest in the body possessing a shaft and two extremities.

WALKING

The simplest, safest and least expensive exercise is walking. A long-term regimen of walking an average of nine miles a week can significantly prolong life. A 200 pound person keeping the same caloric intake but walking everyday 1.5 miles will lose 14 pounds in one year. Skip elevators and escalators! A study of people who simply started using the stairs increased their overall physical fitness levels by 10%-15%.

WORK ETHIC

Having the willingness to work hard (self-discipline). Doing your best and making all you do worthy of pride. The commitment to excellence and high quality in all of one's work.

"In the middle of difficulty lies opportunity." Albert Einstein

HUMERUS

The humerus is the largest of the bones in the upper limb. It is a long bone having a shaft and two extremities. The humerus forms with the scapula at the shoulder joint and with the radius and ulna at the elbow joint.

STRESS MANAGEMENT

Stress is simply the body's reaction to a challenge or threat. Stress results from a situation that can be either positive or negative. Winning a million dollars can be just as stressful as getting a divorce. When you feel stress, your body is flooded with hormones that cause your heart to start beating faster, your breathing to become shallow and rapid, your muscles to get tense and your perspiration to increase. Your blood sugar level rises, and your digestive system slows down. You can tolerate stress better when you eat right and get regular aerobic exercise.

DETERMINATION

Having a firm or fixed purpose. Doing your best, persevering, and not quitting.

"To wring victory from defeat, and make stepping stones of our stumbling blocks, is the secret of success." Orison Marden

PHALANGES

The bones that make up the thumb, fingers, and toes. There are 14 phalanges in each hand, three for each finger (distal, middle, and proximal) and two for the thumb (distal and proximal). There are two phalanges in the great toe and three in each of the other toes.

FITNESS

The five components of health related fitness are:

- 1.) Body Composition - Percent of body fat.
- 2.) Cardiorespiratory - The ability of the heart, blood vessels, and blood to carry oxygen to the cells, the ability of the cells to process oxygen, and the ability of the blood to carry away waste products.
- 3.) Flexibility - The capacity to use muscles and joints through their full range of movement. Flexibility reduces chance of injury to muscles and joints.
- 4.) Muscular Endurance - The ability of a muscle to repeat a movement many times in quick succession (a boxer delivers a dozen or two dozen punches in a row in less than two minutes).
- 5.) Muscular Strength - The greatest force a muscle can produce in one effort. (ability to lift a piano - once).

CARING

Being concerned about others and their welfare. Being empathetic, kind, helpful, friendly, loving, and considerate.

"Kind words can be short and easy to speak, but their echoes are truly endless." Mother Teresa

PATELLA

The knee cap. The patella is a sesamoid bone formed in the tendon of the quadriceps femoris muscle. It is triangular in shape, and helps to bend and straighten the knee more efficiently.

MOTIVATION

Effective learning is based on the strength of motivation; NO PURPOSE, NO LEARNING. We must guide each student to become self-motivated to move toward optimum health. Understanding the need for appropriate nutrition, exercise, and developing proficiency in movement skills in physical education can motivate a student to maintain healthy eating habits and to continue to be physically active beyond the physical education experience.

EMPATHY

Identifying with the state of another person; emotionally taking another's perspective. Being able to see a situation from the eyes of another.

"Those who bring sunshine into the lives of others cannot keep it from themselves." J.M. Barrie

FIBULA

The small bone of the lower leg. The fibula is a long slender bone being expanded both at its upper and lower ends. It forms the lateral aspect of the ankle.

BIOMECHANICS

Newton's 2nd Law - smaller objects will travel farther than heavier objects when the same amount of force is used. When speed is the objective use a flat trajectory.

Newton's 3rd Law - When struck, an object will rebound in the opposite direction with the same amount of force with which it is hit. So the harder the object is hit, the greater will be the force that causes the object to rebound in the opposite direction.

Rotational principles - to rotate an object one must apply torque. Lengthening the lever increases linear velocity.

GENEROSITY

Being willing to share with others--whether materials, talents, or thoughts. Willingness to give; nobility of thought or behavior.

"You have a house, Piglet, and I have a house, and they are very good houses...but poor Eeyor has nothing. So what I've been thinking is: Let's build him a house." A.A. Milne

TIBIA

The larger bone of the lower leg. The tibia is a long bone which transmits the body weight from the medial and lateral condyles of the femur to the foot.

NUTRITION

The six nutrients are water, fats, carbohydrates, protein, vitamins, and minerals. Nutrients are present in the foods we eat and contain chemical substances that function in one or more of three ways: nutrients furnish the body with heat and energy, provide material for growth and repair of body tissue, and they assist in the regulation of the body processes. Next to water, protein is the most plentiful substance in the body. Protein is of primary importance in the growth and development of all body tissues. It is the major source of building material for muscles, blood, skin, hair, nails and internal organs including the heart and the brain.

MODESTY

Lacking pretense; not making a false show in one's life; resisting social pressure to be self-aggrandizing.

"Commit yourself to constant self-improvement." H. Jackson Brown

ULNA

One of the two bones in the forearm. The ulna lies medial to the radius and is the longer of the two bones. The ulna articulates at each end with the radius.

WATER

Water replaces body fluids used up during activity. When exercising strenuously in warmer weather, you can easily lose one to two quarts of water through perspiration. Sweat losses for trained athletes can exceed three quarts an hour, a loss of about three pounds. A person should drink about 6-8 glasses of water every day. Do not overlook the importance of water. Water is the body's largest ingredient (60%). Water carries nutrients, cools down the body, helps digest food, gets rid of waste, maintains body heat and lubricates the joints. Drink everytime you walk by a water faucet!

CITIZENSHIP

Appreciating the essential connection between citizen's rights and responsibilities. Playing by the rules/obeying the laws. Doing your share, respecting authority, staying informed.

"Self-Accountability is the essence of professionalism."
Daryl Siedentop

RADIUS

One of the two bones in the forearm. The radius lies lateral to the ulna and is the shorter of the two bones. The shaft of the radius is markedly convex laterally, allowing it to move around the ulna, thus carrying the hand with it into pronation.

SUGAR

Sugar is a major carbohydrate source but is completely devoid of protein, vitamins, and minerals. Sugar is not considered a nutritious snack. Sugar leads to an imbalance in the calcium-phosphorous relationship. Sugar also can be a contributing factor in development of obesity, diabetes, arthritis, tooth decay, asthma and mental nervous disorders. Fruits are a natural source of sugar. Brown sugar has a slightly higher nutritive value than white sugar. Honey is one of nature's finest energy-giving foods consisting of carbohydrates in the most digestible form. Avoid lots of sweet snacks, especially at bedtime. Saliva flow is low at night, so any food you eat then has all night to feed decay causing bacteria.

OPTIMISM

Choosing to have mostly positive thoughts. Having a natural inclination to be cheerful or hopeful about everything.

"Don't find fault. Find a remedy." Henry Ford

APPENDIX B

EVALUATION INSTRUMENT

After reviewing the instructional cards, please respond to the statements below. Circle the number that best represents the extent to which you agree or disagree with each statement. Feel free to review the cards more than once if needed. Thank you for completing this evaluation. All responses will remain confidential.

SD = Strongly Disagree

D = Disagree

N = Neutral

A = Agree

SA = Strongly Agree

1. Cardstock paper will be durable enough for a teacher to use during class time.	SD	D	N	A	SA
2. Icons match the sub-disciplines and information they represent.	SD	D	N	A	SA
3. The content of the cards is appropriate for middle school teaching.	SD	D	N	A	SA
4. The size of the font is easy to read.	SD	D	N	A	SA
5. The cards would be easy to use by a teacher.	SD	D	N	A	SA
6. The information on the cards is supported in the California Framework for Physical Education	SD	D	N	A	SA
7. The information on the cards is supported in the California Challenge Standards for Physical Education.	SD	D	N	A	SA
8. The information within the 'weightlifter' icon section of the card accurately reflects the discipline of exercise physiology and the goals of the California framework.	SD	D	N	A	SA
9. The information within the 'weightlifter' icon section of the card accurately reflects an understanding of how the body moves.	SD	D	N	A	SA
10. The information within the 'running figure' icon clearly reflects the discipline of motor learning and the goals of the California framework.	SD	D	N	A	SA
11. The information within the 'running figure' icon clearly supports the value and benefits of physical activity.	SD	D	N	A	SA
12. The word within the 'smile' icon is relevant to the discipline of sport sociology and the social development goal of the California framework.	SD	D	N	A	SA
13. The information within the 'smile' icon clearly represents social behavior in a physical activity setting.	SD	D	N	A	SA
14. The information within the italic quotes clearly reflects the discipline of sport psychology and the personal development goal of the California framework.	SD	D	N	A	SA
15. The quote within the italic text section reinforces the development of positive attitudes necessary for enjoyment in physical activity.	SD	D	N	A	SA

Comments, suggestions, or recommendations (please use back side if needed):

APPENDIX C
COVER LETTER

Dear Evaluator,

As a middle school physical educator, I feel students will learn the most from physical education if they understand all the benefits of physical activity including the social, emotional, and psychological aspects included in the California Framework for Physical Education. At an early age, we have the opportunity to teach students how to exercise correctly, develop good eating habits, and prevent risks associated with heart disease. We also can provide a positive environment for social and personal development.

The enclosed eighteen instructional cards include information on the three domains of the California Framework for Physical Education: movement skills and movement knowledge, self-image and personal development, and social development. Each card includes information from the three domains that can be used as a guide to implement the California framework goals within weekly lesson plans. All the materials and information in these cards has been compiled from the California Framework for Physical Education, National Physical Education Standards, and the California Challenge Standards for Physical Education.

As you review the instructional cards, please complete the evaluation instrument. Please return the completed evaluation instrument, demographic information, and the cards in the self-addressed stamped envelope provided.

Your input is greatly appreciated. Thank you for assisting with the completion of this project.

Sincerely,

Jean Lamson

APPENDIX D
DEMOGRAPHIC INFORMATION

Name: _____

Address: _____

Phone Number: (Home) _____

(Work) _____

E-mail: _____

Years of Teaching Experience at Middle School Level _____

Teaching Credential(s):

Degree(s) Obtained:

Presented at CAHPERD?

Presented at Cal Poly?

Current Place of Employment: _____

Current Teaching Assignment: _____

Number of minutes you spend with students in physical education per week?

Grade Level: _____ Class Size: _____

APPENDIX E

CONSENT FORM

Date:

Dear:

I am a graduate student at San Jose State University, currently completing my thesis project for an M.A. in Kinesiology. Dr. Susan Wilkinson is supervising this project. As a middle school teacher familiar with the California Framework and the Challenge Standards for physical education, I would like you to assist me to evaluate a sample of 18 instructional cards that could be used in conjunction with lesson plans to highlight the cognitive, social and emotional aspects of physical education to students. I teach middle school students and understand the demands that are placed on your time, therefore, should you accept this challenge, you will be asked to return a short questionnaire concerning the content and layout of the cards within four weeks. The information you provide me will be used to evaluate the strengths and weaknesses of the instructional cards. At the completion of the project, those randomly selected to participate in this project, will receive a full set of the cards for your participation.

Participation in this study is strictly voluntary. You may refuse to participate in any part of this study. If you decide to participate in this study you are free to withdraw at any time, without prejudice to the researcher or San Jose State University. Confidentiality of all information will be assured. The data generated from this research project will be used only to evaluate the strengths and weakness of the instructional cards. Your identity or questionnaires will not be revealed or shared. Any questions concerning the researcher can be addressed to Jean Lamson (408-734-9053), or my graduate advisor Susan Wilkinson (408-924-3034). Any complaints about the research can be presented to Greg Payne, chair of the Department of Human Performance at San Jose State University, (408-924-3028). Questions about research, or subjects' rights may be presented to Nabil Ibrahim, Associate Vice President for Graduate Studies and Research, at (408-924-2480).

You have been chosen as a potential evaluator because I have had the pleasure of either attending a class of yours at the Cal Poly Physical Education Workshop, or listening to you present at one of the more recent CAPHERD conferences. It is because of the ideas and knowledge you shared that I have been inspired to create my project. Although using the cards with students is a step or two away from reality, the first step is for teachers, like you, to evaluate the potential of these cards.

Your signature on the attached post card indicates you are making a decision to participate in the evaluation. If you agree to participate, please check the appropriate box and complete the address card. If you choose not to participate, perhaps you would know of someone qualified to participate. In that case, would you be so kind as to return the post card to me with a recommendation of a potential evaluator. Thank you so much for your participation. It is greatly appreciated.

Sincerely,

APPENDIX F

POST CARD

Print Name: _____ Signature: _____

I consent to participate in the evaluation of the instructional cards project.

Send to the following address:

I will not be available to participate in the evaluation for your project. I
recommend the following middle school teachers, knowledgeable about the
framework and standards for physical education, who may be willing to participate.

APPENDIX G

APPROVAL LETTER

San José State
UNIVERSITY

**Office of the Academic
Vice President**
Associate Vice President
Graduate Studies and Research
One Washington Square
San Jose, CA 95192-0025
Voice: 408-924-2480
Fax: 408-924-2477
E-mail: gstudies@wanoo.sjsu.edu
<http://www.sjsu.edu>

TO: Jean Lamson
1220 Tasman Dr., #170
Sunnyvale, CA 94089

FROM: Nabil Ibrahim,
AVP, Graduate Studies & Research

DATE: October 12, 2000

The Human Subjects-Institutional Review Board has approved your request for exemption from human subject's review under category "A" in the study entitled:

**"An Instructional Aid to Teach the California
Physical Education Framework Goals"**

This approval is contingent upon the subjects participating in your research project or the subject's data collected for the research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, unless they are serving as a primary source, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Nabil Ibrahim, Ph.D., immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted. This approval is granted for a one-year period and data collection beyond October 12, 2001 requires an extension request.

If you have any questions, please contact me at
(408) 924-2480.

The California State University:
Chancellor's Office
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San Jose, San Luis Obispo,
San Marcos, Sonoma, Stanislaus