CONTENT PRIORITIES AMONG REPRESENTATIVE STAKEHOLDER GROUPS FOR PHYSICAL EDUCATION PROGRAMS IN MICHIGAN:
A DELPHI STUDY

By

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ABSTRACT

CONTENT PRIORITIES AMONG REPRESENTATIVE STAKEHOLDER GROUPS FOR PHYSICAL EDUCATION PROGRAMS IN MICHIGAN

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The purpose of this study was to identify stakeholders' views of the relative importance of content appropriate for inclusion in K-12 physical education programs in Michigan. The study engaged 350 stakeholders in a three-round modified Delphi Technique to obtain rankings of the relative importance of discrete elements of physical education content.

Fifteen school districts in the lower peninsula participated in the study, and were represented by central and building administrators, school board members, classroom teachers, physical education teachers, parents, students, and community recreation directors. Other stakeholders from across the state included content experts from colleges and universities, officers from Michigan's Association of Health, Physical Education, Recreation and Dance, representatives from Intermediate School Districts responsible for supporting physical education programs, and state legislators.

Five research questions were used to guide the study of: 1) the relative importance assigned by stakeholders to lifelong activities and program objectives; 2) the efficacy of the Delphi Technique to increase agreement on the relative importance of lifelong activities and program objectives, within and across stakeholder groups; and 3) the effect of demographic variables of interest (e.g., gender, region of the state, family income) on such agreements.

The results of the study indicate that stakeholders in Michigan perceive swimming, jogging/powerwalking, and strength training as the three most important lifelong activities for students to acquire as a result of a quality physical education program. Stakeholders

also hold the acquisition of personal/social/attitudinal character traits in highest regard, followed by the ability to manage one's own health-related fitness.

A convergence in priorities occurred within and across all stakeholder groups and demographic variables through the course of the study, supporting the position that the Delphi Technique was an effective procedure for creating a consensus on the relative value assigned to lifelong activities and program objectives.

This dissertation is dedicated to my wife Judy, who has, and continues to help me see and appreciate what really matters, and to Jesus Christ who continues to show us both.

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Virtually countless people contribute to academic endeavors of this size. In this case, I feel compelled to extend special appreciation to the following:

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Whereas the true value of this dissertation will be determined only by the degree it and its derivatives positively impact the lives of people, the value of people like these is immeasurable.

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CHAPTER 1

STATEMENT OF THE PROBLEM

Various national organizations and documents have endorsed the inclusion of quality physical education programs in public school curricula (American Academy of Pediatrics, 1987; Fletcher et al., 1992; Pate et al., 1995; United States Department of Health and Human Services [HHS], 1991, 1997; Wynder, 1981). This growing base of support for physical education is derived from studies connecting health benefits to regular physical activity (Blair et al., 1989; Dishman, 1992; Hagberg, 1990; King, Taylor, Haskell & DeBusk, 1989; Marcus et al., 1992; Morris et al., 1990; Paffenbarger & Lee, 1996; Powell & Thompson, 1987). Beyond the direct benefits to individuals, participation in regular physical activity results in a savings of health care costs (Hatziandreu, Koplan, Weinstein, Caspersen & Warner, 1988) whereas sedentary lifestyles accrue increased costs in public health care (Keeler, Manning, Newhouse, Sloss & Wasserman, 1989). Because public schools service a vast majority of the nation's children, health promotion agencies acknowledge the potential for physical education to contribute to the total health of the general public (Iverson & Kolbe, 1983; Iverson, Fielding, Crow & Christenson, 1985; Koplan, Caspersen & Powell, 1989).

Despite the documented benefits of physical activity and the growing number of endorsements for quality programs, physical education programs struggle to become a respected component of public education. The data available suggest physical education is not a high priority for schools (Bain, 1990; Graham, 1987; Siedentop, 1987; Taylor, 1987; Templin, 1987). Parents and administrators hold low expectations for significant outcomes in physical education (Youth Sports Institute, 1985). They attribute skill learning to youth sport programs, learn-to-swim programs and other community-based activities. Outsiders often see physical education as glorified recess and physical education teachers as highly paid recreational specialists. Some members from most stakeholder groups see physical

education as an opportunity for children to blow off steam and/or give students and teachers a break.

Clearly, resources available to schools are limited, and resources are used where people feel they have the greatest impact (Crum, 1987; Staffo, 1990). It is unfortunate that even where need is demonstrated, physical education is one of the first programs to be eliminated or reduced when cuts have to be made (Crum, 1987).

In response to the discrepancy between program potential and perceived value, professional organizations have established content standards for K-12 physical education programs. When operationalized by clearly stated program objectives, content standards define the knowledge, skills, fitness capacities, and values students must acquire to be labeled as physically-educated. In 1992, the National Association for Sport and Physical Education (NASPE) produced a definition of a physically educated person comprised of 20 outcome statements (NASPE, 1992). A national task force drew upon this definition to create and publish seven physical education content standards and example benchmarks suitable for guiding the selection of content and assessing student achievement (NASPE, 1995). Michigan's Department of Education developed a similar document consisting of sixteen content standards and grade level benchmarks. Michigan's standards are consistent with those proposed by NASPE, but provide a more complete structure for identifying and selecting curricular content (Allen, DeJong & Vogel, 1996).

Content standards are advocated because they enhance program description by communicating intended student outcomes to students, teachers and other stakeholders (Berg, 1988; Taylor & Chiogioji, 1987). Standards also provide a framework for program evaluation, teacher preparation, and professional development programs (Berg, 1988; Curry & Temple, 1992; Crum, 1987; Lawson, 1986; Staffo, 1990; Steinhardt, 1992). However, it is unknown if the creation of such documents can improve program effectiveness. While these documents identify content that should be included in a comprehensive program, doing so exacerbates the problems teachers face because few

physical education programs, if any, possess the resources (instructional time, equipment, facilities, personnel, etc.) necessary to effectively address all of the implied content.

National figures indicate that perhaps 36 percent of public school children and adolescents are provided daily physical education (HHS, 1990). A recent survey by Michigan's Department of Education (1997) indicates that while 71 percent to 84 percent of public schools in Michigan require physical education in grades K-5, only 8.9 percent to 16.8 percent of those students are offered physical education three or more days per week. The same survey indicates that time allocated to physical education is eroding. The percentage of public school districts requiring physical education in grades 5-8 has dropped 8 to 16 percent among those 356 school districts reporting.

Reductions in resources (especially instructional time) available to physical education programs requires a reduction in the amount of content included in the curriculum. Failure to reduce the content, in accordance with less than comprehensive resources, necessarily results in a program that merely exposes children to content rather than developing competence on some subset of higher priority program objectives. The creation of standards documents without clear articulation of procedures necessary to match content with resources can reduce rather than improve the effectiveness of local physical education programs.

Evidence of ineffective physical education programs is quite strong. Vogel (1986), in a chapter titled, "Effects of Physical Education Programs on Children," found evidence of effectiveness attributed to programs of physical education. However, he noted that the research methodologies used in those studies were flawed to the degree that no skeptic would be persuaded by the attributions reported. Results obtained from two statewide assessments of motor skills and fitness objectives at the fourth, seventh and tenth grades in conjunction with the Michigan Educational Assessment Program (MEAP) indicate student performance well below targeted standards and no differences between students who do

and do not participate in physical education programs (Michigan Department of Education, 1982, 1985).

The ineffectiveness of physical education is in part a curriculum problem (Berg, 1988; Curry & Temple, 1992; Steinhardt, 1992). The number of defensible program objectives defining a physically educated person is larger than the amount of instructional time available to assure their attainment by students. Accordingly, practitioners are left with the dilemma of what to include in their curricula. Most often the choice is to expose students to a wide range of objectives (all those included in the standards documents). This results in insufficient instructional time devoted to the individual objectives to create real change in student performance.

Many authors concur that it is critical for the future of the profession to identify a common set of objectives that all physical education programs should teach (Lawson 1986; Steinhardt, 1992; "Physical Education for the Elementary School Child", 1984). But if content standards documents represent what students need to be physically-educated, and the total number of objectives necessary to achieve those standards extend beyond the capacity for most K-12 programs to address, can a subset of objectives be identified as essential for all graduates to obtain? If it can, that essential content has not yet been identified (Jewett, 1980; Steinhardt, 1992). This is evidenced by the number of, and diversity in, existing curriculum models that appear in the physical education literature.

Curriculum models are designed to assist curriculum designers with the selection and organization of program content based on a sound rationale. They typically limit content according to a consistent focus (e.g., fitness or sport skill) or conceptual framework (e.g., movement concepts or kinesiological studies). Although the models vary, and curriculum theorists expound on the strengths and weakness of each, most are considered an acceptable way to select and organize curricular content. Curriculum theorists most often urge curriculum designers to select or construct a model consistent

with their personal values (Jewett, 1994; Jewett & Bain, 1985; Seidentop, Mand & Taggart 1986).

Following the advice of curriculum theorists in this regard has two shortcomings. First, if curriculum models are based on the assumption that the designer or the conceptual framework is the definitive source of what is important in content selection, then values held by other key stakeholders are omitted from the process. This position fails to consider the wisdom of diverse stakeholders (including board members, administrators, parents, subject matter experts, etc.) and could also limit the ability to meet the needs of diverse learners. Second, most models fail to address the issue of systematically matching the amount of content included in the program to the resources available. Accordingly, practitioners with limited instructional time are left teaching more content that can be acquired by their students. Priorities must be established to resolve the issue (Webster, 1988).

The core issue in content selection for physical education is not one of importance, because all the content delineated by content standards is important. Rather the question becomes the importance each element of content relative to other elements of content that compete for inclusion in a program.

Different stakeholders hold different perspectives which are important to consider if the curriculum's goal is to best serve its constituency. This raises the issue concerning who should be involved in deciding what content is most important, and thus included in the program. Certainly physical educators should be involved, but their perceptions of the relative importance of the purposes of physical education may differ from those of other stakeholders (Jewett, 1979). Physical educators also have differing opinions as to what constitutes quality in physical education programs (Bain, 1988; Jewett 1979; Kirk, 1988; Reed, 1983; Steinhardt, 1992; Webster, 1988). Those responsible for educational programs also need to remember that parents, community leaders, business persons and

others who financially support the school system rightfully deserve a voice in determining the substance of its intended educational outcomes.

Subject matter experts need to be included as well. While stakeholders rightfully represent what is most valued within the community, some things they desire of a physical education program (and their rationale for desiring it) may not be consistent with the professional literature. Subject matter experts must make sure programs can deliver on what the curriculum professes to provide.

Clearly, physical educators, subject matter experts and other stakeholders need to be engaged in a systematic procedure designed to clarify the purpose and prioritize content appropriate for inclusion in physical education programs. The inclusion of stakeholders and the leadership of subject matter experts is essential. Physical Education's continued existence in public education depends in part on its effectiveness in meeting the public's needs (Crum, 1987). It is imperative then to include their voices in determining priorities necessary to achieve balance between program resources and content included. Establishing priorities without stakeholder involvement will regularly result in inclusion of content that would not represent the values of those who financially support the program.

Research is needed to systematically identify program objectives generally agreed to be of highest priority by stakeholders. The results of such research will assist school districts in the important process of balancing content with local resources. It will also promote better informed choices and reveal differences in opinions held by stakeholder groups. This can focus discourse, research, and/or the education of stakeholder groups in a way that will reduce differences and build support for quality programs.

Statement of the Purpose

The purpose of this study was to identify the priorities held by stakeholders concerning content appropriate for inclusion in K-12 physical education programs in the schools of Michigan. The study involved stakeholders in a modified Delphi Study (Dalkey, 1967) designed to generate rankings of the relative importance of potential physical

education content. The degree to which rankings changed within and across stakeholder groups, participating school districts, and selected demographic variables was also assessed.

Research Questions

The study was framed by the following five research questions:

1. What is the relative importance assigned by stakeholders to lifelong activities and program objectives suitable for inclusion in K-12 physical education programs?
2. Did the ratings assigned to lifelong activities and program objectives by each stakeholder group, school district, and selected demographic variable converge with the priorities held by all other participants?
3. Do differences in the final rank orders assigned to lifelong activities and program objectives exist between the stakeholder groups, school districts, and selected demographic variables at the conclusion of the study?
4. Did the ratings assigned each element of program content converge from the initial round to the final round of a modified Delphi study within all participants, stakeholder groups, school districts, and selected demographic variables?
5. Did the rank order of relative importance on program content change from the initial to the final round of a modified Delphi study for the participants as a whole, or for representatives of stakeholder groups, school districts, and selected demographic variables?

Significance of the Study

This study will provide a view of the relative importance of potential physical education content assigned by physical educators and other important stakeholders. It will also provide a basis for prioritizing content when resources are insufficient to include all content that should be incorporated into a quality program. Seefeldt maintains that we must clearly define what we stand for and demonstrate what we can accomplish in order to

restore our status as an integral part of public school education ("Physical Education for the Elementary School Child", 1984). If programs of physical education use systematic selection procedures, programs with comparable time allocations and similar contexts (including community values) should contain similar content. Large discrepancies in offerings undermine the profession's credibility by conveying the message that content is of importance only as a variable of individual instructor preference.

The process and product of prioritizing content provides the profession with a common platform to present content to the public. Utilizing a defensible procedure for prioritizing content can establish credibility in the eyes of skeptics. With respect to common content, Steinhardt (1992) stresses the need for practitioners to educate the public on the purposes of physical education. Identification of content common to all programs is a critical part of this need in that it will provide the profession with relevant, defensible content prioritized by stakeholders. Creating a consensus on priority content for physical education also has the potential of refocusing some of the debate from what should be presented as content toward how to best facilitate students learning.

Defining essential content for physical education will also serve to focus research efforts. It is Steinhardt's contention that more effort has been directed towards developing theoretical models and debating the value of physical education than to conduct the research which supports such models (Steinhardt, 1992). She maintains that the lack of agreement on a few goals that can be accomplished in physical education programs has limited progress in physical education curricular research. Results from this study identifies priority content for curriculum research. Perhaps more importantly, it identifies why selected groups feel the way they do. This information can be used to frame research efforts that will provide evidence to help resolve such differences of opinion.

Focused research efforts can serve the profession by providing physical educators with the kind of information that will facilitate programmatic endeavors to serve students. It will reduce the vagueness that often exists in messages found in the literature on

curriculum, and will provide teachers with specific and practical examples that Doyle and Ponder (1977) suggest teachers need prior to being willing to implement educational innovations at the local level.

In addition to the benefits derived from refocused research efforts, defining high priority content can improve the quality of the teaching-learning process in a number of ways. Adequate teaching of subject matter in physical education is impossible without a clear definition of intended outcomes. Clear definitions of high priority content depict what is to be learned and the standards of performance that are acceptable for teachers, learners and other stakeholders. Common content in schools could facilitate meaningful discourse between physical education practitioners with respect to sharing effective classroom procedures and instructional techniques. Accordingly, classroom practices could become more effective and efficient, thereby allowing for the inclusion of additional content within the same time constraints.

Finally, the identification of high priority content and a procedure for balancing curricular content with resources can have two major impacts on professional development. First, common content will result in identifying common problems of practice. Common problems can result in collaborative problem-solving efforts, thus enhancing the quality of collegiality as well as the potential for providing high quality professional development services. Second, common content in physical education programs can result in greater uniformity in teacher preparation programs. Research and practice in teacher preparation will become more focused, and teacher educators will be in a better position to share successes and resolve common problems associated with preparing students to teach in school districts with diverse contextual circumstances.

Definition of Terms

For the purposes of this study, the following terms have been defined:

1. Content - Intended student learning outcomes contained in a program expressed as program objectives.
2. Curriculum - The product resulting from, planning formal instruction. It is intended to describe what is taught, why it is taught, when it is taught, and the desired student outcomes. It constitutes the plan for promoting learning (Taba, 1962; Vickers, 1990).
3. Curriculum Framework - A document that reveals the knowledge, skills, attitudes and or behaviors including processes students should know and understand about a particular discipline. It provides a structure within which to organize the other components of the instructional system (Curry & Temple, 1992). It is used to construct the curriculum (Jewett & Mullan, 1977) by providing a systematic approach to decision-making in terms of selecting, structuring and sequencing elements of content (Beuchamp, 1981).
4. Curriculum Model - A procedure for developing a curriculum for particular educational settings (Jewett & Bain, 1985). It is based upon fundamental decisions that clarify program emphasis (Lambert, 1989). Models draw from a specific curriculum framework and provide program designers with a systematic procedure for content selection (Jewett & Bain, 1985), scope and sequence (Jewett, 1994, Goodlad & Su, 1992), and continuity (Goodlad & Su, 1992).
5. Goals - Broad general statements of program intent representing large, areas of curriculum content (Vogel & Seefeldt, 1988). Program goals are descriptions of general "areas" of outcomes (e.g., achieve health-related levels of physical fitness) desired for each student as to achieve a result of participation in curriculum activities. (Jewett & Bain, 1985).

6. Program Objectives - Discrete elements of potential program content that operationally define program goals (Vogel & Seefeldt, 1988). Program objectives can be represented by a word or a few words, but ultimately must clearly communicate what students must know or be able to do to demonstrate mastery of the objective.
7. Ideologies - Belief systems (integrated assertions, theories and aims) that provide the value premise from which decisions about practical educational matters are made (Eisner, 1992). They are manifested as the beliefs about what schools should teach, to what ends and for what reasons.
8. Instruction - The process of selecting, developing and refining teaching/learning activities to facilitate intended learning. The teaching/learning process for implementing the curriculum (Jewett, 1980).
9. Outcomes - Statements clearly describing what students should know and be able to do as a result of instruction (Curry & Temple, 1992).
10. Stakeholders - Individuals or groups of individuals who have an interest in, are serviced or are affected by, or are responsible for administering a physical education program.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this study was to identify priorities stakeholders hold concerning content appropriate for inclusion in K-12 physical education programs in Michigan. The study involved stakeholders from Michigan in a modified Delphi Study (Dalkey, 1967) to generate a ranking of the relative importance of potential physical education content. The degree to which rankings changed within and across stakeholder groups, participating school districts, and selected demographic variables was also assessed.

In this chapter several critical issues related to curriculum design are reviewed. They include: perspectives on education, the role of value orientations in curricular decisions, predominate models for curriculum decision making in physical education, and how they inter-relate. Arguments for and against eclectic approaches to curriculum construction are then presented. An advocacy-building model selected for use in this study will be described in detail. Finally, a process suitable for building a consensus among stakeholders on content decisions is reviewed.

Present State of Curriculum Design

The most fundamental issue in curriculum design is determining what content is of most worth (Broudy, 1988; Diez & Moon, 1992; Jewett & Bain, 1985; Schubert, 1986; Walker, 1990). Most curriculum work in physical education to date focuses on what content is of most worth and why, but the issue is unresolved (Ennis, 1992; Steinhardt, 1992; Vickers, 1990). This leaves practitioners with a multitude of curriculum options, but with little help in the actual task of selecting curricular content (Ennis, 1992; Melograno, 1988; Vickers 1990).

The physical education literature contains numerous curriculum models designed to assist in content selection (Dauer & Pangrazi, 1989; Hellison & Templin, 1991; Jewett & Bain, 1985. Lawson & Placek, 1981; Siedentop, Mand & Taggart, 1986; Vickers, 1990;

Vogel & Seefeldt, 1988). Significant differences in the models are typically centered around the purpose of schooling and the values and beliefs held by those constructing the models (Jewett, 1994).

According to Jewett and Bain (1985) curriculum models provide for a clear description of the value base (beliefs and goals) underlying a given program. The role that value orientations should play in curriculum construction is a prevalent issue in curriculum literature. Some authors (Siedentop, Mand, & Taggart, 1986; Jewett, 1994; Jewett & Bain 1985) argue the need for developers to clarify their beliefs relative to content selection and other curriculum procedures, then make curriculum decisions based upon those values and perspectives. Other authors (Brandt, 1988a, 1988b; Jackson, 1992; Reid, 1992) perceive curriculum construction as a complex process where perceived values and perspectives held by designers are relevant , but only part of the complex process.

Clarification of the purpose of education, value orientations, and physical education curriculum models provide developers with a basis for comparing different strands of thought. These clarifications will assist developers in organizing their own thoughts, and understanding the motivations behind the positions others hold. This information also provides a foundation upon which a defensible, systematic approach to decision-making can be established. Accordingly, it is important to understand these perspectives, models and value orientations and how they are interrelated in order to determine their value in the process of content selection.

Curriculum Perspectives

Differences in curriculum models can often be tied to differing opinions concerning what should be taught in schools (Broudy, 1988; Eisner, 1992; Jewett & Bain, 1985). According to Fraleigh (1990), adopting a primary purpose of schooling establishes the grounds for value compatibility and consistency through the curriculum development process. Attempts have been made to categorize various beliefs into ideologies or perspectives on the purpose of education (Eisner & Vallance, 1974; Jackson, 1992;

Kleibard, 1987; McNeil, 1981). Ideologies implicitly represent educational philosophies with different assumptions about human nature, society and education. In general all perspectives on the purpose of education appearing in the literature can be categorized into six basic strands of thought, five of which directly relate to the selection of subject matter.

One predominant perspective is that the purpose of school is to maintain status quo in the society. Often referred to in the literature as traditional curriculum, academic rationalism and/or structure of knowledge, emphasis in this perspective is to transmit the existing culture (social, academic, etc.) to the next generation. The main purpose of school is to provide youth with the tools and knowledge to successfully participate in the traditional culture. Advocates emphasize the need for youth to acquire the most powerful products of accumulative historical understanding, and endorse the maintenance of present subject matter divisions.

A second perspective is that schools should create societal reform (Apple, 1982; Giroux, 1983). Proponents of this position can be classified as social reconstructionists with reformist views. This perspective is also reflected in writings advocating emancipatory education (Greene, 1978). Advocates maintain that schools should prepare citizens to identify social injustice and actively intervene to facilitate changes for the better.

A third perspective shares a focus on social reconstruction but emphasizes the desire to create change for the individual. It is referred to in the literature as an adaptive view of social reconstruction, emancipatory education (Bain, 1988), and/or curriculum for self-actualization (Eisner & Vallance, 1974). Proponents of this position view social issues and change as a crucial context for personal development. Their position is that citizens need to develop tools necessary for individual adaptation to a world involved in constant change. To apply this perspective, schools would increase students' access to opportunities that enable citizens to reflect on personal conditions and actively work towards personal liberation and development (Dewar, 1987; Griffin, 1985).

A fourth perspective is to perceive school as an agent to develop cognitive processes (Papert, 1980). Advocates assert that the school's responsibility is to teach citizens how to teach themselves because the body of knowledge is rapidly growing and changing today's society. Educational outcomes are the processes of thinking in contrast to learning specific subject matter.

A fifth perspective, clearly articulated by Brandt (1988a, 1988b) is eclectic in nature. Advocates of this position suggest that those involved in designing curriculum hold multiple perspectives, and that these perspectives are important in degrees that are dependent upon the circumstances surrounding specific curriculum decisions. Those circumstances include the variations in local cultures and history, national directives, health initiatives and personal experiences. Because perspectives vary according to circumstances, which perspective predominates in any given circumstance should be a function of the unique set of circumstances.

Value Orientations

The educational perspective a person favors is related to their organized set of values (Fraleigh, 1990). The argument is that differing value priorities suggest different ways of organizing and managing content (Fraleigh, 1990; Jewett, 1994). Jewett and Bain's (1985) value orientations are intended to provide a means of classifying sets of values that inspire educational decisions. Their work delineates five basic value orientations: disciplinary mastery, social reconstruction, learning process, self-actualization, and ecological integration. It has been suggested that most curriculum work in physical education shares some of the basic underlying notions with Jewett and Bain's approach to curriculum theory and practice (Kirk, 1988; Steinhardt, 1992). The following is a brief description of the five value orientations.

Disciplinary Mastery. Those predisposed to a disciplinary mastery orientation place the mastery of an organized body of knowledge to the forefront of learning and evaluate students on the content mastered. Advocates assert mastery of subject matter is the

key to schooling, and they design curriculum to facilitate such mastery (Jewett, 1994). Their position is that the acquisition of a predetermined, body of knowledge in the form of knowledge, skills and values allows recipients to successfully participate in (and contribute to) a specific cultural condition. This position reflects the curriculum perspective that schools should maintain and extend the current culture.

Disciplinary mastery is the most prevalent orientation in practice within physical education (Siedentop, Mand & Taggart, 1986; Newell, 1990) and is the focus of most pre-professional and staff development programs (Newell, 1990). According to Fraleigh, skill acquisition provides recipients with the opportunity to experience satisfaction with personal performances and to successfully partake in a range of movement experiences. The approach is conducive to the transmission of procedural and propositional knowledge (Scheffler, 1965), and according to Fraleigh (1990) could provide the medium for developing intrinsic values as well

Social Reconstruction. Social reconstruction, according to Jewett and Bain, is based on the concept that the curriculum should be used to address critical social, political and economic issues as a means to creating a better society. In this curriculum approach, physical education needs to incorporate learning opportunities related to social issues, and instruction should emphasize interpersonal sensitivity, awareness of others, and the development of social skills (Fraleigh, 1990). Student evaluation would be based on attitudes and personal and social character traits displayed. Jewett and Bain delimit this value orientation to stressing societal gain over individual gain. It therefore reflects a more reformist view of social reconstruction.

Learning Process. Proponents of the learning process value orientation advocate the need to develop process skills that can be applied independently to learning whatever becomes important to learn over a lifelong (Fraleigh, 1990; Jewett & Bain, 1985; Papert, 1980). The process by which knowledge is generated is viewed as content (Fraleigh 1990; Jewett, 1994), including the processes of acquiring motor skill and creative movement

(Jewett & Mullan, 1977). Curriculum design in this perspective seeks to facilitate use of principles to analyze and evaluate performance (Lawson & Placek, 1981). Jewett (1994) contends that this value orientation places a priority on both the learner and the subject matter. Advocates take a narrow view of both however, in that they focus on the individual as a learner and on the process for mastering subject matter in contrast to mastering a wide range of product knowledge. The learning process value orientation thereby reflects a cognitive concepts perspective on education. According to Fraleigh (1990), play and movement is used as a context in which students develop competency in the skills of learning, and student evaluation should focus on the student's ability to learn independently.

Self-Actualization. Curriculum decisions for those oriented towards self-actualization center around helping students achieve their personal potential. The educational goal from this perspective is to help students develop a positive sense of autonomy and a self-concept which enables them to become self-directed, independent learners (Eisner & Vallance, 1974; Jewett, 1994; Maslow, 1979; Rogers, 1983). Individual achievement of excellence and self-direction takes precedence over subject matter or societal concerns (Fraleigh, 1990; Jewett, 1994). This orientation reflects an adaptive view of social reconstruction as an educational perspective. The classroom is managed through strategies which cause students to interact with content selected to help them achieve individual excellence (Fraleigh, 1990).

Ecological Integration. Proponents of this value orientation emphasize the need to find a balance between subject matter, needs of the learner and social goals (Colwell, 1985; Jewett & Ennis, 1990). According to Jewett (1994), advocates of this position emphasize a personal search for meaning, but assume personal meaning can be achieved only by integrating the natural and social environment. As students engage in a search for personal meaning, they learn to integrate personal needs and interests in a larger social and natural environment (Colwell, 1985; Jewett & Ennis, 1990). Curriculum construction is

approached as a means of manipulating subject matter in a way that enables students to adapt to present circumstances and develop skills to allow them to contribute to a planned and improved future for all in an ever changing world (Fraleigh, 1990; Jewett, 1994). This orientation reflects a societal perspective of social reconstruction

Curriculum Models

Curriculum models appear in the literature as a means of providing practitioners with a systematic, logical approach to the selection, and organization of program content. Descriptions of a variety of models can be found in the literature (Dauer & Pangrazi, 1989; Hellison & Templin, 1991; Jewett & Bain, 1985. Lawson & Placek, 1981; Siedentop, Mand & Taggart, 1986; Vickers, 1990; Vogel & Seefeldt, 1988). There appear to be 13 distinct models, differing in program goals, structure, content, and value orientations (Bain, 1988; Jewett & Bain, 1985, Steinhardt, 1992). Some authors assert that differences in curricular models are tied to differences in opinions concerning what should be taught in schools and what knowledge is of most worth (Broudy, 1988; Jewett & Bain, 1985). However, most models are process oriented, providing little or no assistance in selecting subject matter.

Many authors suggest that the prevalence of different models imply that physical educators hold inordinately diverse opinions regarding what constitutes a quality physical education program (Bain, 1988; Jewett, 1994; Kirk, 1988; Reed, 1983; Steinhardt, 1992). Some contend that curriculum designers should select or construct a model consistent with a predetermined value orientation (Sanders & McCutcheon, 1986). The strengths and weaknesses of this position will be discussed in detail in the next section.

In *The Curriculum Process in Physical Education*, Jewett and Bain (1985) identify seven unique curriculum models that are described in the physical education literature. According to Steinhardt (1992), virtually all curriculum writing in physical education concerning curriculum construction is represented by one of these models. The seven models, are described below with reference to their corresponding value orientations and

curriculum perspectives. It should be noted that there is substantial variability in how models are described by different writers. The following descriptions attempt to present points of general agreement by most writers.

Developmental Education. The developmental education model is best represented by the common phrase "education through the physical." The developmental model is characterized by using physical activity to contribute to the social, emotional, intellectual and physical development of the individual (Melograno, 1979; Pangrazi & Darst, 1985; Thompson & Mann, 1977). The focus of physical education programs for advocates of this model is on the development of the learner over mastery of subject matter (Jewett, 1994). The conceptual framework for program design is predicated on the notion that all learners progress through common developmental patterns. As such, this model reflects a self-actualization value orientation. The program design is derived from research on theories of human development and hierarchies of objectives reflecting achievement in cognitive, affective and psychomotor domains (Siedentop, 1980).

With respect to physical movement, this approach attempts to educate children to use their bodies more effectively in a wide variety of fundamental movements, sports, dances and aquatic skills (Bain, 1988). Curriculum construction evolves from a process of goal clarification, searching for appropriate strategies to implement the model, and effectively evaluating results (Steinhardt, 1992). Physical education teachers are expected to select and sequence learning tasks based on research describing children's developmental patterns, interests and skill capabilities (Thomas, Lee & Thomas, 1988).

The developmental model is probably the most frequently used today, and some professionals feel it is infused throughout all models. Some of the criticism voiced against the approach stems from a lack of evidence of its effectiveness. Critics assert there is insufficient evidence that physical education can produce the broad range of outcomes it claims, that participation in physical education programs contributes to the development of

desirable personal and social character traits, and that the model in practice fails to account for individual needs of the learner (Lawson & Placek, 1981).

Humanistic Physical Education. A humanistic model is based on the assumption that physical education should be student oriented, contributing to the total well being of the individual. Whereas the developmental model assumes the developers know the general course development must take and how to guide it, the humanistic model stresses the uniqueness inherent in each individual. Humanistic physical education places emphasis on student self-awareness as the basis for personal choice (Jewett & Bain, 1985). It acknowledges the need for individuals to make sense of their existence.

Represented most clearly by the writings of Hellison (1985, 1987), the model uses physical activity as the medium physical educators use to enhance the social development of students. Teachers assist students in their search for personal identity and understanding as they progress through a social hierarchy that begins with irresponsibility and culminates in caring for others. As such, advocates of this model reflect a self-actualization value orientation (Jewett & Bain, 1985) and/or social reconstruction, depending upon the teacher's priorities (Fraleigh, 1990).

Critics of humanistic models maintain that the intended outcomes are common to all subject areas, and should not be the primary focus of physical education. Program effectiveness may also rely heavily on the quality of the personal relationship between teacher and student (Jewett & Bain, 1985). Siedentop (1980) adds his concern that the concept of self-actualization is unclear in nature, which results in program objectives being insufficiently clear to drive instruction or evaluation. Finally, as with the previous model, questions exist concerning how well physical education programs can contribute to the development of desirable personal and social character traits in students (Lawson & Placek, 1981).

Movement Education. The movement education model defines content for physical education as human movement (Jewett & Bain, 1985). The notion behind this

approach is three-fold. The first is that the primary goal of physical education is to teach children to move skillfully, with a knowledge of how they move and how their movement is meaningful (Logsdon et al., 1977). The second is that the development of movement competencies is hierarchical in nature, and understanding and acquiring basic concepts and movements enhances the acquisition of more complex movements. Third, engaging students in meaningful movement results in an intrinsic appreciation for movement.

The conceptual framework for the model is based on Laban's (1963) classification of 16 movement themes. The curriculum is based on the study of the principles that govern the control of human movement while providing for the acquisition of skill required to exert that control (Stanley, 1969). Learning tasks are designed sequentially from general and basic to specific and complex (Barrett, 1988). According to Fraleigh (1990), teachers are responsible to comprehensively analyze movement, then use this information to design instructional objectives and learning activities. A problem-solving, guided discovery, or exploratory teaching approach is typically used (Jewett & Bain, 1985; Logsdon, 1984) to provide students with experiences that enhance their ability to move, engage them in thought process, and contribute to the development of their value system (Logsdon et al., 1977). Value orientations held by advocates of movement education represent a combination of disciplinary-mastery, learning process and self-actualization.

Critics of the movement education model argue that teaching general movements as a way to prepare students for more complex movements depends on the unsubstantiated supposition that such learning will transfer (Locke, 1969; Lawther, 1977; Siedentop, 1980). They also claim that use of the teaching approaches advocated by the model exacerbate the problems associated with the excessive constraints on available instructional time. Finally, critics point to a lack of evidence to support the practice of using discovery teaching styles to teach movement skills (Dauer & Pangrazi, 1989; Siedentop, 1980).

Kinesiological Studies. Proponents of the kinesiological studies model emphasize the need to acquire knowledge of movement which in turn allows individuals to

become independent consumers as they participate in their movement culture. As such, the overriding goal in this model is understanding and mastering human movement (Jewett & Bain, 1985). The conceptual framework upon which the curriculum is based is derived from the disciplinary foundations of human movement such as exercise physiology, biomechanics and motor development. It is concerned mainly with the process by which students learn. Practitioners are expected to provide students with opportunities for self-directed learning and problem-solving through a combination of classroom lectures and gymnasium/laboratory activities to enable them to independently adapt to, and participate in, an ever-changing movement culture. Value orientations held by advocates of this model are similar to those who advocate movement education. Because of the emphasis on higher order thinking, forms of this model most often appear at the secondary level. Although few examples of this model exist in practice, many schools include one or two concept units in their overall curriculum, usually in conjunction with teaching health-related physical fitness (Pangrazi & Darst, 1985).

As with movement education, critics of this model oppose emphasizing intellectual development at the expense of participating in physical activity. Critics also question the effectiveness of discovery teaching methods in teaching athletic skills (Dauer & Pangrazi, 1989; Siedentop, 1980).

Sport and Play Education. There are references in the literature for play education and sport education as well as with the two combined. Siedentop defines sport as playful competition and as such considers the sport education model an extension of play (Siedentop, 1980). The sport and play education model is predicated on the notion that play and participation in sport is intrinsically valuable. Participants voluntarily participate in it outside the classroom for its own sake. The mandate for physical education then is to provide individuals with the skills, knowledge and fitness levels to successfully participate in desired activities. Physical education is conceptualized as an essential form of play education where play education is defined as any process that increases an individual's

tendency and ability to participate in competitive, expressive and/or gratifying motor activities. The curriculum is constructed in a systematic way to help students become skilled sport participants and behave in a way that allows them entry into the specific sport culture (Siedentop, Mand & Taggart, 1986). The emphasis in this model is on becoming proficient at physical activities over the development of inner self or physical fitness. Advocates therefore tend to hold a disciplinary mastery value orientation. Teachers design tasks in which students learn specific skills, rules and strategies while developing an appreciation of customs and traditions specific to each activity.

A major criticism of this model is that it is difficult to justify curriculums emphasizing play to administrators in the presence of fiscal constraints common to today's programs. Lawson and Placek (1981) also note significant conceptual differences between sport education and physical education. Their most critical point is that participation in physical education is mandatory whereas participation in sport and play is voluntary. Jewett and Bain (1985) express concern that the model assumes that increases in skill will result in increases in participation, and that sport behavior learned when young will carry over to adulthood. Neither is documented.

Personal Meaning. The personal meaning model is based upon the precept that any experience must have meaning and significance for the individual to be educational (Jewett, 1994). Because learning depends upon meaningfulness and significance for the learner, discovery and creation of meaning is the central focus of education.

Advocates of this model see physical education using the medium of movement as a means of learning rather than learning to move. The model's emphasis is on the holistic development of the individual along with a concern for social responsibility and world-wide citizenship. As such, the selection of educational experiences is founded on the social context in which it occurs, thereby reflecting an ecological integration value orientation (Jewett & Ennis, 1990). Societal context and concerns receive more attention than in previous models.

The central task in curriculum construction is assisting the learner to discover and create personal meaning by moving and interacting with the environment. Teachers must analyze potential sources of meaning, then provide a wide range of opportunities and respond supportively as individuals search for meaning. The process of learning is considered the content of physical education. Students are assisted in understanding and knowing how to use the learning process to achieve the purpose of the lesson.

A major criticism of the personal meaning model is that there are few examples in practice. Practitioners find it difficult to translate the purposes for participating in physical activity into statements of program goals. Others see defining physical education as "education through the physical" as too broad to be achieved with limited resources thereby diminishing physical education's unique contribution to education and rendering it as expendable in the eyes of administrators (Crum, 1987).

Health-Related Physical Fitness. The goal of a health-related physical fitness model is the development and maintenance of individual fitness. Achievement of the goal is attained by the acquisition of fitness through progressive increases in appropriate physical activity, development of competency in appropriate movement patterns, and acquiring the knowledge necessary to provide individuals with the ability to monitor, modify and maintain healthy levels of physical fitness.

The conceptual framework for curriculum construction is the delineation of the components of fitness, including cardio-respiratory fitness, muscular strength and endurance, flexibility and body composition. Teachers are expected to provide students with appropriate kinds and amounts of physical activity to produce desired outcomes in conjunction with knowledge about how the components are affected by exercise. The ultimate purpose of the model is to facilitate adherence to a personal regimen of exercise.

The fitness model has received criticism for being too narrow in scope (Lawson & Placek, 1981). Others have stated that there is insufficient time to achieve necessary levels of fitness within existing time constraints (Crum, 1987).

Eclectic Model

Most physical education programs reflect an "eclectic" approach to curriculum construction. Eclectic models combine selected parts of various models. The basis for the majority of criticisms directed at an eclectic approach to curriculum design is that they are atheoretical. Curriculum theory can be described as a process of defining and describing events which provide a systematic basis for making curriculum decisions (Jewett, 1994), and it is argued that curriculum development should be based on theoretical and conceptual foundations that clarify program emphasis and guide the structuring, selecting and sequencing of content (Jewett & Bain, 1985; Lambert, 1989).

It is argued that the lack of a theoretical base (resulting from the absence of a common value orientation) limits program effectiveness in that there is no systematic basis to control and guide the direction of learning activities (Ennis & Hooper, 1990; Jewett & Bain, 1985). This often results in educational efforts working towards conflicting purposes which may negate potentially beneficial outcomes (Curry & Temple, 1992). Critics also contend that the lack of a consistent theoretical base impedes the advancement of knowledge concerning specific phenomena (Jewett & Bain, 1985). They claim reverberating between various models, educational theories and practices limits the potential impacts that might be derived from a unified theoretical focus.

Criticisms of eclectic approaches to curriculum stem from a number of pragmatic issues as well. First, physical education has historically tried to achieve such a wide range of outcomes that programs have lacked a central focus (Steinhardt, 1992). Second, eclectic designers accept the notion that the curriculum needs to consider all areas valued within the profession or by the stakeholders associated with the program. This places a tremendous burden on curriculum designers to accommodate competing claims for time and attention (Brandt, 1992). Finally, issues of accountability and objective standards to use for evaluative purposes is yet to be fully resolved (Steinhardt, 1992).

A major contention by various authors is that the selection or construction of a curriculum model must be preceded by clear identification of personal value orientations of the developers or participating stakeholders. According to Eisner and Vallance (1974), difficulties in resolving curriculum conflicts can most often be traced to recognizing conflicting conceptions of curriculum. It's clear that value orientations influence philosophical positions. Curriculum goals are typically derived from personal beliefs (Dauer & Pangrazi, 1989; Siedentop, Mand & Taggart, 1986), and differences in value priorities result in differences selecting, organizing and managing educational experiences (Fraleigh, 1990). Therefore, many contend that the selection of a curriculum model and intended educational outcomes should be consistent with one's value orientation (Ennis & Zhu, 1991; Jewett, 1994; Sanders & McCutcheon, 1986). Jewett and Bain contend that value orientations clarify the implementation of contrasting educational philosophies by describing major points of focus, emphasis and practice. They stress the need to identify and develop curricula consistent with one's value orientation, and they criticize eclectic models because they avoid addressing theoretical positions which underlie program effectiveness.

Problems with a Value-Orientations Approach to Curriculum Design

Those who advocate a values-based approach to curriculum design maintain that curriculum construction should begin with a curriculum theory based upon the designer's value orientation. The principles and curriculum goals delineated in the theory should guide the construction of a curriculum framework which in turn should be used to select or design a curriculum model (Jewett & Bain, 1985). The critical component to Jewett and Bain's curriculum theory is clear and concise articulation of the curriculum designer's value orientation (Jewett, 1994; Jewett & Bain, 1985), for it is this that drives various definitions of technical terms and serves as a basis for subsequent decisions. There are several problems associated with this approach to curriculum construction.

1. No authentic curriculum theory defined in this manner currently exists for physical education.

The purpose for using a curriculum theory is to provide a systematic basis for decision-making when selecting, structuring and sequencing potential content (Jewett, 1994). Curriculum theorists in physical education agree that the field's primary subject matter is human movement. However, there are at least three ways in which movement can be perceived as educational. First, physical education can seen as education about movement. From this perspective, educational experiences become a cognitive study. Second, education can be through movement. Physical education can use human movement as a means to achieve outcomes that may be extrinsic to the activity itself such as personal health, socially-redeemable character traits, moral training, self-actualization, etc.. Third, physical education can be seen as education in movement. Here human movement results in intrinsically valuable and culturally significant movement abilities.

All three perspectives provide the basis for valid conceptual frameworks that may be highly valued by stakeholders responsible for and/or served by the physical education program. All three suggest different ways of perceiving relationships among the elements of movement and, when considered separately, result in curriculum frameworks very different in structure and purpose. Such curriculum theories fail to meet the criterion of authenticity in that differences in constructs are products of the perspectives of their authors, and do not consider the perspectives of other major stakeholders.

2. There is no empirical evidence available showing that a consistent theoretical base for physical education curriculum produces effective, efficient, and valued curriculum practice.

According to Jewett (1994) components of a curriculum theory include definitions of technical terms; statements consisting of facts, propositions and assumptions; underlying value orientations driving the decision-making process; program content, and curriculum goals. The qualification implied by the notion of a consistent theoretical base in this context

is that all components of the theory are understandable and in accord, or at least are compatible with, the designer's value orientations. The theory's purpose is to direct curriculum development, implementation and evaluation. Consequently, evaluation of a curriculum theory's effectiveness in producing a quality curriculum must address at least two basic issues:

a) When different curriculum designers adhere to a single curriculum theory, consistent curriculum practices should result.

A curriculum theory should provide purpose and direction in the construction of a curriculum framework, curriculum, instruction and evaluation. The power of a theory resides in its ability to drive the decision-making process. Assessing a theory's effectiveness must address issues of feasibility and replicability. With respect to replicability, adherence to a specific theory should lead to instructional decisions and practices that are transportable across practitioners. The connection between theory and practice is enhanced if evidence can be presented that a particular program can be successfully implemented (Steinhardt, 1992). A theory's power is also reflected in the degree to which it becomes manifested in classroom practice. Program designs true to a specific value orientation must result in programs that stakeholders value.

b) Students achieve the intended outcomes articulated in the curriculum theory as a result of participating in programs designed and implemented in accordance with the theory.

Regardless of how those holding different value orientations conceptualize what must be done, the most basic goal of all curriculum theorists is to improve the quality of life for its constituents. Hellison (1989) points out that research can not tell us what is worth doing. However, it can tell us if a specific model can achieve its intentions. To date there is little empirical evidence to support the notion that any of the models are effective in providing participants the short and long term benefits they are designed to facilitate.

Until evidence is obtained that a particular curriculum theory results in the implementation of replicable practice, and that the practice results in students achieving the

intended outcomes, there remains no compelling argument to advocate use of a consistent theoretical base over a more eclectic approach.

3. It is unlikely that any single theory can encompass the needs of many individuals.

Amid all curricular debate, curriculum theorists must agree on two basic premises that underlie formal public education. The root purpose of formal education is to improve the quality of the lives for those it serves, and that all citizens deserve access to the best of what public education has to offer. In addition to these two premises, curriculum theorists in physical education must fulfill the unique contributions the field can provide to the total educational enterprise. Two issues arise concerning the ability of a model derived from a consistent value orientation to sufficiently affect quality of life:

a) The model must adequately represent what the field of physical education has to offer.

Complaints have been rendered that curriculum development in physical education has not kept pace with the increasing body of knowledge (Ennis & Chen, 1993; Vickers, 1992). Issues have been raised concerning the ability of conceptual frameworks and subsequent models to adequately represent the field's body of knowledge. The main point behind curriculum perspectives and value orientations is that discussions of curriculum must proceed from assumptions about the nature of knowledge and purposes of education (Brandt, 1988a). Selecting and organizing curriculum content in accordance with a model representing a single value orientation contributes to excluding or de-emphasizing content and/or procedures that are unique to physical education and valued by stakeholders. A health-related physical fitness model is an example of a model based on a consistent defensible goal that receives criticism for being too limited in scope (Lawson & Placek, 1981).

Process-based models also receive criticisms because their focus on processes excludes or de-emphasizes the importance of achieving specific subject matter-related outcomes (Brandt, 1988a; Cheney, 1987; Eisner & Vallance, 1974; Ravich & Finn, 1987; Reid, 1992). Eisner and Vallance stress the need to strike a balance between concern over

how a child learns (process) and mastery of the subject matter in which they are engaged. This is especially significant in that, according to Vickers (1992), most models that appear in physical education literature are process oriented. Such models are in conflict with the fundamental notion that the subject matter of physical education is human movement (Arnold, 1979; Brown, 1967; Crum, 1987; Jewett, 1994). A fundamental decision curriculum designers must make concerns the selection of content skills, knowledge, behaviors and values that enable successful participation in a movement culture. Process-based models run the risk of excluding potentially valuable subject matter because of the nature of their conceptual framework.

b) A curriculum model based on a single value orientation may not meet the needs of a heterogeneous population of students.

There is considerable agreement in the literature on three fundamentals of selecting curriculum content (Brandt & Tyler, 1983; Jewett & Bain, 1985; Schrag, 1992; Tyler, 1949). The first is the nature of the students themselves. Content selected for inclusion must be relevant to students' needs, interests, and nature as learners.

Better understanding of students' attitudes and beliefs about physical activity and physical education can greatly influence teacher effectiveness in designing programs that address the needs of students (Steinhardt, 1992). We know different persons have different needs, interests, and attitudes, and that they participate in physical activity for different reasons. We also know that children differ from adults physically, psychologically and emotionally. Programs with narrow foci can limit the achievement of immediate and long-term needs of a diverse population of students (Reid, 1992). In all probability, such programs engage less than a sufficient number of students in a meaningful way.

A second major consideration for the selection of content is the nature of the subject matter. The major objectives physical education programs address can be categorized as physical fitness, motor skill, social efficiency, cultural acclimation, recreational competency and intellectual competency. Data obtained from numerous studies confirm that various

objectives under each of these categories are held in high regard by stakeholders (Michigan's Exemplary Physical Education Project, 1995). A fundamental axiom in curriculum construction is that emphasis placed on highly-regarded content necessarily results in a de-emphasis on content viewed as less important when resources are finite.

Selecting content based on a single value orientation is defensible in that it is systematic, and conceptually based and theoretical. A major weakness in this approach however, is its inability to include content valued by important stakeholders. Put simply, a singular value orientation limits the ability of curriculum designers to meet the needs of various segments of their constituency.

A third consideration for content selection is the social context in which school exists. Meeting the needs of students is foundational to the purpose of schooling, and it is impossible to meet student needs without considering the local context. Reid (1992) contends that a single value orientation lacks the flexibility to: address diverse settings, adapt as circumstances change, or to adjust to curriculum mismatches or malfunctions as they become apparent.

4. The notion of designing a curriculum consistent with a single value orientation conflicts with common practice.

Steinhardt (1992) makes the case that the link between curriculum theory, suitability, practicality and practice is enhanced where evidence is presented that a particular program can be successfully implemented. At present, there is considerable evidence to indicate practitioners and curriculum theorists in general do not think in terms of emphasizing a single value orientation. Several studies support the notion that physical education teachers possess an inclination towards more than one value orientation (Ennis & Hooper, 1988; Ennis & Zhu, 1991; Martin, 1993) and generally integrate components of more than one model in selecting content (Ennis & Hooper, 1988; Steinhardt, 1992). Caldwell and Bain (1985) found university physical educators' perceptions of appropriate physical education curricula were consistent with concepts addressed in health-related

physical fitness, sports education and movement education models. They also found that the university professors considered all three models equally important.

Results from a 1991 study lead Ennis and Zhu to the conclusion that it is doubtful that teachers' value orientations manifest themselves in the curriculum decision-making process as pure perspectives. Ennis describes them as one of a number of strong influences on the decision-making process. Jackson (1992) holds a stronger position in regard to the role value orientations play in teachers' decision-making process in education in general. He feels most practitioners have not even thought about value orientations and presents a credible argument questioning why they should. His contention is that individuals' value orientations will be embedded in their arguments for proposing and opposing potential curriculum decisions.

Clearly, practitioners and other stakeholders hold a number of value orientations and components of various models in high regard. As a consequence, if curriculum construction is intended to enhance the quality of the educational experience, the practice of designing curriculum based on a single value orientation must be questioned. Developing a curriculum is not the prerogative of one or more developers who represent a single value orientation. Rather, it requires input from participating teachers, and should involve many other stakeholders.

5. Value orientations may be misrepresented.

The call to clarify value orientations as an early step in the design process (Ennis & Zhu, 1991; Jewett, 1994, Jewett & Bain, 1985; Sanders & McCutcheon, 1986), and then select or construct models consistent with those positions, illustrates a perspective of what value orientations are and how they need to become manifested in actual experience. A major contention with this approach has to do with the nature of value orientations and the milieu in which curriculum construction occurs.

Dissenting voices (Brandt, 1988b; Jackson, 1992; Reid, 1992) point out that value orientations originally appear in the literature as a way to categorize conflicting opinions on

the purpose of the curriculum and/or the primary purpose of schooling. They were created to provide a means of clustering those who share predominant values and opinions for the purpose of understanding variance in the curriculum decision making-process. Research shows value orientations may be held in varying degrees by curriculum designers (Ennis, Ross & Chen, 1992). It is questionable if they exist in pure form (Eisner, 1990), or are defined well enough to be mutually exclusive. The latter argument stems from descriptions of disagreement between those who share perspectives (Brandt 1988b, Eisner, 1990; Reid 1992). A comparison of categorizations by different authors (e.g., Eisner & Vallance, 1974; Orlosky & Smith, 1978) stands as evidence that no set of categories represents all possible conceptions of curriculum. As a result, Brandt and Reid argue they are not representative of actual views held by particular individuals.

Critics also contend that advocates do not come to hold their perspectives by careful consideration, as curriculum designers are advised to do. Jackson insists proponents of a particular orientation came to that orientation as a result of becoming immersed in an educational issue and then acquiring an opinion on that issue (Jackson, 1992). These opinions are then nurtured through investigation and reinforced by exchanges with associates with similar experiences and perspectives. In contrast, curriculum design occurs within institutionalized settings where the socio-political dynamics of each institution and the value orientations held by individual stakeholders are negotiated, compromised, and combined to reach mutually-acceptable goals (Brandt, 1988b; Eisner, 1990; Reid, 1992).

6. Models do not adequately address problems of priorities.

An added pressure imposed upon actual practice is the critical constraint of resources. Practitioners are often asked to consider a multitude of curriculum options and expected to use mandates in the form of state and national content standards, while resources (particularly instructional time) are severely restricted. Most existing curriculum models provide little direction for matching content and resources through the use of prioritizing student learning (Crum, 1987; Ennis & Chen, 1993; Melograno, 1988;

Vickers, 1990; Webster, 1989). Unless a model guides practitioners in limiting content in proportion to the amount of instructional time available, curriculum products typically become a "mile wide and an inch deep." Rarely do practitioners determine what content is of most worth and then systematically include an amount of content that matches local resource constraints.

Description of an Alternative Curriculum Development Model

Based upon the previous discussion, the model used in this study is based upon a pragmatic, or political perspective to curriculum planning. A pragmatic perspective, according to Reid (1992), Jackson (1992), Brandt (1988b) and Gay (1980) acknowledges that in practice, curriculum construction contains a political component in which personal inclinations are debated, negotiated, and decided in a way that results in a product representative of multiple orientations held by multiple stakeholders. These authors maintain an eclectic curriculum design model is better able to serve its constituents (than a single theme model) for three reasons. First, a political approach by nature assigns value to all perspectives. The result is that decisions are modified in accordance with the appropriateness of the value orientation for a particular context. Second, a political model shifts decision making power from a small number of persons who cannot represent the values of other important stakeholders to a representative group. Third, it better approximates actual practice.

The following narrative describes a political/professional model for the selection of content. It is at the content selection phase of curriculum construction where the voices of representative stakeholders must be engaged. Doing so insures their values and interests are represented when limited resources affect the amount of content included in a program.

Clearly, physical education programs function with variable resources. They render services in a milieu where multiple voices, representing various value orientations, must be processed, and they are faced with a vast and growing body of content deemed appropriate for inclusion in their programs. It becomes imperative, then, that program content selection

proceed in a clearly defined, systematic fashion that results in the inclusion of defensible content that is held in high regard by all stakeholders. An acceptable procedure must address four basic questions:

- What content should be considered for inclusion in the selection process?
- How should content appropriate for inclusion in a K-12 program be represented for accurate consideration by decision-makers?
- Who should participate in the process of content selection?
- What procedure(s) should be used to select content?

The procedures used in this study are a modification of those outlined by Vogel and Seefeldt (1988), and provide a systematic approach to the selection of content for a K-12 physical education program. The steps are comprehensive in that they address each of the questions above. The rationale for each step is provided in detail.

Steps for the Selection of Content for an Exemplary Physical Education Program

Step 1.	Identify potential content for inclusion in the physical education program that is defensible for inclusion in public education and organize it into categories of student outcomes.
Step 2.	Clearly define each potential content element and specify the standards of performance that operationally define the achievement of the program objectives.
Step 3.	Obtain evidence about what stakeholders think are the most important program objectives to be acquired as a result of participation in the K-12 program.

Step 1. Identify potential content for inclusion in the physical education program that is defensible for inclusion in public education.

Historically, content taught in physical education has focused on education about movement (cognitive study about physical movement), through movement (using human movement as a tool to achieve worthwhile objectives such as personal health and affective character traits), and in movement (engaging in movement as an holistic and intrinsically valuable experience). These historical perspectives, coupled with the ever-increasing body of potential content has left physical educators with more potential content than can be included in their programs. As financial resources dwindle and potential content expands, educational agencies will need to become more concerned with what is included in their programs. It becomes increasingly important, therefore, for physical education programs to articulate and defend their intended outcomes. Content initially included in programs should be restricted to that which matches available resources and is defensible and relevant in the eyes of the program's stakeholders. Therefore, content considered for inclusion should meet three criteria.

First, content considered for inclusion in physical education programs must be deemed important to stakeholders. The issue in determining what is included in a school's curriculum (or excluded) is one of determining relative importance of the content. Physical education's strongest argument for inclusion in the school program is its ability to reduce the health risks associated with living a sedentary lifestyle and improve the general quality of life, coupled with its ability to reach virtually all students. A significant element of justifying its position in public education, then, is to promote content that is linked to documented benefits to health and well-being.

Second, the content should be unique to physical education programs and achievable by a large portion of the population. Potential content selected must represent a contribution to a citizen's well-being that otherwise will not be filled, or perhaps would not be filled as well were physical education excluded. Advocating content that can be fully

addressed by other subject matter areas negates the physical education program's relative importance and weakens its legitimacy.

A third criterion is that the acquisition of the knowledge, attitudes, fitness capacities and/or behaviors represented by potential content depends upon effective instruction. Acquisition of intended outcomes by individuals independent of formal, effective instruction negates the need to invest limited resources into expensive instructional programs.

Content that meets these criteria can best be communicated to stakeholders when it is represented as a series of clear, discrete statements organized into meaningful categories. Categories provide a structure that quickly communicates the scope of defensible content while maintaining the potential to include or exclude discrete elements of potential content. Discrete elements of content operationalize the meaning of the categories in terms that are clear to stakeholders. Accordingly, they communicate potential beneficial outcomes at a reasonably precise level. They also provide the framework for specifying clear standards necessary to evaluate program effectiveness.

Various endeavors to specify the content of physical education have resulted in similar documents. The National Association of Sport and Physical Education (NASPE) recently published a document providing a structure to the potential content for physical education in the form of seven content standards (NASPE, 1995). The State of Michigan's Model Core Curriculum in Physical Education is a similar document consisting of four curricular areas, subdivided into 16 content standards (Michigan Department of Education, 1994). The Michigan document includes all of NASPE's standards, but provides greater detail and clearer definitions of intended program outcomes. The Michigan document, therefore, enables greater consistency in content selection, than does the NASPE document.

The instrument used in this study closely parallels Michigan's document. The major differences are in definitions of competence. The Michigan document defines competence

on the potential elements of content as achieving proficiency at a functional level (i.e., master the element of content in accordance with an authentic standard of performance on that element). This study extends the definition of competence to include contextual performance (i.e., using the element of content at authentic levels of mastery while participating in physical activity). The difference eliminates two content standards that appear in Michigan's document that are based on using various elements of content in combinations.

Step 2. Clearly define each potential element of content and specify the standard(s) of performance that operationally define(s) its achievement.

Each category of potential content must be represented by discrete elements of content (Vogel & Seefeldt, 1988). For this study, these elements are called program objectives. Program objectives, according to Vogel and Seefeldt (1988) are words or short phrases that, when operationally defined precisely articulate intended outcomes of instruction. Selection of content is made, therefore, by selecting program objectives for inclusion in the program. In this study, program objectives were also categorized into four logical content categories. Representing potential content under content categories as program objectives serves the content selection process by: 1) clarifying both general and specific outcomes required to achieve competence in a program, and 2) clearly defining intended outcomes of potential content in a comprehensive and thereby unbiased manner.

Perhaps no aspect of the content selection process is more important than clearly defining intended outcomes of instruction. Each program objective must be clearly defined so those engaged in debate over its relative importance can focus on importance rather than intended meaning. To that end, stakeholders must be provided with performance standards students must attain to master each program objective.

Step 3. Obtain evidence describing the relative importance stakeholders assign to each program objective.

The rationale for initiating the prioritization process is the interplay between the amount of defensible content to teach and the limitations imposed by resources, such as the amount of instructional time available. Content standards documents such as those sponsored by NASPE and Michigan's Department of Education define what it means to be physically educated and reflect key elements of curricular models and perspectives common to the physical education literature (Steinhardt, 1992). Potential content is comprehensive in amount. It represents much more however, than almost all programs are able to include when student competence rather than exposure is the intended outcome. Selecting content in this way shifts the debate away from what is important to what is most important and why.

Identifying and engaging representatives from various stakeholder groups in the process of content selection pays a number of dividends. First, it provides a systematic process for incorporating values, interests and priorities within the community into the program content selection process. Doing so enables physical education programs to defend the content of their programs with evidence that the program incorporates content deemed most important to its constituency. Second, it serves as a medium for communication and education of stakeholders with respect to purpose, rationale, organization, implementation and evaluation of high quality physical education programs. Stakeholders and physical educators alike benefit from the dialogue by obtaining a better understanding of what should be taught in physical education and why. It also provides a medium through which assumptions held can be addressed and altered. Engaging stakeholders results in better informed citizens, better informed program developers, and typically creates a group of advocates for the program that represent all stakeholder groups.

Perhaps even more importantly, a process engaging all stakeholder groups in assigning relative importance to content serves as an agent to temper personal bias. If in

fact value orientations are a result of personal experiences and interactions within personal spheres of influence, one must acknowledge this influence as a limitation affecting programmatic decisions which need to serve a broad range of clients. Selecting content based on the values of one or two curriculum writers, or a large number of individuals who only represent one stakeholder group, can not be justified.

Establishing Consensus on Relative Importance of Content

The Delphi method was originally developed by the Rand Corporation in the 1950's to establish consensus of opinion regarding future trends for the sake of guiding decision-making processes (Dalkey, 1967; Helmer, 1994; Ono & Wedemeyer, 1994). The method provides a systematic procedure for soliciting and facilitating a convergence in opinions from within a controversial socio-political arena of debate (Helmer, 1966; Lundberg & Glassman, 1983; Penland, 1983; Sandow, 1972; Spinelli, 1983; Weaver, 1972). The Delphi technique is designed to explore and expose underlying assumptions or information leading to differing judgments and educate respondent groups as to the diverse and interrelated aspects of the topic (Penland, 1983).

Features which separate the Delphi technique from conventional survey research include guaranteed anonymity, interchange of ideas and opinions, the ability to share conflicting opinions in non-threatening environments, successive interaction and continuous aggregation of informed judgments (Brown, 1968; Penland, 1983; Spinelli, 1983). Expert panels establish priorities to relevant policy-making objectives by using a series of questionnaires. Successive questioning occurs without face-to-face confrontations, and are interspersed with controlled feedback of the groups' reasons for supporting the various items of the instrument (Hakin & Weinblatt, 1993; Helmer, 1966). The purpose of feedback is to effect interaction and create consensus among respondents who otherwise operate in a totally independent manner. The process results in a systematic informed consensus of opinion while identifying important divergence in opinions (Penland, 1983).

Agreement on goals and/or courses of action are often hindered by divergence of ion, strong allegiances and varying vested interests. When self-serving motives, onal bias and incompatible values are present, effective methods must be used to sort e diverse elements on the merit of their supporting arguments (Lundsberg & Glassman, 3). The Delphi technique, according to Helmer (1994), may be the most efficient means lable for determining degrees of consensus and/or dissension among decision-making ps. It does so by avoiding undue influence on outcomes of some dominant individuals ermitting independent thought and reducing the reluctance by some participants to don positions previously made public. It also has the potential to enhance clarification e issues and the attainment of a fair outcome.

The Delphi technique has been found to be an effective tool for assessing clientele ls, desires and opinions as institutions re-examine their goals (Cyphert & Gant, 1971; o, 1985; Uhl, 1983), allowing dialogue between geographically separated experts kin, 1994), and facilitating the convergence of highly diverse opinions (Blohm & nbuck, 1975). The literature also contains documentation of the Delphi's effectiveness lucating participants on pertinent issues (Raskin, 1994).

A variety of curriculum studies have also found the Delphi technique an effective for building a consensus in opinions with respect to educational priorities and issues. vo separate endeavors, Raskin (1983, 1994) found it effective in obtaining consensus ssues concerning the administration of instruction in the field of social work. Results separate studies using random and convenience samples lead Martorella (1991) to lude a national consensus among social studies educators exists concerning curriculum s, problems in the field, and needed areas of research. Similar results have been found erning objectives for environmental education (Hammerman & Voelker, 1987) and collegiate business communication courses (Martin & Chaney, 1992). The procedure been effectively implemented in institutional goal setting (Cyphert & Gant, 1971; veigert & Schabacker, 1974; Uhl, 1971) and in curriculum planning and development

projects (Fazio, 1985; Todd & Reese, 1989; Uhl, 1983; Weaver, 1988).

The Delphi technique was used in the field of physical education to validate twenty-three purposes for moving, grouped into seven major categories, that appear in Jewett and Mullan's *Purpose Process Curriculum Framework* (Jewett & Mullan, 1977). Using curriculum theorists, researchers, directors, supervisors and teachers as stakeholder groups, LaPlante (1973) determined all seven categories of movement purposes were valid for providing guidance in program development.

The basic procedure used with the Delphi technique is described in the literature by a variety of authors (Helmer, 1994; Huchfeldt, 1972; Martin & Chaney, 1992; Penland, 1983; Race & Planek, 1992; Uhl, 1983). In its basic form, the initial step is to invite panel members, or stakeholders, to participate. Respondents selected to participate must provide a broad representation from competent and interested individuals in the area being investigated. Although most research using the Delphi engages individuals deemed "experts" within the realm of investigation, Uhl (1971, 1983) found no dilution in results by including lay persons. Participation by invitation (Huchfeldt, 1972; Uhl, 1971) and providing participants with incentive to remain interested (Uhl, 1983) are cited as crucial components to reduce attrition rates.

The Delphi technique consists of a series of questionnaires dispensed in a number of rounds. Typically, round one is designed to solicit opinions of experts (stakeholders) as a means of identifying and framing potential issues, and/or generating a list of options for a specified purpose. In educational research, the technique is most often used to identify educational goals or objectives. The opinions received from the first round are aggregated and categorized. The information is then reduced by a project committee to the least number of discrete statements possible without the loss of information.

In round two, respondents are provided the revised list of items. They are asked to rate each item according to its importance, and provide statements (rationales) defending items they selected as being of highest priority.

A number of studies have circumvented the first step (utilizing an open-ended questionnaire) by providing a defensible list of items in place of the first round (referred to in the literature as a structured format). With this structured format, respondents are asked to rate the importance of each item, and are given the option of adding items they feel have been overlooked. They are also asked to provide the rationale for their additions, which in turn is included in subsequent rounds. Both techniques produce similar results, but those using open-ended questionnaires can expect higher dropout rates (Uhl, 1983).

The ratings obtained from the second round are aggregated and represented by statistical measures of central tendency. Most often, means or medians are reported as measures of central tendency, and at least one measure of dispersion is reported. Brown (1968) and Helmer (1994) found the median to be the best single number representative of a group's collective opinion, and suggested the interquartile range be used as a measure of divergence of opinion among respondents. The statements (rationales) provided by respondents for each item are reviewed and summarized by a project committee. The main points of each argument are represented in concise statements and are included with the item and its descriptive statistics in the next round.

The information from each item (along with its statistical analysis and rationales for its rating) is provided to participants in the third round. Respondents are directed to read and consider the feedback provided by others and re-rate items in light of the descriptive statistics and written rationales. Any time their new ratings fall outside a prescribed range - usually the interquartile of ratings - they are asked to provide a rationale defending their decision. The purpose of this requirement is to force participants to reflect on their positions and provide others with information they might not have considered.

The measure of dispersion on item responses tends to decrease in successive rounds (Helmer, 1994). Ideally, successive rounds (consisting of providing participants with descriptive statistics and rationales for rating items outside the named range of dispersion) continue until the measure of dispersion for each rating stops decreasing.

However, the researcher must balance the quality of information obtained with the respondent time and the potential for increased rates of attrition with each round as interest wanes (Uhl, 1983; Zoski & Jurs, 1990). Most of the change in the rating dispersion typically occurs during the first three rounds (Cyphert & Gant, 1971; Scheibe, Skutsch & Shofer, 1975).

Time to complete the rating process and time allotted between rounds should be allocated in a way that provides sufficient time for decision making, while minimizing the length of the study to restrict attrition. Administrators should allow enough time between rounds to prepare and distribute feedback, but not so much that the participants lose interest. According to Uhl (1983) results are maximized if participants return questionnaires in five days or less, and no more than three weeks elapse between rounds.

Experts rarely agree on a single answer to a question, or arrive at a single value. Therefore a consensus provides a more valid estimate of diverse needs than the judgment of only one expert (Brown, 1968; Kean, 1982). The Delphi technique provides a process for resolving key issues in a way that neutralizes politics and accentuates defensible rationale. At a minimum, even where a wide divergence of opinion exists, the Delphi technique results in an acceptable level of agreement by most stakeholders (Bryson, 1988). In cases where no definitive agreement can be attained, the Delphi isolates the sources of dissension and helps identify the kind of information that might reduce the divergence of opinions (Helmer, 1994).

The Delphi technique provides a means to portray various perspectives and informed judgments so the results are derived from many and complex mutual interactions while minimizing many of the problems associated with group dynamics (Jones & Twiss, 1978; Bryson, 1988). It allows for representation of subgroups' (or minority) opinions and insights, and it allows respondents to provide responses in deference to authority (Jones & Twiss, 1978). The technique avoids domination by subgroups or strong personalities (Asch, 1958; Kelly & Thibault, 1954; Powell, 1993). The technique eliminates the

discussions in group situations directed towards individual and/or group interests and focuses the work on the task at hand. Finally, the Delphi technique minimizes the reluctance by experts to modify previously-expressed opinions while diminishing the bandwagon effect (Jones & Twiss, 1978).

The Delphi technique is an especially effective tool when the problem: 1) needs to be solved using the collective judgments of more than one group (Uhl, 1983), 2) can benefit from subjective judgments (Race & Planek, 1992), 3) involves individuals representing diverse experiences and expertise (Race & Planek, 1992), 4) circumstances make face-to-face meetings impractical (e.g., number of participants necessary, conflicting schedules, cost of travel for multiple meetings, etc.).

Potential users of the Delphi technique should be cautioned that the technique is not appropriate when analytical or calculable methods are available (Jones & Twiss, 1978). Users of the Delphi technique are faced with the difficulty of sifting through and accurately representing potentially large numbers of responses (Zoski & Jurs, 1990). Different from empirical techniques, administering the technique at times relies on a series of value judgments and depends upon individual interpretations. It is also important to note that the procedure is a consensus-building technique. Finally, under the best of conditions, each item's importance is represented by a measure of central tendency within some deviation of the total distribution (Keen, 1982). This leaves the interpretation of the strength of agreement in the hands of those administering and reacting to the results of the endeavor.

Weaver (1972) exposits two other concerns. First, the Delphi technique makes little distinction between the desirable and the plausible. How feasible potential results might be to implement is at times difficult to separate from its value in the minds of participants. Secondly, opinions are not always distinguishable as rational judgments. Care must be taken to represent the opinions of those participating.

Summary

Appropriateness of an eclectic model

This study was based upon an eclectic approach to curriculum construction. Eclectic models are characterized by accommodating the interplay of values, interests, demands and powers of stakeholder groups in the selection of content, thereby approximating what occurs in daily practice (Gay, 1980). Advocates of eclectic models emphasize the impropriety of one curriculum designer imposing his/her value base on diverse groups.

The model assumes a pragmatic approach to the selection of curriculum content, basing decisions upon the premise that outcomes students need to acquire prior to graduation should be determined as carefully as possible using relevant stakeholder groups. Examples of eclectic approaches and their defense appears in Reid's (1992) discussion of a deliberative model, Brandt's (1988b) discourse on a utilitarian perspective, and Vogel and Seefeldt's program design model in Physical Education (Vogel & Seefeldt, 1988).

Curriculum balance: kind and amount

Steinhardt, in her review of the field of physical education, notes several studies supporting the notion that physical education teachers generally teach using more than one curricular model, providing logical support for an eclectic approach as well. The concept of a balanced curriculum incorporating variety in the kinds of objectives- in contrast to curriculum models advocating a narrow focus- has received support in the literature (Dauer & Pangrazi, 1989; Legwold, 1983). An eclectic approach necessitates representing all potential inclusions in the program, reaching consensus on what elements are deemed most important in the eyes of the stakeholders, then balancing content with available resources. The process accommodates the consideration of all value orientations and curriculum models, and the result is a curriculum product that includes all orientations and models in varying degrees.

Stakeholders

Assigning relative importance to the content appropriate for K-12 physical education programs that truly represents the best thinking of all stakeholders requires the inclusion of a representative group of stakeholders in the decision-making process. This study engaged all pertinent stakeholder groups in establishing content priorities. Stakeholders appropriate for inclusion in the content selection process include central administrators, building administrators, school board members, classroom teachers, physical education teachers, community recreation directors, parents and students.

Appropriateness of the Delphi technique

The Delphi Technique (Dalkey, 1967) was used in this study to engage representative stakeholders. In general, a number of characteristics made the Delphi Technique an appropriate procedure for this study. The Delphi technique facilitates the systematic collection and analysis of judgments on key issues by experts within a common field (Martorella, 1991). It is widely accepted as an effective method of obtaining consensus from a group of experts (Blohm & Steinbuch, 1975, Helmer, 1994, Jones & Twiss, 1978; Martorella, 1991). Brown, Cochran and Dalkey (1969) reported no loss in effectiveness when non-experts were included as long as a number of participants are knowledgeable about the subject area. The Delphi technique has a history of use in curriculum planning and development (Fazio, 1985; Judd, 1971; Martin & Chaney, 1992; LaPlante, 1973; Reeves, G. & Jauch, L. R., 1978; Todd & Reese, 1989; Uhl, 1983; Weaver, 1988) and goal setting (Cyphert & Gant, 1971; Schweigert & Schabacker, 1974; Uhl, 1971).

The Delphi technique consists of engaging a broad representation of competent and interested individuals in a series of surveys. In each survey round, respondents share opinions and receive feedback with respect to the items of interest. Respondents review summarized ratings and their associated rationales and are then provided the opportunity to

revise their responses based upon their assessment of the new information (Race & Planek, 1992).

The measure of dispersion on item responses tends to decrease in successive rounds (Helmer, 1966). While the ideal would be to continue rounds until the measure of dispersion stops decreasing, the number of rounds suitable for a study becomes a function of balancing the quality of information with the amount of time consumed and the potential for increased attrition with successive rounds. Generally speaking, it appears most change in the degree of dispersion on rating of items occurs by the third round (Cyphert & Gant, 1971; Scheibe, Skutsch & Shofer, 1975). Accordingly, this study used three rounds.

CHAPTER 3

METHODOLOGY

The purpose of this study was to identify stakeholders' views of the relative importance of content that is appropriate for inclusion in K-12 physical education programs in Michigan. The study involved stakeholders in a modified Delphi technique to obtain rankings of the relative importance of discrete elements of physical education content. The degree to which rankings changed within and across stakeholder groups, participating school districts, and within selected demographic variables was also assessed. The study was framed by the following research questions:

1. What is the relative importance assigned by stakeholders to lifelong activities and program objectives suitable for inclusion in K-12 physical education programs?
2. Did the ratings assigned to lifelong activities and program objectives by each stakeholder group, school district, and selected demographic variable converge with the priorities held by all other participants?
3. Do differences in the final rank orders assigned to lifelong activities and program objectives exist between the stakeholder groups, school districts, and selected demographic variables at the conclusion of the study?
4. Did the ratings assigned each element of program content converge from the initial round to the final round of a modified Delphi study within all participants, stakeholder groups, school districts, and selected demographic variables?
5. Did the rank order of relative importance on program content change from the initial to the final round of a modified Delphi study for the participants as a whole, or for representatives of stakeholder groups, school districts, and selected demographic variables?

Description of the Sample

The sample for this study was drawn from a population of stakeholders residing in Michigan. Stakeholders are individuals who are served by K-12 physical education programs or influence what content is taught. School-related stakeholder groups were identified by synthesizing the literature that addresses those who influence or are influenced by what is taught in schools (Brandt & Tyler, 1983; Ennis, 1992; Faucette, 1986; Jewett & Bain, 1985; Levine, 1990; Ratliffe, 1986; Tyler, 1949). School-related stakeholder groups pertinent to content selection in physical education include: central administrators, building administrators, classroom teachers, physical education teachers, school board members, parents, community recreation directors, and current students or recent graduates. Other stakeholder groups pertinent to content selection in physical education include: subject matter experts, state professional physical education association officers, state legislators, and representatives from Michigan Departments of Education and Community Health, intermediate school districts, and Michigan Recreation and Parks Association.

School Related Sampling Procedures.

Different regions of the state vary in population density, terrain, weather, political allegiance, and amount of rural/urban populations. It was assumed that these variables, along with variation in lifestyles, family incomes, and preferences for public or private education could affect attitudes towards curricular content. Accordingly, the state was divided into five regions: upper peninsula, northern lower peninsula, the western, central, and eastern regions of the remaining lower peninsula. A purposeful sampling procedure was implemented to acquire four representative schools from each region. The intent was to obtain combinations of public/private, large/small, urban/rural, poor/affluent school districts from each region to represent these differences in subpopulations.

Invitations were extended by mail to six school districts from each region, varying according to the prescribed criteria, six weeks prior to the scheduled start of the study. The invitation, appearing in Appendix A, consisted of a cover letter, a flier describing the study,

the study's schedule of events, a description of a district facilitator's responsibilities, and criteria for the selection of representative stakeholders for the district. The cover letter explained that the study would be limited to the first 20 school districts that agreed to participate and provided the right combination of prescribed demographic criteria.

The invitation encouraged school districts to participate by explaining that those who participate would receive important information reflecting priorities held by the local community. This information would allow them to:

- customize their curriculum based on local values and interests;
- compare local values to other school districts in the state and the state as a whole;
- receive acknowledgment in Michigan's Alliance for Physical Education, Recreation and Dance professional journal as a participant in the statewide study;
- complete a substantial amount of work towards achieving criteria necessary for recognition in the Governor's Exemplary Awards Program.

Follow-up phone calls were made to school districts seven to ten days after the mailing to answer questions and encourage participation. As some school districts chose to participate and others decided not to, additional school districts were selected and invited to participate to balance the desired demographic characteristics. Seventeen school districts agreed to participate prior to the deadline of October 15 (see the study schedule in Appendix A), and fifteen of those completed the study. No school from the upper peninsula agreed to participate.

School districts were required to designate a local facilitator to recruit participants, distribute and collect study materials, and return all materials to Michigan State University. Their responsibilities are described in a flier in Appendix A. The flier describes how subjects were to be sampled in a replicable fashion across districts. Facilitators were provided a $100 honorarium at the completion of the study.

Each school district was represented by participants in each school-related stakeholder group. The number of participants varied according to the size of school (e.g.,

a large school with multiple buildings was often represented by numerous building administrators, while a small school where administrators have more diverse roles typically had fewer participants). The participants by region of the state, school size and stakeholder type are summarized in Table 1.

Sampling Subject Matter Experts and Institutions.

Invitations to participate in the study also were extended to individuals who teach physical education curriculum and/or pedagogy courses at every college and university in Michigan that provides teacher preparation programs in physical education. Michigan has 21 such institutions. Additionally, all officers in Michigan's Association for Health, Physical Education, Recreation and Dance (MAHPERD) for the 1996-97 school year with a primary focus on physical education were invited to participate.

An attempt was made to enhance participation and minimize attrition rates by:

- emphasizing the importance of the study's findings to the conduct of physical education teacher education in Michigan,
- stressing the importance of completing all three rounds,
- reminding participants that involvement in the study was a good way to contribute to Michigan's Exemplary Physical Education Curriculum Project, and as such was a form of professional service,
- informing them their participation in the study would be acknowledged in the MAHPERD Journal.

Representatives of the other groups that have a stake in the content of physical education programs were also extended invitations to participate in the study. They include:

- state senators and representatives serving on education and appropriations committees, and those representing school districts that agreed to participate;
- members of the Departments of Education and Community Health that are responsible for educational programming;
- a random sample of members of the Michigan Recreation and Parks Association.

Table 1: Distribution of participants by region, school size and stakeholder type.

			Stakeholder Type									
Region	Size[1]	School	cad	bad	sbm	crt	pet	pnt	std	rec	undesig-nated	Totals
North	A	A	2	1	2	3	13	2	0	1	1	25
	D	B	2	1	0	4	2	3	2	0	1	15
	C	C	0	3	0	3	3	2	2	0	3	16
West	B	D	0	3	1	3	8	4	0	1	0	20
	C	E	0	3	2	4	3	3	1	0	2	18
	D	F	1	0	1	1	2	8	1	0	0	14
	A	G	1	2	0	5	12	10	1	3	1	35
Central	D	H	0	2	1	2	3	3	0	0	2	13
	D	I	1	1	1	3	1	4	0	1	3	15
	B	J	1	3	3	3	8	4	1	3	2	28
	C	K	0	1	0	2	2	5	2	0	0	12
East	A	L	2	1	0	1	11	2	0	0	1	18
	B	M	1	3	1	4	2	3	0	1	4	19
	A	N	0	4	0	3	5	4	0	0	6	22
	A	O	1	3	2	2	13	8	0	2	3	34
Totals		15	12	31	14	43	88	65	10	12	29	304

Legend: cad= central administrator; bad= building administrator; sbm= school board member; crt= classroom teacher; pet= physical education teacher; pnt= parent; std= student; rec= community recreation directors.

[1] Schools in Michigan are divided into quartiles by the Michigan High School Athletic Association to equalize competition between like-sized schools. Class A schools represent the 25% of schools with the largest student population.

All stakeholders outside of school districts were mailed invitations to participate that included the following:

- a cover letter,
- a flier describing the study and listing their responsibilities and benefits from participation,
- a study timetable,
- a consent form (Appendix B).

Stakeholders indicated their willingness to participate by filling out the consent form and returning it in the enclosed self-addressed envelope.

Description of the Survey Instrument

The survey instrument was designed to represent discrete units of potential content (program objectives) either included or advocated in the NASPE and Michigan content standards for physical education. Because of basic differences in how program objectives included in those documents are represented, the instrument was divided into two parts. Part 1 contains leisure activities in the form of games, sports and activities commonly included in programs of physical education. Part 2 represents program objectives that overarch lifelong activities, such as fitness capacities, personal/social skills, activity-related cognitive concepts and fundamental motor skills.

The rationale behind dividing the survey into two parts is that a physically-educated person demonstrates mastery on a variety of objectives that transcend specific leisure activities (i.e., general program objectives). They would also be expected to have mastered a selected number of specific lifelong activities. The leisure activities are fundamentally different in that each sport contains several program objectives. For example, gaining competency in basketball requires mastering program objectives such as: control dribble, rebounding, shooting lay-ups, person-to-person defense, two-on-two offense, and knowledge of rules.

The instrument used in the first round of this study appears in Appendix C. The first part of the instrument was printed on yellow paper and was used for rating the relative importance of leisure activities often included in physical education programs. The second part was printed on white paper, and was used for rating all other program objectives.

The part of the instrument used to prioritize general program objectives is divided into four content domains common to physical education literature and used in the Michigan Content Standards document. These include the psychomotor skills, fitness capacities, activity-related cognitive concepts, and personal/social/attitudinal character traits. Content from each domain is subdivided into one of 15 content areas that parallel Michigan's content standards. Each content standard is further reduced to a list of discrete, ratable program objectives. Although the document is comprehensive in nature, participants were allowed to add program objectives they felt should be included in subsequent rounds.

Each of the 15 content standards includes a statement of rationale for its content (see Appendix C). The program objectives that represent each standard were accompanied by definitions of competence. Definitions of competence were intended to describe levels of performance that allow graduates to use the objective effectively in real world settings. The definitions allowed participants to rate the relative importance of each program objective in the presence of a common outcome expectation. The definitions were provided to enhance participants' ability to make distinctions of their relative importance and communicate rationales for their ratings.

Demographic data were collected as part of the consent to participate form. The form appears in Appendix B. Participants were asked for the following information: 1) the school district they were associated with (if appropriate), 2) the primary stakeholder group they were representing, 3) their gender, 4) the category which contained their household income. Due to the difficulty in defining and measuring socio-economic status, household incomes were used as a general indicator. Income brackets were determined by identifying

the state's median household income, then estimating cut-points above and below the median that would generally subdivide the state's household incomes into quintiles.

Data Collection Procedures

Preparation Phase

A project Delphi Committee of nine individuals was assembled during this phase of the study. Seven members of the committee had advanced degrees in the field of physical education (six Ph.D.'s, one Ph.D. candidate/University tenured faculty). The remaining two had extensive experience in curriculum construction and possessed strong writing/editorial skills. The committee consisted of four women and five men.

Committee members were convened following completion of the data collection for rounds one and two. Their charge was to review the rationales for each item, eliminate arguments that were inconsistent with the physical education literature, categorize like rationales, and then represent each unique, discrete rationale in a concise statement to be included for consideration by participants in the subsequent round.

Project team members were trained during their initial meeting. The training consisted of communicating the purpose of their involvement, the criteria to use in representing stakeholder rationales and the procedure to use in processing their assigned tasks. After the procedure was explained and demonstrated, a question and answer session terminated the training.

After round one and two data were obtained, project team members were randomly assigned to groups of completed items and their corresponding rationales. Each program objective was assigned to two committee members, who analyzed the rationales independently. Their edited statements of rationale(s) were forwarded to a third committee member, who compared the results and resolved discrepancies. The final statements of rationale for each item were then reviewed by a grammatical editor, to assure clear communication.

Round One. The first survey round was initiated in the following manner:

• for school districts, surveys were mailed or delivered to the district facilitator, who then distributed individual surveys to participants. Participants were provided with envelopes. They were instructed to complete the survey, insert the completed survey into the envelope, then seal and return the package to the facilitator to insure confidentiality. During the five day response period, facilitators collected the surveys and returned them to the study center at Michigan State University.

• for all other participants, surveys were mailed directly to their preferred addresses. They were requested to return the completed survey within five days. A self-addressed envelope with return postage was provided to facilitate return of each survey.

Participants were first asked to assign priorities to what they considered to be the most important lifelong activities to teach in a K-12 physical education program. They were asked to rate 15 of the 96 lifelong activities, using the following procedure:

• assign a 5 rating to the three activities they felt were most important for students to master as a result of participation in a K-12 physical education program.

• assign a 4 rating to the three next most important lifelong activities,

• assign three 3 ratings, three 2 ratings, and three 1 ratings in a similar fashion.

This forced-choice method of rating was adopted on the assumption that a very limited amount of time was available to teach physical education content in most Michigan school districts. It was used to avoid the risk inherent in absolute rating, which is the assignment of equally high or peak values to all content. Each participant was then asked to provide a statement of rationale supporting their three highest choices. They were told that these rationales would be shared anonymously in the next round.

Participants were then asked to use the following procedure to rate 50 of the 98 general program objectives on the second part of the instrument:

• read the directions, rationales for content categories, and definitions of competence for each program objective,

• assign a 5 rating to the ten objectives they felt were the most important for students to master in their physical education program,

• assign a 4 rating to the next ten most important program objectives, and

• continue in the same fashion to assign ten 3 ratings, ten 2 ratings and ten 1 ratings.

For each objective assigned a rating of 5, participants were asked to provide a rationale explaining why that objective was given the highest rating.

Mean values were calculated for each lifelong activity and separately for each program objective. Dispersions in ratings were represented by interquartile ranges. Rationales for highly-rated lifelong activities and program objectives were compiled and processed by the project committee as described earlier. All of this information was incorporated into the second round instrument.

The second round instrument again separated lifelong activities from general program objectives. The items in each part appeared in rank order according to mean ratings, and were accompanied with their overall rank, mean rating, interquartile range, and statements of rationales constructed by the project committee. A sample from the second round instrument, illustrating the instrument's format and rationales, appears in Appendix D[2]. The study schedule allotted a maximum of seventeen days to construct the second round instrument and initiate the second round of data collection.

Round Two. The distribution, completion, return procedures, and timelines for the second and third rounds of the survey were the same as for the first round. Respondents were given the data from round one on the second round instrument.

Using the two parts of the instrument separately, participants were asked to review each item's rank order, mean rating, and the rationales for those rated in the highest category. They were then asked to re-rate the items on both parts of the instrument using the same procedure as the first round. When participants rated an item outside the interquartile range from the previous round (thus assigning either more or less relative

[2] The complete instruments used for rounds two and three can be obtained by contacting the author.

importance to the lifelong activity/program objective than at least half the participants of the prior round) they were asked to provide a statement of rationale for why their rating was appropriate.

The data were processed in the same manner used for the first-round. The rationales were sorted into those supporting higher ratings and those supporting lower ratings on each item. The project committee represented each unique rationale statement as a discrete statement for participants to read and consider in the third and final round. A sample from the instrument used for the third and final round, illustrating the instrument's format and rationale statements, appears in Appendix E.

Round Three. The third round instrument presented the items in rank order based upon data obtained in the second round. Each item was accompanied by its mean rating and interquartile range, and the rationales for rating the item higher and/or lower. Participants were asked to consider the rank order, mean ratings, and arguments for rating the item higher or lower, and then re-rate each objective in the same manner used in the second round. The data obtained in this round were used to compile the final prioritized list of program objectives.

Data Analysis

Data were obtained separately for lifelong activities and program objectives commonly taught in physical education programs. Both sets of data were analyzed in the same fashion.

Question 1: Determining Overall Priorities

Mean ratings were calculated from respondents' ratings for each item at the conclusion of each survey round. Items were ranked according to mean ratings in descending order. Results from the first round represents priorities held at the onset of the study, and results from the third and final round represent the priorities established as a result of the Delphi process. The data also were separated according to subgroups specified in the design and prioritized in the same fashion.

Question 2: Measuring Convergence in Priorities by Subgroups to All Other Participants

The relative importance of the lifelong activities and program objectives, represented by rank order, were calculated for the first and final rounds for each stakeholder group, school district, level of household income, and region of the state. The degree to which the priorities held by each group converged to those held by all other participants at the conclusion of the study was calculated in the following manner:

- Kendall's rank order correlation coefficient was calculated between each group's ranking from the first round, and the final round rankings of all other participants combined;
- Kendall's rank order correlation coefficient was calculated between each group's ranking from the third (final) round, and the final round rankings of all other participants combined;
- the degree of convergence in rankings was determined by comparing the two coefficients (e.g., if the correlation coefficient comparing the final round rank order for any group to the final results of all other participants was greater than the coefficient comparing their first round rankings to the other participants' final results, a convergence in opinion occurred). Statistically significant changes in rank order correlation were determined by comparing the significance of the change in correlation coefficients, using the method described by Bruning (1991).

Question 3: Determining if Differences Exist Between Groups at the Study's Conclusion

Differences in the relative importance on lifelong activities and program objectives were determined by calculating the range of rankings for each objective among stakeholder groups, school district, household income, gender and region of the state. Kendall's rank order correlation was administered to calculate the amount of agreement between groups. Additionally, the number of lifelong activities and program objectives that actually differ between specified groups for a quantity of items that commonly occur in programs of physical education in Michigan was examined to assess the degree of variability between groups.

Question 4: Measuring Convergence/Divergence in Ratings Within and Across Groups.

The dispersion in ratings for each item was calculated by averaging the absolute difference between each participant's rating and the item's median rating. Changes in dispersion from the first to the final round were represented by computing the difference in mean absolute differences from the first and third rounds on each item. The Binomial Test was administered to test the probability that the observed number of items that experienced a decrease in rating dispersion would occur by chance. The procedure was used to identify a significant convergence or divergence in ratings for each item. It was applied to all participants together, and then for each stakeholder groups, school district, household income, gender and region of the state.

Question 5: Measuring Changes in Relative Priorities Across Rounds.

Rank orders for items from the first and final rounds were compared for all participants together, and then by stakeholder groups, school districts, genders, household incomes, and regions of the state. Wilcoxon's Matched-Pairs Signed-Ranks Test was used to determine if statistically significant changes in rank order occurred. The test assesses the degree to which the distribution of objectives around their median were significantly different from the first to the third round. The Wilcoxon test takes into account the degree of change that occurs on each item.

CHAPTER 4

RESULTS

Study Sample

Three hundred fifty of the 412 (85.0%) stakeholders that agreed to participate completed all three rounds of the study. The composition of the stakeholder groups appears in Table 2. The attrition rate was similar across stakeholder groups, with the exception of students, and representatives from the Departments of Education and Community Health. Only 10 of 22 students who began the study, and no one from the Departments of Education and Community Health, completed all three rounds. While seven legislators agreed to participate by returning consent forms, the data obtained could be matched to only two of the consent forms. The remaining legislators either reconsidered, or the instruments were filled out by staff members who used uninterpretable identification numbers, making it impossible to match the data with the appropriate demographics. The response rates for the remaining groups ranged from 97.8 percent (classroom teachers) to 72.7 percent (MAHPERD representatives).

The nature of the participating school districts is summarized in Table 3. Data are presented concerning the sample size representing each school district, the region of the state in which the district is located, each district's total student enrollment, whether the school is public or private, urban or rural, and the district's general economic status. Dashed lines appear where data were not available.

The data from Table 3 suggests that the demographic data was reasonably balanced in every category mentioned above. Each school district was represented by 12 to 35 participants. The number of participants was directly related to the size of the school. Three school districts were located in the northern part of the state. Each of the other regions was represented by four school districts. The school districts' student enrollment was equally distributed around the state mean and reasonably distributed within each geographic region.

Table 2: Characteristics of Stakeholders.

Stakeholder Groups				
	Percent			
no.	Completion		Gender	
12	75.0	Central School Administrator	144	Male
31	83.8	Building School Administrator	132	Female
14	73.7	School Board of Education	276	Total[1]
43	97.8	Classroom Teacher		
88	87.1	Physical Education Teacher	**Household Income**	
65	92.9	Parent	1	less than $15,000
10	45.5	Student (current or former)	10	$15,000 - $29,999
16	85.7	Community Recreation Director	38	$30,000 - $44,999
6	75.0	Intermediate School District	79	$45,000 - $69,999
2	28.6	Legislature	135	$70,000 or more
8	72.7	MAHPERD Representative	262	Total[1]
17	94.0	University Physical Education		
0	0.0	Department of Education		
0	0.0	Department of Health		
38		undesignated		
350	85.0%	Total[1]		

[1] Differences in total number of respondents in each group (stakeholder group, gender, household income) is a result of participants not designating their gender or income on the demographic data portion of the consent form.

Table 3: School District Demographic Data.

School	No. of Subjects	Region	No. of Students	Type	% urban*	% poverty	Med. Fam. Income
A	25	North	11,085	public	25 outside	7.8	$29,561
B	15	North	1,002	public	0	18.4	$18.280
C	16	North	1,897	public	0	22.3	$20,092
D	20	West	3,342	public	96.2 inside	1.8	$38,180
E	18	West	1,395	private	43.6 inside	4.22	$35,475
F	14	West	955	private	45 inside	-----	----------
G	35	West	6,554	public	71.4 inside	3.6	$39,031
H	13	Central	1,087	public	0	12.4	$25,102
I	15	Central	1,010	public	0	9.3	$31,907
J	28	Central	3,354	public	41.9 outside	6.8	$33,499
K	12	Central	1,324	private	98 inside	-----	----------
L	18	East	24,600	public	100 inside	32	$18,742
M	19	East	2,105	private	92 inside	0	----------
N	22	East	12,825	public	99.2 inside	3.7	$44,004
O	34	East	15,800	public	98.5 inside	3.5	$49,047
State Average	304		2,664		63 inside 8 outside	12.8	$31,020

* Outside refers to populations defined as urban, but located outside urbanized areas.

Inside refers to populations defined as urban and located inside urbanized areas.

Of the seven districts that had student enrollments above the state mean, one was located in northern Michigan, two were in the western region, one was in the central region, and three were in eastern Michigan. Four school districts were private schools. Two were located in the west region, one in the central region and one was in the east.

Data on urban/rural locations appear in the sixth column. Definitions for urban, urban areas, and rural were extracted from the Census Bureau. The terms "inside" and "outside" refer to whether the district's population resides inside or outside an urban area. Urban is defined as all territory, populations and housing areas inside urbanized areas, and places of 2,500 persons or more outside urbanized areas. Urbanized areas are defined as a central place and surrounding territory that together have a minimum of 50,000 persons. The surrounding areas must have a population density of at least 1000 persons per square mile.

Of the 15 participating school districts, four were completely rural while six were at least 92 percent urban inside urban areas. The remaining four districts demonstrated varying combinations of urban and rural populations.

The percent of the population below the poverty level and the median household income were used to indicate the socio-economic status of residents of the district. The data were extracted from Michigan's Department of Management and Budget 1990 Census Data for school districts. The dashed lines indicate no information was available. The median family income was above the state's median family income in six of the 12 school districts where figures were available. For the other six, the income level was virtually equal to the state's figure in one district, and less that the state figure in five districts.

Question 1

What is the relative importance assigned to lifelong activities and program objectives suitable for inclusion in K-12 physical education programs?

Data on the relative importance assigned to selected lifelong activities were collected separately from data on the relative importance assigned to program objectives. Mean ratings of relative importance for lifelong activities were calculated by assigning zeros to all

lifelong activities that were unrated by the 350 participants. Ratings were then averaged across each activity. The lifelong activities were then ranked according to their mean ratings in descending order.

Data from the lifelong activities appear in Table 4, listed according to their final rank order by all participants. The same information is provided for all program objectives in Table 5. Each activity and program objective is accompanied by three sets of data. The first set, consisting of the three left-most columns, provides the item's final ranking, overall mean rating and average rating dispersion from the final round. Dispersions of ratings were calculated by averaging the absolute value of the difference between each participant's rating and the item's median rating.

The middle set of data consists of the same information for each item from the study's first round. The right-most set, shaded in gray, provides the changes that occurred in overall rank, mean rating, and rating dispersion from the first to the final round.

While mean ratings and dispersions were rounded to the nearest hundredth in the tables, exact values were used to determine rank order. Four program objectives appearing in Table 5, sportsmanship, self-respect, shoot a basketball overhand, and knowledge: size, did not appear in the initial instrument addressing program objectives. They were added to the second round instrument upon suggestion by participants during the first round. Consequently, no data appears for these items under the columns titled First Round and Changes.

Table 4: Rankings, mean ratings, and rating dispersions of lifelong activities by all stakeholders for the first and final rounds.

	Final Round			First Round			Changes		
Activity	Rank	Mean	Disp.	Rank	Mean	Disp.	Rank	Mean	Disp.
swimming	1	4.64	0.36	1	4.20	0.80	0	0.44	-0.44
jogging/powerwalking	2	4.32	0.68	2	3.06	1.81	0	1.26	-1.13
strength training	3	3.64	1.22	5	2.35	1.85	-2	1.29	-0.63
basketball	4	3.15	1.23	3	2.61	1.59	1	0.55	-0.36
tennis	5	3.06	1.14	4	2.40	1.48	1	0.66	-0.34
volleyball	6	2.85	1.10	8	1.90	1.50	-2	0.95	-0.40
golf	7	2.52	1.38	6	2.33	1.50	1	0.18	-0.12
cycling	8	2.33	1.46	9	1.76	1.68	-1	0.57	-0.22
softball	9	2.32	1.27	7	2.02	1.51	2	0.30	-0.24
dance: aerobic	10	2.11	1.43	10	1.73	1.72	0	0.37	-0.29
soccer	11	2.02	1.24	11	1.72	1.61	0	0.30	-0.37
walking	12	1.55	1.41						
skiing: cross country	13	1.33	1.22	13	1.22	1.22	0	0.11	0.00
track: running	14	1.00	1.00	16	1.00	1.00	-2	0.01	0.01
hiking	15	0.99	0.99	12	1.30	1.30	3	-0.31	-0.31
skating: inline	16	0.82	0.82	15	1.00	1.00	1	-0.18	-0.18
dance: social	17	0.70	0.70	17	0.86	0.86	0	-0.16	-0.16
bowling	18	0.70	0.70	14	1.04	1.04	4	-0.34	-0.34
rope jumping	19	0.69	0.69	18	0.81	0.81	1	-0.12	-0.12
swimming: life saving	20	0.68	0.68	20	0.73	0.73	0	-0.05	-0.05
gymnastics: tumble /floor	21	0.47	0.47	23	0.61	0.61	-2	-0.14	-0.14
badminton	22	0.38	0.38	26	0.39	0.39	-4	-0.01	-0.01
step aerobics	23	0.32	0.32						
racquetball	24	0.31	0.31	24	0.59	0.59	0	-0.28	-0.28
football: flag/touch	25	0.29	0.29	19	0.80	0.80	6	-0.51	-0.51
track: field	26	0.19	0.19	30	0.35	0.35	-4	-0.16	-0.16
camping	27	0.19	0.19	21	0.66	0.66	6	-0.47	-0.47
hockey: ice/inline/floor	28	0.17	0.17	27	0.39	0.39	1	-0.22	-0.22
back packing	29	0.15	0.15	31	0.34	0.34	-2	-0.20	-0.20
dance: line	30	0.12	0.12	41	0.17	0.17	-11	-0.05	-0.05
skating: ice	31	0.12	0.12	28	0.38	0.38	3	-0.26	-0.26
dance: square	32	0.11	0.11	43	0.14	0.14	-11	-0.03	-0.03
table tennis	33	0.10	0.10	33	0.25	0.25	0	-0.15	-0.15
skiing: downhill	34	0.09	0.09	29	0.37	0.37	5	-0.28	-0.28
swim: WSI	35	0.09	0.09	40	0.17	0.17	-5	-0.08	-0.08
self defense	36	0.07	0.07						
tai-chi	37	0.06	0.06	44	0.13	0.13	-7	-0.08	-0.08
fishing: baitcasting	38	0.05	0.05	32	0.26	0.26	6	-0.20	-0.20
frisbee: skills/games	39	0.05	0.05	36	0.21	0.21	3	-0.16	-0.16
martial arts: karate	40	0.05	0.05	37	0.20	0.20	3	-0.14	-0.14
canoeing	41	0.05	0.05	25	0.41	0.41	16	-0.36	-0.36
archery	42	0.04	0.04	34	0.24	0.24	8	-0.19	-0.19
wrestling	43	0.04	0.04	42	0.15	0.15	1	-0.11	-0.11
skating: roller	44	0.04	0.04	35	0.22	0.22	9	-0.19	-0.19
orienteering	45	0.04	0.04	38	0.19	0.19	7	-0.15	-0.15
team handball	46	0.04	0.04	53	0.08	0.08	-7	-0.05	-0.05
dance: modern	47	0.03	0.03	56	0.06	0.06	-9	-0.03	-0.03
dance: creative	48	0.03	0.03	50	0.10	0.10	-2	-0.08	-0.08

Table 4 (cont'd).

Activity	Final Round			First Round			Changes		
	Rank	Mean	Disp.	Rank	Mean	Disp.	Rank	Mean	Disp.
martial arts: others	49	0.02	0.02	55	0.07	0.07	-6	-0.04	-0.04
crew	50	0.02	0.02	80	0.01	0.01	-30	0.01	0.01
card games	51	0.02	0.02						
snow shoeing	52	0.02	0.02						
gymnastics: apparatus	53	0.02	0.02	58	0.06	0.06	-5	-0.04	-0.04
dance: folk/ethnic	54	0.02	0.02	39	0.17	0.17	15	-0.15	-0.15
speedball	55	0.02	0.02	64	0.05	0.05	-9	-0.03	-0.03
handball	56	0.01	0.01	46	0.11	0.11	10	-0.10	-0.10
lacrosse	57	0.01	0.01	71	0.03	0.03	-14	-0.02	-0.02
fishing: spincasting	58	0.01	0.01	45	0.12	0.12	13	-0.11	-0.11
sailing	59	0.01	0.01	48	0.11	0.11	11	-0.10	-0.10
shuffleboard	60	0.01	0.01	62	0.05	0.05	-2	-0.04	-0.04
kayaking	61	0.01	0.01	65	0.04	0.04	-4	-0.03	-0.03
hocker	62	0.01	0.01	84	0.01	0.01	-22	0.00	0.00
horseshoes	63	0.01	0.01	51	0.09	0.09	12	-0.09	-0.09
skiing: water	64	0.01	0.01	68	0.04	0.04	-4	-0.03	-0.03
hockey: field	65	0.00	0.00	49	0.11	0.11	16	-0.11	-0.11
shooting: riflery	66	0.00	0.00	57	0.06	0.06	9	-0.06	-0.06
boxing	67	0.00	0.00						
walking: race	68	0.00	0.00	22	0.61	0.61	46	-0.61	-0.61
horseback riding	69	0.00	0.00	47	0.11	0.11	22	-0.11	-0.11
gymnastics: rhythmic	70	0.00	0.00	52	0.09	0.09	18	-0.09	-0.09
fishing: flycasting	71	0.00	0.00	54	0.07	0.07	17	-0.07	-0.07
climbing (rock)	72	0.00	0.00	59	0.06	0.06	13	-0.06	-0.06
diving: SCUBA	73	0.00	0.00	60	0.06	0.06	13	-0.06	-0.06
frisbee: ultimate	74	0.00	0.00	61	0.06	0.06	13	-0.06	-0.06
paddleball	75	0.00	0.00	63	0.05	0.05	12	-0.05	-0.05
pickle ball	76	0.00	0.00	66	0.04	0.04	10	-0.04	-0.04
martial arts: judo	77	0.00	0.00	67	0.04	0.04	10	-0.04	-0.04
diving: springboard	78	0.00	0.00	69	0.03	0.03	9	-0.03	-0.03
shooting: clays/trap	79	0.00	0.00	70	0.03	0.03	9	-0.03	-0.03
dance: jazz	80	0.00	0.00	72	0.03	0.03	8	-0.03	-0.03
dance: tap	81	0.00	0.00	73	0.02	0.02	8	-0.02	-0.02
fencing	82	0.00	0.00	74	0.02	0.02	8	-0.02	-0.02
water polo	83	0.00	0.00	75	0.02	0.02	8	-0.02	-0.02
croquet	84	0.00	0.00	76	0.02	0.02	8	-0.02	-0.02
dance: ballet	85	0.00	0.00	77	0.02	0.02	8	-0.02	-0.02
diving: skin	86	0.00	0.00	78	0.02	0.02	8	-0.02	-0.02
bocce ball	87	0.00	0.00	79	0.01	0.01	8	-0.01	-0.01
swimming: synchronized	88	0.00	0.00	81	0.01	0.01	7	-0.01	-0.01
tennis: platform	89	0.00	0.00	82	0.01	0.01	7	-0.01	-0.01
tetherball	90	0.00	0.00	83	0.01	0.01	7	-0.01	-0.01
shooting: other	91	0.00	0.00	85	0.01	0.01	6	-0.01	-0.01
squash	92	0.00	0.00	86	0.01	0.01	6	-0.01	-0.01
aerial darts	93	0.00	0.00	87	0.01	0.01	6	-0.01	-0.01
rugby (modified)		0.00	0.00				0	0.00	0.00
korfball		0.00	0.00				0	0.00	0.00
snow boarding		0.00	0.00				0	0.00	0.00

According to the results summarized in Table 4 for all respondents, the single most important activity for students to master through participation in a quality physical education program is competency in swimming. The activity's mean rating of 4.64 was 0.32 higher than the next activity, and its final mean rating dispersion 0f 0.36 was nearly half as large as any other of the highest-rated activities. The next ten activities in rank order of preference, with their mean rating in parenthesis, consists of jogging/powerwalking (4.32), strength training (3.64), basketball (3.15), tennis (3.06), volleyball (2.85), golf (2.52), cycling (2.33), softball (2.32), aerobic dance (2.11), and soccer (2.02). Of the first eleven activities, swimming, jogging/powerwalking, strength training, cycling, and aerobic dance can be classified as fitness oriented, while basketball, volleyball, softball and soccer are more skill and team oriented.

Of the 87 lifelong activities listed on the survey in the first round, 64 received ratings in the final round. Walking and step aerobics were added after the first round as a result of participants' recommendation, even though walking is included in the activity of jogging/powerwalking, and step aerobics is a form of aerobic dance. Because of the difficulty in providing effective rationales to anonymous contributors as to why their suggestions were disregarded, it was decided to include them among potential activities in subsequent rounds. Self defense, card games, snow shoeing, and boxing were also added as per participants' suggestions.

Based on the ratings of the program objectives summarized across all respondents (Table 5), the most important outcome of a quality physical education program is the achievement and maintenance of health-related aerobic fitness. The second most valued outcome is assigning value to living an active lifestyle, followed by knowing the potential benefits of engaging in regular physical activity. Seven of the first 10 program objectives, and 19 of the first 40, are from the affective domain. No motor skill appears in the first ten rankings, and only two (relaxation in response to stressful situations, and competence in running) are among the first twenty.

Table 5: Rankings, mean ratings, and rating dispersions of general program objectives from the first and final rounds.

Program Objective	Final Round			First Round			Changes		
	Rank	Mean	Disp.	Rank	Mean	Disp.	Rank	Mean	Disp.
aerobic fitness	1	4.54	0.46	1	4.35	0.65	0	0.19	-0.19
value an active lifestyle	2	4.50	0.50	4	3.77	1.16	-2	0.73	-0.66
benefits of physical activity	3	4.48	0.52	2	4.29	0.71	1	0.19	-0.19
nutritional habits	4	4.34	0.66	3	3.81	1.07	1	0.53	-0.41
respect for others	5	4.21	0.79	8	3.37	1.24	-3	0.83	-0.45
cooperation	6	4.20	0.80	6	3.50	1.15	0	0.70	-0.35
best effort	7	4.04	0.96	5	3.53	1.18	2	0.52	-0.22
responsibility	8	4.03	0.97	7	3.39	1.24	1	0.64	-0.27
self-control	9	3.95	0.94	10	3.30	1.29	-1	0.65	-0.35
appreciation of fitness	10	3.86	0.90	9	3.31	1.30	1	0.55	-0.40
respect for rules	11	3.79	0.81	16	2.81	1.41	-5	0.98	-0.60
design a personal activity program	12	3.73	1.18	12	3.19	1.46	0	0.54	-0.29
follow directions	13	3.63	0.94	15	2.83	1.38	-2	0.80	-0.44
how to learn motor skills	14	3.29	1.09	11	3.21	1.42	3	0.07	-0.33
strength: abdomen/low back	15	3.28	1.13	14	3.03	1.46	1	0.25	-0.33
relaxation	16	3.25	1.14	18	2.78	1.62	-2	0.46	-0.48
prevent injuries	17	3.16	1.08	20	2.69	1.38	-3	0.47	-0.30
decision-making	18	3.08	1.16	19	2.72	1.52	-1	0.36	-0.36
run	19	3.00	1.08	17	2.79	1.63	2	0.21	-0.55
leadership	20	2.96	1.15	24	2.37	1.53	-4	0.59	-0.38
perseverance	21	2.87	1.28	22	2.58	1.46	-1	0.29	-0.18
compassion for others	22	2.83	1.16	25	2.27	1.61	-3	0.57	-0.44
flexibility: hip/low back	23	2.62	0.96	30	2.10	1.51	-7	0.52	-0.55
assess health-related fitness indicators	24	2.56	1.15	23	2.48	1.67	1	0.08	-0.52
lean/fat ratio	25	2.45	1.34	13	3.16	1.57	12	-0.71	-0.23
respect for property	26	2.41	1.08	33	2.06	1.47	-7	0.35	-0.39
throw: overhand	27	2.39	1.22	28	2.19	1.73	-1	0.21	-0.51
enjoyment of movement	28	2.34	1.15	26	2.23	1.55	2	0.11	-0.40
realistic perception of ability	29	2.33	1.14	32	2.08	1.51	-3	0.25	-0.37
strength: legs	30	2.29	1.02	35	1.99	1.43	-5	0.29	-0.40
posture: walk/stand	31	2.28	1.02	34	2.03	1.58	-3	0.25	-0.57
initiative	32	2.11	1.13	31	2.08	1.46	1	0.03	-0.33
catch: fly balls	33	2.10	1.20	36	1.85	1.61	-3	0.25	-0.41
strength: arms	34	2.04	0.93	41	1.66	1.42	-7	0.39	-0.49
detrimental affects of physical activity	35	2.00	1.26	21	2.60	1.44	14	-0.60	-0.18
care for common athletic injuries	36	1.92	0.98	42	1.49	1.48	-6	0.42	-0.50
competitiveness	37	1.91	1.16	27	2.22	1.59	10	-0.30	-0.43
posture: lift and carry	38	1.88	1.03	29	2.14	1.48	9	-0.27	-0.45
sportsmanship	39	1.84	1.50						

Table 5 (cont'd).

Program Objective	Final Round			First Round			Changes		
	Rank	Mean	Disp.	Rank	Mean	Disp.	Rank	Mean	Disp.
balance: dynamic upright	40	1.71	0.96	40	1.66	1.46	0	0.04	-0.50
appreciation of skilled performance	41	1.51	1.07	38	1.71	1.43	3	-0.20	-0.36
jump rope	42	1.42	1.00	46	1.33	1.19	-4	0.09	-0.20
dribble: with hands	43	1.31	1.00	45	1.33	1.28	-2	-0.02	-0.27
courage	44	1.27	0.97	37	1.73	1.48	7	-0.46	-0.51
strength: shoulders	45	1.22	0.97	48	1.24	1.24	-3	-0.02	-0.27
flexibility: trunk	46	1.21	0.91	50	1.18	1.17	-4	0.04	-0.26
knowledge: personal space	47	1.18	0.90	44	1.40	1.33	3	-0.22	-0.43
knowledge: body parts	48	1.15	0.99	51	1.06	1.06	-3	0.09	-0.07
skip	49	1.01	0.89	43	1.41	1.36	6	-0.40	-0.47
knowledge: body actions	50	0.85	0.85	63	0.78	0.78	-13	0.07	0.07
jump: vertical	51	0.84	0.84	49	1.20	1.20	2	-0.36	-0.36
self-respect	52	0.82	0.82						
throw: underhand	53	0.79	0.79	59	0.90	0.90	-6	-0.11	-0.11
bat	54	0.79	0.79	54	1.01	1.01	0	-0.22	-0.22
posture: push and pull	55	0.74	0.74	55	0.98	0.98	0	-0.24	-0.24
strike: forehand	56	0.73	0.73	66	0.70	0.70	-10	0.03	0.03
posture: sit	57	0.71	0.71	47	1.26	1.21	10	-0.55	-0.50
effects of selected performance modifiers	58	0.70	0.70	39	1.68	1.39	19	-0.98	-0.69
even beat	59	0.62	0.62	52	1.03	1.03	7	-0.41	-0.41
dribble: with feet	60	0.59	0.59	68	0.66	0.66	-8	-0.07	-0.07
flexibility: shoulder	61	0.53	0.53	56	0.94	0.94	5	-0.41	-0.41
kick: instep	62	0.50	0.50	71	0.61	0.61	-9	-0.11	-0.11
knowledge: boundaries of space	63	0.48	0.48	65	0.72	0.72	-2	-0.24	-0.24
knowledge: use of force	64	0.48	0.48	69	0.66	0.66	-5	-0.18	-0.18
strike: overhand	65	0.47	0.47	83	0.39	0.39	-18	0.07	0.07
hop	66	0.43	0.43	58	0.91	0.91	8	-0.48	-0.48
flexibility: neck	67	0.38	0.38	61	0.87	0.87	6	-0.48	-0.48
jump: horizontal	68	0.36	0.36	57	0.91	0.91	11	-0.55	-0.55
tempo	69	0.35	0.35	53	1.01	1.01	16	-0.66	-0.66
balance: static upright	70	0.33	0.33	64	0.74	0.74	6	-0.40	-0.40
leap	71	0.30	0.30	70	0.65	0.65	1	-0.35	-0.35
catch: rolling balls	72	0.29	0.29	73	0.58	0.58	-1	-0.29	-0.29
gallop	73	0.28	0.28	67	0.66	0.66	6	-0.38	-0.38
strike: backhand	74	0.27	0.27	91	0.31	0.31	-17	-0.04	-0.04
kick: toe	75	0.25	0.25	74	0.56	0.56	1	-0.30	-0.30
strike: underhand	76	0.23	0.23	95	0.24	0.24	-19	-0.02	-0.02
pass chest	77	0.22	0.22	81	0.46	0.46	-4	-0.24	-0.24
slide	78	0.22	0.22	72	0.60	0.60	6	-0.38	-0.38
flexibility: ankle	79	0.21	0.21	62	0.81	0.81	17	-0.60	-0.60

Table 5 (cont'd).

Program Objective	Final Round			First Round			Changes		
	Rank	Mean	Disp.	Rank	Mean	Disp.	Rank	Mean	Disp.
strength: neck	80	0.20	0.20	60	0.87	0.87	20	-0.67	-0.67
knowledge: use of time	81	0.20	0.20	86	0.37	0.37	-5	-0.18	-0.18
land from a horizontal fall	82	0.18	0.18	76	0.48	0.48	6	-0.30	-0.30
shoulder roll: forward	83	0.18	0.18	77	0.48	0.48	6	-0.30	-0.30
knowledge: positions in space	84	0.17	0.17	78	0.48	0.48	6	-0.31	-0.31
pass: overhead	85	0.16	0.16	89	0.34	0.34	-4	-0.17	-0.17
roll a ball	86	0.16	0.16	80	0.46	0.46	6	-0.30	-0.30
shoot a basketball overhand	87	0.15	0.15						
knowledge: twist/rotate	88	0.14	0.14	75	0.52	0.52	13	-0.37	-0.37
knowledge: directions in space	89	0.13	0.13	90	0.31	0.31	-1	-0.19	-0.19
knowledge: body planes	90	0.12	0.12	92	0.29	0.29	-2	-0.18	-0.18
punt	91	0.10	0.10	96	0.23	0.23	-5	-0.13	-0.13
knowledge: levels of space	92	0.08	0.08	97	0.16	0.16	-5	-0.08	-0.08
shoulder roll: backward	93	0.08	0.08	84	0.38	0.38	9	-0.31	-0.31
uneven beat	94	0.08	0.08	87	0.36	0.36	7	-0.29	-0.29
climb a rope ladder	95	0.05	0.05	85	0.38	0.38	10	-0.33	-0.33
balance: inverted	96	0.05	0.05	82	0.43	0.43	14	-0.38	-0.38
knowledge: use of flow	97	0.03	0.03	94	0.26	0.26	3	-0.22	-0.22
knowledge: shapes	98	0.02	0.02	93	0.28	0.28	5	-0.26	-0.26
knowledge: size	99	0.02	0.02						
knowledge: turn	100	0.01	0.01	79	0.47	0.47	21	-0.46	-0.46
vault	101	0.01	0.01	98	0.13	0.13	3	-0.11	-0.11
accent	102	0.01	0.01	88	0.35	0.35	14	-0.35	-0.35

Aside from the dominance of program objectives from the affective domain (only three affective program objectives appearing on the final instrument failed to make the first 40 objectives), program objectives from the remaining three areas (fitness, motor skill, cognitive concepts) appear a similar number of times within the first 40 program objectives. Six fitness capacities, eight cognitive concepts, and seven motor skills (two locomotor, three non-locomotor and two object control) are included.

Generally speaking, the priorities depicted in the 40 highest-ranked program objectives suggests a priority be given to the development of appropriate personal/social behavior and to the tools necessary to personally manage the acquisition and maintenance of health-related levels of fitness. Along with the seven fitness objectives, all eight cognitive concepts address knowing how and why to direct a safe, effective personal activity program. The seven motor skills appearing in the top 40 include relaxation, dynamic upright balance, and correct posture when lifting and carrying objects. Only two program objectives - overhand throw and catching fly balls - would be construed as objectives designed to prepare graduates to participate in sport-related activity.

The twenty lowest-ranked program objectives consists of 11 cognitive concepts and nine motor skills, with no fitness or affective-related objectives. All 11 cognitive concepts fall into the movement concepts category (i.e., turn, size, shapes, use of flow, etc.). Only three movement concepts, knowledge of personal space (ranked 47th), body parts (ranked 48th)and body actions (ranked 50th), appear among the first half of ranked objectives (see Table 5). The nine motor skills appearing in the lowest 20 consist of five non-locomotor skills (forward shoulder roll, backward shoulder roll, climb a rope ladder, inverted balance, and vault) and four object control skills (overhead pass, roll a ball, shoot a basketball overhand, punt).

Question 2

Did the ratings assigned to lifelong activities and program objectives by each stakeholder group, school district, and selected demographic variable converge with the priorities held by all other participants?

The degree to which priorities held by sub-groups of participants converged toward the final priorities held by all other participants was determined by:

- correlating the rank order of items by each sub-group from the first and final round with all other participants' final round;
- testing the significance of the change in correlation coefficients using the method described by Bruning (1997).

Bruning's procedure was used to determine if the observed change in correlation was statistically significant. This procedure was used for all school districts, stakeholder groups, household incomes, and regions of the state. The results appear in Table 6.

The correlation coefficients (i.e., agreement in rankings) increased in every case. With respect to lifelong activities, increases ranged from 0.0295 to 0.2113 among school districts, from 0.0339 to 0.1911 among stakeholder groups, from 0.0419 to 0.2563 among different income brackets, and from 0.0180 to 0.2056 among different regions of the state.

The increase in agreement in rankings was significant at the .05 level in one school district (O). Physical education teachers were the only stakeholder group that experienced a statistically significant increase. Significance was also obtained for participants with household incomes of more than $45,000, and those from all regions of the state except region 4 (eastern lower Michigan).

For the program objectives, increases ranged from 0.053 to 0.2993 among school districts, 0.0266 to 0.1819 among stakeholder groups, 0.1187 to 0.1480 among different household incomes, and 0.1172 to 0.1214 across different regions of the state. Statistics could not be calculated for legislators, or for the income bracket of less than $15,000, because of an insufficient number of subjects.

Table 6: Changes in rank correlations on Lifelong Activities and Program Objectives between specific groups and all other participants.

		Lifelong Activities					Program Objectives				
	N	first corr.	final corr.	change	df	t statistic	first corr.	final corr.	change	df	t statistic
Districts											
A	25	.6018	.7557	.1539	22	1.3938	.7708	.8896	.1188	22	1.9068
B	15	.5388	.7361	.1973	12	1.1195	.6483	.8010	.1527	12	1.1169
C	16	.5789	.6611	.0822	13	0.4261	.6475	.8608	.2133	13	1.8982
D	20	.6319	.7103	.0784	17	0.6535	.7356	.6826	.0530	17	0.4212
E	18	.6257	.7574	.1317	15	0.9791	.7165	.8691	.1526	15	1.6798
F	14	.6475	.6887	.0412	11	0.2536	.7522	.8991	.1469	11	1.6488
G	35	.6450	.7198	.0748	32	0.7435	.7520	.8693	.1173*	32	2.0685
H	13	.5685	.6886	.1201	10	0.6349	.7051	.8515	.1464	10	1.2609
I	15	.5894	.7123	.1229	12	0.7584	.7641	.8701	.1060	12	1.1442
J	28	.6495	.8188	.1693	25	1.9347	.7357	.8917	.1560*	25	2.5568
K	12	.6581	.7317	.0736	9	0.4215	.7051	.8079	.1028	9	0.7378
L	18	.5952	.7358	.1406	15	1.0056	.7173	.8726	.1553	15	1.6929
M	19	.5457	.7141	.1684	16	1.1037	.5231	.8224	.2993*	16	2.1831
N	22	.6788	.7083	.0295	19	0.2266	.7647	.8286	.0639	19	0.7376
O	34	.5759	.7872	.2113*	31	2.2306	.7254	.8873	.1619*	31	2.8570
Stakeholder Groups											
cad	12	.6226	.6982	.0756	9	0.3626	.7687	.8823	.1136	9	1.1192
bad	31	.6954	.7293	.0339	28	0.3416	.7588	.8525	.0937	28	1.4033
sb	14	.6041	.6669	.0628	11	0.3456	.7109	.8342	.1233	11	1.0793
crt	43	.6372	.7904	.1532	40	1.9779	.7744	.8770	.1026*	40	2.2906
pet	88	.6672	.8372	.1700*	85	3.5144	.8414	.9074	.0660*	85	2.6584
pnt	65	.6185	.7519	.1334	62	1.6968	.8075	.8650	.0575	62	1.4957
std	10	.5278	.6535	.1257	7	0.4304	.7272	.7569	.0297	7	0.1417
rec	16	.6391	.7705	.1314	13	1.0718	.7072	.8891	.1819*	13	2.2377
isd	6	.5139	.7050	.1911	3	0.5463	.5962	.7391	.1429	3	0.4278
leg	2	.4183	.5491	.1308	--	-------	.4338	.5728	.1390	--	-------
mpd	8	.5708	.6453	.0745	5	0.2066	.6102	.8193	.2091	5	0.7603
sme	17	.6066	.7850	.1784	14	1.3596	.7659	.7925	.0266	14	0.2346
Household Incomes											
<$15K	1	.4877	.5296	.0419	---	-------	.5960	.6542	.0582	---	-------
<$30K	10	.6027	.6972	.0945	7	0.4264	.6919	.8166	.1247	7	0.7847
<$45K	38	.6561	.7923	.1362	35	1.6185	.7901	.9088	.1187*	35	2.7925
<$70K	79	.6676	.9239	.2563*	76	7.2505	.7965	.9445	.1480*	76	6.2434
>$70K	135	.6884	.9226	.2342*	132	9.0367	.7826	.9116	.1290*	132	5.6249
Regions of the State											
rg1	62	.6016	.8072	.2056*	59	3.0698	.7850	.9064	.1214*	59	3.4845
rg2	92	.6169	.8103	.1934*	89	3.7857	.7890	.9062	.1172*	89	4.4217
rg3	68	.6199	.8015	.1816*	65	3.0416	.7561	.8757	.1196*	65	3.2229
rg4	96	.7561	.7741	.0180	93	0.3924	.7978	.9162	.1184*	93	4.4602

* Statistically significant at $p<.05$.

Significant changes among program objectives were more prevalent. Data from four school districts G, J, M, and O were significant at the .05 level, as were the correlations for classroom teachers, physical education teachers, and community recreation directors. Changes in correlations for groups with household incomes over $30,000, and all regions of the state were also significant.

Question 3

Do differences in the final rank orders assigned to lifelong activities and program objectives exist between the stakeholder groups, school districts, and selected demographic variables at the conclusion of the study?

Lifelong Activities

Table 7 presents a summary of the distribution of ranges in rankings of lifelong activities by sub-groups. The rank order of all lifelong activities by stakeholder groups, school districts, region of the state, and household income in appears in Appendix F. Similar data for program objectives appear in Appendix G. In both documents, the range of rankings by item across specified groups appears in the second column from the right. The right-most column presents the average absolute difference between each group's rank and the item's median rank.

The number of items displaying large ranges in overall rank between stakeholder groups was relatively large. The range varied from 20 to 29 places on 28 lifelong activities, 30 to 39 places on 11 activities, and 40 to 49 places on three activities. Consequently 42 of the 64 activities (66%) displayed a range in rankings of 20 places or more. Those activities with the greatest range in rank included social dance (43), ice/floor hockey (41), and step aerobics (41) (see Appendix F). Lifelong activities that demonstrated the greatest average absolute differences in rank among stakeholder groups include team handball (10.58), self defense (9.58), square dancing (9.50), tai-chi (9.42), folk/ethnic dance (9.25), and step aerobics (9.17).

Table 7: Number of lifelong activities (LAs) that demonstrate high ranges in overall rank across stakeholder groups, school districts, regions of the state, by gender and across income brackets.

All Lifelong Activities (N=64)

range of rankings	stakeholder	school district	region	gender	income
20-29	28	17	10	2	12
30-39	11	22	4	0	1
40-49	3	6	0	0	0
50+	0	0	0	0	0
total	42	45	14	2	13
% of total	65.6%	70.3%	21.9%	3.1%	20.3%
No. of LAs with mean dispersion ranges >10	1	3	3	2	0

15 Highest Rated Activities

range of rankings	stakeholder	school district	region	gender	income
20-29	1	0	0	0	0
30-39	0	1	0	0	0
40-49	0	0	0	0	0
50+	0	0	0	0	0
total	1	1	0	0	0
% of total	5.4%	5.4%	0%	0%	0%
No. of LAs with mean dispersion ranges >10	0	0	0	0	0

The data from Table 7 show that the variability in the rankings of lifelong activities was greater between school districts than stakeholders. Forty-five lifelong activities (70.3%) displayed a range in ranking of 20 places or more (compared to 42 activities among stakeholder groups), and a larger number of activities displayed ranges at 30 or more places among school districts than in stakeholder groups. The range in rankings varied from 20 to 29 places on 17 lifelong activities, 30 to 39 places on 22 lifelong activities, and 40 to 49 on six lifelong activities.

Activities that demonstrated the greatest range in ranking by districts were badminton (43 places), line dancing (42), square dancing (46),baitcasting (45), team handball (42) and modern dance (40) (see Appendix F). Three lifelong activities displayed average absolute differences in ranks greater than 10.0: self defense (11.80), square dance (10.47), and team handball (10.47).

The range in rankings of lifelong activities across regions of the state was minimal. No lifelong activities displayed a range of 40 places or more, four displayed ranges from 30 to 39 places, and ten displayed ranges from 20 to 29 places. Only tai-chi, team handball, and snow shoeing displayed an average absolute difference in rank across groups of 10 or more.

The range in rankings of lifelong activities across income brackets and by gender were less variable than the other groups. With respect to household incomes, one lifelong activity (crew) displayed a range in ranking of 30 to 39 places, and 12 lifelong activities displayed ranges of 20 to 29 places. Gender groups differed by 20 places or more on two activities. Females ranked self defense 26 places higher than males, and males ranked snow shoeing 23 places higher than females. With these two exceptions, no lifelong activities displayed a mean absolute difference in rank over 10.0 by gender or across income brackets.

The ranges of rankings assigned to lifelong activities presents a convincing argument that large differences in the priorities of lifelong activities are held by various stakeholder

groups and that these priorities differ across school districts. It is important, however, to limit the analysis of these data to the number of activities that can reasonably be considered for inclusion in physical education programs in Michigan. Individuals experienced with curriculum revision projects among the school districts in Michigan suggests that few, if any, school districts have enough instructional time to address even 15 lifelong activities in their core curriculum. Accordingly, the data for the 15 highest-ranked activities by stakeholder group, school district, region, gender and household income are included in Table 8 and described in the following paragraphs.

The greatest range in rankings among the 15 highest ranked lifetime activities was 23 places for basketball, 17 places for softball and soccer, and 14 places for tennis and track: running (see Appendix F). All but four activities - three of which appear among the three highest ranked activities - display double-digit ranges in rankings. The two stakeholder groups with the greatest discrepancy in rankings from the other groups are students and legislators. Students were the only group to rank jogging outside the top two places. Students also ranked basketball, volleyball, soccer, and track: running higher than other the stakeholder groups, and assigned jogging, strength training, golf and cross-country skiing lower relative priorities. Legislators assigned a higher priority to cycling, aerobic dance, walking and track: running, while assigning lower priorities to strength training, basketball, tennis, volleyball, golf and softball.

The average absolute difference in ranks from the median for all participants is a good indicator of overall variation. Rankings for soccer had the highest difference in rank (3.08), followed by track: running (2.92), and golf (2.75). Seven of the 15 activities had an average variation from the median of 2 or more places, and eight had a average variation of less than two places.

Table 8. Rank, range in rankings, and average dispersion (disp.) in rankings for the 15 highest ranked lifelong activities by sub-groups at the conclusion of the study.

Stakeholder Groups															
Activity	all	cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	disp.
swimming	1	2	1	1	1	1	1	2	1	1	3	1	1	2	0.33
jog/powerwalk	2	1	2	2	2	2	2	10	2	2	2	2	2	9	0.75
strength training	3	3	3	3	3	3	3	5	3	3	10	4	3	7	0.83
basketball	4	4	5	4	5	5	4	1	4	4	24	5	6	23	2.42
tennis	5	6	4	5	4	4	9	6	5	5	17	3	4	14	2.00
volleyball	6	7	6	6	6	6	5	4	10	6	12	10	7	8	1.58
golf	7	5	8	11	7	7	10	15	6	9	16	6	5	11	2.75
cycling	8	10	7	8	9	10	8	9	7	11	1	7	11	10	1.83
softball	9	9	9	7	8	9	6	8	9	7	23	12	10	17	2.25
dance: aerobic	10	8	13	9	10	8	11	16	11	8	5	9	8	11	2.00
soccer	11	11	10	10	11	11	7	3	8	15	20	16	9	17	3.08
walking	12	13	12	15	12	12	13	11	13	10	4	8	12	11	1.75
ski: X country	13	12	11	12	13	13	15	22	12	13	9	11	13	13	1.83
track: running	14	15	15	14	15	18	14	7	16	12	6	19	20	14	2.92
hiking	15	17	14	13	14	16	16	13	17	17	13	23	16	10	1.92

School Districts																
Activity	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	range
swimming	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1
jog/powerwalk	1	3	2	2	2	2	2	1	2	2	2	2	3	2	2	2
strength training	3	4	4	3	8	5	3	3	3	3	4	3	4	4	3	5
basketball	7	2	3	6	4	4	4	4	6	6	3	4	5	5	4	5
tennis	4	9	5	5	6	3	5	9	8	4	7	6	2	3	6	7
volleyball	9	5	7	4	3	6	6	8	7	7	5	5	10	6	5	7
golf	8	7	6	9	11	9	11	5	4	5	10	9	7	7	9	7
cycling	6	13	9	11	5	7	7	7	5	9	8	10	6	10	12	8
softball	13	6	8	7	7	10	10	6	9	11	6	7	9	11	8	7
dance: aerobic	10	15	38	8	12	11	8	14	11	8	11	8	12	8	7	31
soccer	11	8	10	10	9	8	9	10	12	10	9	13	8	9	10	5
walking	15	11	11	18	10	15	13	12	13	12	12	11	16	12	11	8
ski: X country	5	10	16	13	13	12	14	11	10	14	15	17	11	14	17	12
track: running	18	14	15	16	16	13	15	19	16	16	13	12	13	16	13	7
hiking	14	12	14	15	15	14	19	13	14	19	22	19	17	18	14	10

Table 8 (cont'd).

	Region						Gender			
Activity	1	2	3	4	rng.	disp.	ma	fm	rng.	disp.
swimming	1	1	1	1	0	0.00	1	1	0	0.00
jog/powerwalk	2	2	2	2	0	0.00	2	2	0	0.00
strength training	3	3	3	3	0	0.00	3	3	0	0.00
basketball	4	4	4	5	1	0.25	4	5	1	0.50
tennis	5	5	6	4	2	0.50	5	4	1	0.50
volleyball	7	6	7	6	1	0.50	6	6	0	0.00
golf	6	10	5	8	5	1.75	7	8	1	0.50
cycling	9	7	8	10	3	1.00	9	9	0	0.00
softball	8	8	9	9	1	0.50	8	7	1	0.50
dance: aerobic	13	11	10	7	6	1.75	11	10	1	0.50
soccer	11	9	11	11	2	0.50	10	11	1	0.50
walking	12	12	12	12	0	0.00	12	12	0	0.00
ski: X country	10	13	13	14	4	1.00	13	13	0	0.00
track: running	17	16	14	13	4	1.50	14	16	2	1.00
hiking	14	15	15	16	2	0.50	15	14	1	0.50

	Household Income						
Activity	<$15K	<$30K	<$45K	<$70K	>$70K	rng.	disp.
swimming	4	1	1	1	1	3	0.60
jog/powerwalk	10	2	2	2	2	8	1.60
strength training	1	3	3	3	3	2	0.40
basketball	5	4	4	4	5	1	0.40
tennis	3	5	5	5	4	2	0.60
volleyball	14	6	6	6	6	8	1.60
golf	8	9	9	8	7	2	0.60
cycling	2	7	10	10	8	8	2.20
softball	13	8	7	7	10	6	1.80
dance: aerobic	21	15	8	11	9	13	3.80
soccer	6	10	11	9	11	5	1.40
walking	12	12	12	12	12	0	0.00
ski: X country	9	13	13	13	13	4	0.80
track: running	7	18	14	15	15	11	2.40
hiking	11	16	15	17	14	6	1.60

Kendall's rank order correlation coefficients were calculated to measure the degree of agreement in rankings of the 15 highest-rated lifelong activities between stakeholder groups at the conclusion of the study. Results appear in Table 9. The range of correlation coefficients was .0609 (legislators and students) to .9238 (classroom teachers with both building administrators and physical education teachers).

The highest correlation in rank order between stakeholder groups occurred between classroom teachers and building administrators (.9238), classroom teachers and physical education teachers (.9238), classroom teachers and school board members (.9048), physical education teachers and subject matter experts (.8995), and physical education teachers and central administrators (.8995) all of which are significant at the $p<.01$ level. Correlation coefficients are not significant ($p=.05$) for legislators with any other group, and students with central administrators, MAHPERD representatives, physical education teachers, or subject matter experts.

A correlation coefficient of .70 would imply that a rank by one group would account for 49% of the variation in the other group's rank. While it represents a relatively strong relationship in the rankings, it leaves more than half of the variance accounted for by other variables. Accordingly, while moderately strong relationships exist between parents and central administrators (.7019), parents and MAHPERD representatives (.6184), school board members and MAHPERD representatives (.7020), parents and recreation directors (.7019), and parents and subject matter experts (.6827), each relationship demonstrated a relatively high degree of variance.

The range in rankings among the 15 highest rated activities was less variable across school districts than across stakeholder groups (see Table 8). Only three lifelong activities displayed ranges in rankings of 10 places or more. The range was 31 places for aerobic dance, 12 places for cross country skiing, and 10 places for hiking. The mean absolute difference in rankings from the median exceeded 2.0 on only four activities: aerobic dance (3.73), cross country skiing (2.33), hiking (2.27), and cycling (2.07).

Table 9. Kendall's rank order correlation of the 15 highest rated lifelong activities by stakeholder groups, school districts, regions, household incomes and gender.

Stakeholder Groups

	bad	cad	crt	isd	leg	mpd	pet	pnt	rec	sbm	sme	std
bad												
cad	.7656											
crt	.9238	.8421										
isd	.7789	.8116	.8558									
leg	.2279	.1991	.2279	.2071								
mpd	.7597	.8309	.7981	.7476	.2901							
pet	.8476	.8995	.9238	.8173	.1883	.8558						
pnt	.7847	.7019	.7847	.7923	.1991	.6184	.7081					
rec	.8038	.8173	.8038	.7343	.1792	.8309	.8038	.7019				
sbm	.8667	.7847	.9048	.8750	.2081	.7020	.8286	.8421	.7464			
sme	.8038	.8462	.8804	.7730	.2190	.7923	.8995	.6827	.7788	.7847		
std	.4294	.3236	.4099	.4335	.0609	.2660	.3318	.5589	.4216	.4879	.3628	

School Districts

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A															
B	.4712														
C	.5481	.7404													
D	.5865	.6827	.6442												
E	.5072	.6049	.6245	.7220											
F	.6442	.6442	.7212	.7019	.7611										
G	.6699	.5742	.6124	.7847	.7283	.8230									
H	.6058	.7596	.7788	.6442	.6049	.6635	.5742								
I	.6827	.6827	.7212	.6827	.6537	.7019	.6507	.8558							
J	.7081	.5742	.6890	.7656	.5923	.8230	.8095	.6507	.7656						
K	.5217	.7343	.7440	.7440	.7549	.8116	.7981	.7150	.6570	.7020					
L	.5822	.6827	.7212	.8365	.6537	.7404	.7847	.6827	.7212	.7847	.8503				
M	.6763	.5797	.7150	.6184	.6275	.8503	.6827	.7343	.7440	.7597	.6893	.6570			
N	.6507	.6316	.6699	.7847	.6312	.8804	.7905	.6316	.7081	.9048	.6827	.7847	.7789		
O	.5168	.6890	.7273	.8230	.6312	.7081	.7714	.6507	.6890	.7714	.7981	.9187	.6250	.8286	

Table 9 (cont'd).

Household Income

	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000
<$15,000					
<$30,000	.3837				
<$45,000	.2732	.8002			
<$70,000	.3137	.8393	.9238		
≤$70,000	.3339	.8393	.8667	.8667	

Region of the State

	north	west	central	east
north				
west	.8476			
central	.8667	.8286		
east	.7905	.7524	.8476	

Gender

	female	male
female		
male	.9048	

Kendall's rank order correlation for the 15 highest-ranked activities by school district appear in Table 9. Two correlation are extremely high - district L with district O (.9187), and district J with district N (.9048). In contrast, 55 of the 130 correlation coefficients are .7020 or lower. Although the correlations are moderately strong, they leave more than half of the variance accounted for by other variables. Rankings by certain school districts were markedly different from most other districts. District A displayed a correlation coefficient of .7020 or less in combination with the 13 other school districts. Two districts (B, E) displayed similar correlation coefficients in combination with 10 districts. One district (H) displayed the same results with nine districts, two (I, M) displayed the same results with eight districts, and two more (D, N) displayed the same results with seven districts.

Rankings of the 15 highest rated lifelong activities were similar across regions, by gender, and across household income brackets. No range in rankings exceeded six places for regions or gender (see Table 8, top half), and their correlation coefficients between groups in Table 9 range from .7524 (west region to east region) to .9048 (males to females). The range in rankings across household incomes exceeds 10 places for two activities: aerobic dance (13), and track: running (11) (see Table 8, bottom half). The correlation coefficients in Table 9 show extremely low values for all comparisons including household incomes less than $15,000. All other correlation coefficients exceed .80.

Program Objectives

Appendix G presents the rank order of program objectives by stakeholder group, along with each objective's range in rank and average absolute difference in rank from the median. Table 10 presents a summary of the distribution of ranges of program objectives.

The range in item rankings across stakeholder groups equals or exceeds 50 places on 12 program objectives, was between 40 and 49 places on 11 program objectives, between 30 and 39 places on 37 program objectives, and between 20 and 29 on 25 program objectives. Those program objectives demonstrating the greatest range in rank (see Appendix G) include: slide (89), punt (86), roll a ball (82), underhand throw (67),

overhand strike (60), forehand strike (60), catching fly balls (59), use of time (56), knowledge of size (56), body planes (55), underhand strike (53), and shooting a basketball overhand (50). The average absolute difference from the median equals or exceeds 10 places on 17 of the 102 items, which includes: use of flow (13.92), vault (13.42), forehand strike (13.00), use of time (12.42), slide (12.33), punt (12.08), body planes (11.75), shapes (11.33), directions in space (11.25), boundaries in space (11.17), overhand strike (10.92), catch fly balls (10.67), underhand throw (10.58), overhand throw (10.50), shoot a basketball overhand (10.33), accent (10.08), and underhand strike (10.00).

The range in rankings were less variable for school districts than for stakeholder groups (Table 10). Ranges equaled or exceeded 50 places on three program objectives, was between 40 and 49 places on 5 program objectives, between 30 and 39 places on 25 program objectives, and between 20 and 29 places on 43 program objectives. The program objectives with the greatest range in rankings (Appendix G) across school districts are: courage (51), lift/carry posture (51), and push/pull posture (51). The average absolute difference in the range of rankings across districts exceeded 10 on only two program objectives: push/pull posture (10.40) and shooting a basketball overhand (10.20).

Few differences in rankings of program objectives exist across regions of the state, by gender or across household income categories (see Table 10). With regard to regions, no program objective displayed a range in rankings of 30 or more. Only six objectives demonstrated a range of 20 to 29 places. They are: shoot a basketball overhand (28), positions in space (25), slide (24), ankle flexibility (22), underhand strike (21), and neck strength (20). Differences in rankings by males and females never exceeded 15 places, and exceeded 10 places on only four program objectives. They are: forward shoulder roll (14), ankle flexibility (14), shoot a basketball overhand (14), and even beat (12).

Table 10. Number of general program objectives that demonstrate high ranges in rankings across stakholder groups, school districts, regions of the state, by gender and across income brackets.

All Program Objectives (N=102)

range	stake-holder	school district	region	gender	income
20-29	25	43	6	0	20
30-39	37	25	0	0	4
40-49	11	5	0	0	1
50+	12	3	0	0	0
total	85	76	6	0	25
% of total	83.3%	74.5%	5.9%	0%	24.5%
No. of LAs with mean dispersion ranges >10	17	2	2	0	2

First 50 Program Objectives

range	stake-holder	school district	region	gender	income
20-29	15	21	0	0	10
30-39	16	9	0	0	0
40-49	3	2	0	0	0
50+	1	2	0	0	0
total	35	34	0	0	10
% of total	70%	68%	0%	0%	20%
No. of LAs with mean dispersion ranges >10	0	0	0	0	1

The range in rankings of program objectives across categories of household income was between 20 and 29 places on 20 objectives, between 30 and 39 places on four objectives, and exceeds 40 places on one objective (posture: sit).

As with lifelong activities, it is important to analyze the data using a number of objectives that can reasonably be accommodated in typical physical education programs. Individuals experienced with curriculum projects in the school districts of Michigan suggest that few, if any, school districts have enough instructional time to include more than 50 program objectives in their core curriculum. Accordingly, comparisons of rankings of the 50 highest-rated program objectives will be described for stakeholder groups, school districts, regions of the state, gender and household income brackets.

Stakeholders. The data in Table 10 show that the range in rankings across stakeholder groups on the first 50 program objectives was between 20 and 29 places on 15 objectives, between 30 and 39 places on 16 objectives, between 40 and 49 places on three objectives, and over 50 places on one objective. The average absolute difference in ranks from the median rank for stakeholder groups (from Appendix G) exceeded 10.0 on two program objectives: catching fly balls (10.67) an overhand throw (10.50). For all other program objectives, high ranges are the result of outliers by a small number of stakeholders.

Table 11 provides Kendall's rank order correlation coefficients comparing relationships between stakeholder groups on the 50 highest-rated program objectives. The groups demonstrating the strongest relationships were parents with building administrators (.8976), parents with classroom teachers (.8827), and classroom teachers with building administrators (.8613). The groups demonstrating the lowest correlations were MAHPERD representatives with legislators (.3897). subject matter experts with students (.4095), and legislators with subject matter experts (.4279). Forty-two of the 66 combinations (63.6%) demonstrate correlation less than .70. Three stakeholder groups, classroom teachers, representatives from intermediate school districts and subject matter experts, displayed

correlation coefficients of less than .70 in every combination with other stakeholder groups.

School Districts. Data comparing rankings in Table 10 across school districts display variability similar to that found in stakeholder groups. Twenty-one program objectives displayed a range in rankings of 20 to 29, nine program objectives displayed a range of 30 to 39, two displayed a range of 40 to 49, and two objectives had ranges of greater than 50. The average absolute differences from the median rating in Appendix G was 8.20 or less on every objective.

Kendall's rank order correlation coefficients, comparing the 50 highest-rated program objectives appear in Table 11. All correlation coefficients are less than .70 (indicating less than 50 percent of the variability in one ranking can be accounted for by the other's rank) for every comparison with school D, 13 of 14 comparisons with school M, and 12 of 14 comparisons with school B. Excluding these schools, only five of the remaining 66 comparisons result in a correlation of less than .70.

Little variability in rankings appears among data across regions of the state, income brackets or gender. The range in rankings did not exceed 14 points on any program objective and all average absolute differences in median rank were below 6.00. Data by gender was even more homogeneous. Males and females agreed on rankings for 20 of the first 50 program objectives, and varied by one place on nine others. No range exceeded 6 places. With respect to income brackets, the range in ranking fell between 20 and 29 on ten program objectives and were less than 20 on all other objectives.

Table 11. Kendall's rank order correlation of the 50 highest rated program objectives by stakeholder groups, school districts, regions, household incomes and gender.

Stakeholder Groups

	bad	cad	crt	isd	leg	mpd	pet	pnt	rec	sbm	sme	std
bad												
cad	.8096											
crt	.8613	.7342										
isd	.6276	.6763	.5727									
leg	.5866	.4772	.5762	.4437								
mpd	.6669	.6464	.6866	.5891	.3897							
pet	.8249	.8167	.7786	.6263	.4955	.6833						
pnt	.8976	.7732	.8827	.6223	.6060	.6720	.8148					
rec	.8329	.7425	.7745	.6517	.5948	.5753	.7886	.8260				
sbm	.7883	.7686	.7481	.6322	.4974	.7383	.8112	.8019	.7247			
sme	.6030	.6892	.5356	.6871	.4279	.5779	.6670	.6049	.6142	.6163		
std	.7417	.6293	.7633	.4641	.5646	.5800	.6744	.7586	.6696	.6773	.4095	

School Districts

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
A														
B	.6260													
C	.8158	.7108												
D	.3314	.1475	.3079											
E	.7771	.6266	.7463	.4068										
F	.8595	.6537	.8052	.3771	.8092									
G	.7306	.5562	.7124	.4716	.7490	.7555								
H	.7954	.7212	.7646	.2567	.7846	.7776	.6656							
I	.8652	.6645	.8148	.3220	.8339	.8524	.7323	.8158						
J	.8818	.6580	.8247	.3501	.8231	.8414	.7664	.8273	.8962					
K	.7880	.5805	.7404	.3865	.7501	.7940	.7249	.6855	.8242	.7810				
L	.7935	.6627	.7986	.3825	.7851	.7924	.7400	.7660	.7868	.8151	.7586			
M	.6707	.5525	.6264	.3279	.6419	.6579	.7069	.6399	.6784	.6794	.6661	.6597		
N	.7348	.4737	.6911	.5347	.7382	.7327	.7598	.6401	.7094	.7327	.6845	.7275	.6637	
O	.8494	.6791	.8665	.3678	.8308	.8532	.7686	.8026	.8589	.8660	.7927	.8363	.6579	.7388

Table 11 (cont'd).

Household Income

	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000
<$15,000					
<$30,000	.5628				
<$45,000	.5411	.7658			
<$70,000	.5698	.8146	.8456		
≤$70,000	.5078	.7578	.8349	.8708	

Region of the State

	north	west	central	east
north				
west	.7755			
central	.8764	.7830		
east	.8550	.8687	.8619	

Gender

	female	male
female		
male	.9187	

Question 4

Did the ratings assigned each element of program content converge from the initial round to the final round of a modified Delphi study within all participants, stakeholder groups, school districts, and selected demographic variables?

The overall results for lifelong activities from Table 4 show that the number of activities receiving a rating decreased from 81 activities in the initial round to 64 activities in the final round. Only thirty-seven lifelong activities received ratings by 10 or more of the 350 respondents who completed this section of the survey. Of those that received ratings in the first round, the mean rating dispersion increased on two activities (track: running and crew), stayed the same for two other activities (cross country skiing and hocker), and decreased on the other 82 (95.3% of the activities).

The Binomial Test was used to test the probability that the observed number of lifelong activities that experienced a decrease in rating dispersion from round one to round three would occur by chance. The results, appearing in Table 12 for all participants, indicate that the convergence obtained is highly significant (p=.0000). Table 12 also displays the number of lifelong activities that experienced a decrease in rating dispersion for each subgroup. The ratings of lifelong activities also indicate a significant convergence within all stakeholder groups and all school districts, across all household incomes, regions of the state and both genders.

Similar convergence was observed for the program objectives. The rating dispersion decreased on 95 of the 98 program objectives (97.0%) that appeared on the first-round instrument. The rating dispersion decreased by more than 0.50 on fifteen program objectives, and by at least 0.30 on 32 of the first 40 objectives (80 percent of the items).

Table 12. P-values associated with the probability of rating convergence on 87 lifelong activities (LAs) and 98 program objectives (POs).

	No. of LAs	p value	No. of POs	p value
Overall	84	.0000	95	.0000
Stakeholder Groups				
cad	77	.0000	78	.0000
bad	81	.0000	90	.0000
crt	80	.0000	92	.0000
pet	82	.0000	92	.0000
pnt	77	.0000	93	.0000
sbm	82	.0000	88	.0000
std	72	.0000	82	.0000
rec	77	.0000	81	.0000
isd	74	.0000	58	.0859
sme	73	.0000	72	.0000
mpd	80	.0000	79	.0000
leg	75	.0000	77	.0000
Household Income				
< $15 K	87	.0000	82	.0000
< $30 K	81	.0000	93	.0000
< $45 K	80	.0000	97	.0000
< $70 K	87	.0000	85	.0000
> $70 K	79	.0000	84	.0000
Gender				
female	75	.0000	93	.0000
male	80	.0000	96	.0000

	No. of LAs	p value	No. of POs	p value
School District				
A	80	.0000	96	.0000
B	71	.0000	74	.0000
C	76	.0000	62	.0116
D	85	.0000	62	.0116
E	75	.0000	93	.0000
F	84	.0000	90	.0000
G	77	.0000	81	.0000
H	75	.0000	79	.0000
I	81	.0000	96	.0000
J	74	.0000	97	.0000
K	80	.0000	81	.0000
L	80	.0000	88	.0000
M	73	.0000	62	.0116
N	76	.0000	73	.0000
O	77	.0000	95	.0000
Region				
North	78	.0000	89	.0000
West	64	.0000	88	.0000
Central	80	.0000	98	.0000
East	80	.0000	91	.0000

Results of the Binomial Test are also reported in Table 12. As with lifelong activities, participants' ratings of program objectives converged as a result of participating in the Delphi procedure. The convergence of ratings by all respondents was significant ($p \leq .01$). The data also indicate a significant convergence within all stakeholder groups (p=.0000) except for representatives from intermediate school districts (p=.0859), all school districts except three (schools C, D, M) (p=.0116), all household incomes, regions of the state and both genders.

Question 5

Did the rank order of relative importance on program content change from the initial to the final round of a modified Delphi study for the participants as a whole, or for representatives of stakeholder groups, school districts, and selected demographic variables?

Changes in rankings of lifelong activities by all participants between the first and third rounds is portrayed in Table 4. Changes in rank must be observed with caution, because of the addition of lifetime activities included after the first round. For example, the ranking for every activity appearing after boxing (ranked 67) increased six places due to the inclusion of six activities after the first round (walking, step aerobics, self defense, card games, snow shoeing, and boxing). The total increase in this case is not related to changing opinions or priorities.

Lifetime activities demonstrating the greatest increase in rank (subsequent to adjusting for the effects of including the six additional activities[1]) , and corresponding decrease in overall priority, include crew (32), hocker (27), lacrosse (19), line dancing (13) and square dancing (13). Lifetime activities demonstrating the greatest decrease in rank and corresponding increase in priority include race walking (40), horseback riding (16), canoeing (13), rhythmic gymnastics (12), field hockey (11), fishing: flycasting (11), and folk/ethnic dance (9).

[1] Adjustments were made by excluding those activities that did not appear in the initial instrument. Accordingly, the numbers that appear here may not correspond exactly to those appearing in Table 4.

Wilcoxon's Matched-Pairs Signed-Ranks Test was used to determine if a statistically significant change in rank order occurred. The test assesses the degree to which the distribution of lifetime activities around their median is significantly different from the first to the third round. Wilcoxon takes into account the degree of change that occurs on each item. The p-values from the Wilcoxon test appear in Table 13.

The tests indicate the rank order of the entire list lifelong activities for the participants as a whole changed significantly from the first and final round (p=.0000). With respect to stakeholder groups, the rank order from the first and final rounds differed significantly at the .01 level for building administrators, classroom teachers, physical education teachers, parents, and school board members. The rank order changed significantly for only one of the fifteen participating school districts (school O) at the 0.01 level, and three others(A, B, G) at the 0.05 level of significance. The rank order changed for those with household incomes of between $30,000 and $45,000 ($p<.05$), and for those with household incomes of over $45,000 ($p<0.01$). The order changed for all regions of the state except west Michigan ($p<0.01$), and for both males and females ($p<0.01$).

Information about significant changes in rank order is useful to justify the benefits of sharing information when considering program inclusions. It may not be useful in the practical process of selecting lifetime activities to include in a physical education program. No school district has sufficient resources to produce competence in their graduates in all lifetime activities. Most school districts in Michigan can effectively address only 10 to 12 lifelong activities. Accordingly, a practical approach to analyzing changes in relative priority would be to analyze the 15 highest-rated activities (excluding walking, which is embedded in jogging/powerwalking).

The 15 highest-ranked activities appear in Table 4. Analysis of the top 15 lifelong activities shows few large changes in rank order among the 15 highest-ranked activities. Fourteen activities remained among the top fifteen in both rounds. Bowling dropped out of the first 15 and was supplanted by track: running. Five activities maintained their ranking

from the first to the final round, while five changed their rank one position, four moved two positions, and one moved three places. In all, 10 of the 15 highest ranked activities experienced a change in order.

The Wilcoxon Test was administered to determine the significance of the changes in order of the 15 highest ranked activities. The p-values for the tests appear in Table 13. The change in rank order of the first 15 activities for all participants as a whole was more than what would have been attributed to chance (p=.0045). Among stakeholder groups, changes for central building administrators, classroom teachers, and community recreation directors were significant at the 0.01 level, while changes for building administrators, intermediate school district representatives, physical education teachers, and parents were significant at the 0.05 level. The p-values were below .05 for all school districts except one (G). The changes in order were significant at p=0.05 for all levels of household incomes except those earning less than $15,000 (p=.7695), both genders, and all regions of the state except west Michigan.

Changes in rankings of program objectives by all participants between the first to the third round can be seen by examining the data in Table 5. The mean values of 33 of the first 34 program objectives increased from the first to the final rounds (only lean/fat ratio decreased), resulting in a higher ranking for 19 objectives, a decrease in rank on 12 objectives, and no change on three. Correspondingly, the 34 lowest priority objectives decreased in mean value, which resulted in an increased rank on 10 program objectives and a lower ranking on 22 objectives.

The general objectives demonstrating the greatest increase in rank and the number of places they decreased in parentheses are: underhand strike (19); overhand strike (18); backhand strike (17); knowledge: body actions (13); and forehand strike (10). Although the rankings for these objectives changed by 10 places or more, their mean ratings changed by no more than 0.07. This suggests that the changes in rank are more related to changes in the ratings of other objectives than in the ratings assigned directly to these objectives.

Table 13. P-values for changes in rankings in rankings of lifelong activities (LA) and program objectives (PO) from the first and third rounds.

	All LAs	First 15 LAs	All POs	First 50 POs		All LAs	First LAs	All POs	First 50 POs
All Participants									
	.0000	.0045	.2502	.0002					
Stakeholder Groups					**School Districts**				
cad	.0745	.0045	.6817	.0022	A	.0462	.0231	.0730	.0273
bad	.0144	.0199	.0081	.0529	B	.0362	.0309	.8373	.0038
crt	.0046	.0064	.2759	.0004	C	.0691	.0146	.2882	.2507
isd	.9615	.0268	.0232	.0001	D	.0531	.0171	.6438	.7538
leg	.2473	.0571	.0000	.0000	E	.1224	.0309	.2219	.0127
mpd	.4180	.0571	.0049	.0000	F	.0636	.0076	.5900	.0000
pet	.0005	.0231	.0822	.0056	G	.0146	.0884	.8319	.0027
pnt	.0082	.0231	.2613	.0010	H	.0959	.0115	.3757	.0010
rec	.4712	.0054	.8165	.0023	I	.0571	.0468	.0265	.0045
sbm	.0025	.0736	.1185	.0025	J	.0900	.0356	.1711	.0012
sme	.1060	.0738	.0407	.1828	K	.3769	.0022	.0756	.1583
std	.1350	.2681	.6223	.0019	L	.2265	.0018	.0429	.0727
					M	.4665	.0184	.9379	.0007
Region					N	.1361	.0268	.6601	.0196
North	.0002	.0268	.0763	.0078	O	.0059	.0184	.2155	.0000
West	.2196	.0691	.6272	.0002	**Gender**				
Central	.0042	.0076	.4389	.0002	female	.0002	.0106	.5535	.0001
East	.0012	.0022	.6949	.0002	male	.0007	.0064	.1834	.0008

Fourteen program objectives demonstrated a decrease in relative priority of ten places or more. All fourteen also experienced a decrease in mean rating ranging from 0.30 to 0.98. Seven of the fourteen objectives fall into the category of movement concepts and non-locomotor skills. Those objectives, listed with the number of places they decreased in rank, are: sitting posture (10); inverted balance (14); climb a rope ladder (10); tempo (16); twist/rotate (13); turn (21); and accent (14). The remaining seven objectives were three fitness objectives: lean/fat ratio (12), ankle flexibility (17), neck strength (20); two cognitive concepts: detrimental affects of physical activity (14), affects of performance modifiers (19); one affective concept: dealing with competition (10); and one locomotor skill: horizontal jump (19).

Results from the Wilcoxon Matched-Pairs Signed-Ranks Test appear in Table 13. The test indicates the rank order of program objectives for the participants as a whole did not change significantly from the first to the final round (p=.2502). With respect to stakeholder groups, the rank order changed significantly at the .05 level for school building administrators, representatives from intermediate school administrators, legislators, MAHPERD representatives, and subject matter experts. The overall rank order changed significantly for only two of the fifteen participating school districts (I and L), and no significant change occurred by household income, gender, or region of the state.

As with the lifelong activities, the rank order of all program objectives could be misleading on two counts. First, participants rated only 50 program objectives each round. This results in a zero being assigned to virtually half the objectives by default. The more frequently participants selected the same 50 objectives in all rounds, regardless of their order, the less often those that were never or seldom rated could experience rating changes. Accordingly, the rating procedure could result in a significant change in order among those program objectives receiving the bulk of the ratings while restricting the potential for change in the objectives of lower priority. In this situation, the Wilcoxon test would be expected to show insignificant findings overall, even though significant changes may have

occurred in the higher priority objectives. Second, and most important, physical education programs do not have enough instructional time to teach all of the objectives if mastery rather than exposure is the intended outcome. Most school districts are able to address only half of the total number. Of more interest is whether the Delphi technique results in a change in the rank of items that would typically be included in most K-12 programs.

The Wilcoxon test was administered to determine if significant changes in rank occurred in the 50 highest-rated program objectives from the final round. Results appear in Table 13. There was a significant difference in relative rank for the participants as a whole (p=.0002). The rank order changed significantly at the .05 level for all stakeholder groups except subject matter experts (p=.1828), for 11 of the 15 school districts, and all levels of household incomes except those earning less than $15,000 (p=.7695). The rank order of the first half of the program objectives also changed significantly within both genders and across all regions of the state.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS, CONCLUSION

Introduction

The most fundamental issue in curriculum construction is determining what content is of most worth (Broudy, 1982; Diez & Moon, 1992; Jewett & Bain, 1985; Schubert, 1986; Walker, 1990). Of similar importance is determining the amount of curricular content that appropriately matches the resources available in a target school district. The establishment of content priorities is essential to either increase the amount of instructional time available to accommodate student mastery of content or to reduce content to the most valued program objectives that can be accomplished in the time available (Glasser, 1992).

Although most curriculum construction models address content selection in some way, only the eclectic model deals with a critical reality of curriculum construction. This reality is that curriculum construction occurs in a heterogeneous environment. Important stakeholders who should be involved in content selection have diverse backgrounds and experiences, which result in competing values, needs and agendas. This heterogeneity, however, should be embraced as a strength in the process of selecting appropriate content. The content selection process occurs within institutionalized settings where the socio-political dynamics of each institution and the value orientations held by individual stakeholders should be heard, challenged, negotiated and combined to reach mutually-acceptable goals (Brandt, 1988; Eisner, 1990; Gay, 1980; Goodlad and Su, 1992; Reid, 1992). Clearly, the content selection process should not be left to the prerogative of a limited number of developers who may represent a limited set of values.

Assigning relative importance to the content appropriate for programs of physical education that represents the best thinking of a programs stakeholders requires a procedure that meets three criteria. First, stakeholders from all special interest groups need to be engaged. Because stakeholders rarely agree on a single answer to a question, or arrive at a single value, a consensus provides a more valid base for programmatic decisions (Brown,

1968; Kean, 1982). Second, the procedures used to obtain consensus must be defensible. A strong rationale must be available to suggest that the procedure used will effectively address the problems associated with decision-making in a value-laden arena, and that the results will be better than if the procedure had not been used. Third, a consensus must be obtained that provides a defensible basis for a course of action. The following discussion, recommendations and conclusions reveal how these criteria were met in this study.

The chapter is divided into three sections, followed by a summary. The first section discusses the sample. The second section addresses the first three research questions: the overall results of the study, the degree of convergence in priorities across groups, and the degree to which differences in priorities still exist between groups. The third section, which discusses the appropriateness of the Delphi technique as a content selection tool in curriculum construction, addresses the fourth and fifth research questions: the degree to which convergence in ratings occur, and the degree to which the Delphi technique facilitates changes in priorities among stakeholders.

Each section consists of an overview, a discussion of the results, a conclusion, and recommendations for future use and research.

Sample

Overview

Representatives from 14 different stakeholder groups were identified and invited to participate in the study. Participation through invitation was a critical part of the methodology in two ways. First, participants were asked to engage in a rigorous process where they would have to compare their own priorities and rationales with those of others in three rounds of information processing. Individuals having no stake in the results would be less likely to complete the consensus process. Second, a reality of curriculum construction is that program content is affected by those who desire input. Those who have a low stake in the results and/or choose not to participate are deferring their influence to those who actively participate. Both issues, reducing attrition and engaging those who

would most likely engage in curriculum construction, enhance the utility of the results.

It is impossible to identify how many individuals were invited to participate in the study because of the role facilitators had in the sampling process. Facilitators were engaged within school districts and the Departments of Community Health and Education to recruit subjects. Facilitators were oriented to their role and provided fliers describing the study and criteria to be used for subject selection. Initially 412 subjects representing 14 stakeholder groups agreed to participate in the study. Three hundred fifty participants completed all three rounds (85.0%). Four of the 12 stakeholder groups that completed all three rounds consisted of 10 or less subjects. Those groups were students (10), MAHPERD representatives (8), representatives from intermediate school districts (6), and legislators (2).

Discussion

One of the causes of small sample size in some subgroups is that some of the stakeholder groups represent a very small population of stakeholders. The MAHPERD board is small in number, as are the number of individuals who maintain a strong interest in physical education working in the Departments of Education and Community Health . Intermediate school district organizations vary in size and structure, resulting in few individuals identified who are responsible for physical education in their geographical regions.

Stakeholder participation may be related to the methods of data collection. Two methods of invitation and data collection were used which appeared to affect the degree to which participants completed the consensus building tasks. While some participants participated directly through the mail, the majority of participants (304 of the 340 individuals who completed the study) were engaged through school districts.

It is interesting to note that five of the six stakeholder groups with the highest rate of completion (classroom teachers, school building administrators, physical education teachers, parents, and community recreation directors) were directly engaged in data collection through school districts. In contrast, the three stakeholder groups with the lowest

completion rates (legislators, representatives from the Departments of Education and Community Health) participated through direct mail and were part of governmental agencies. The rate of completion of all three rounds of the study for those engaged through school districts was 89.4%. For direct mail respondents, it was 74.2%.

Participants representing school districts were personally invited to participate by a facilitator. Representatives from each school district and met as groups in their district to complete the forms. When participants were unable to attend the meeting(s), facilitators personally distributed and collected their survey forms and provided them with necessary instructions.

Representatives of small stakeholder groups may have had less motivation to complete the study. One of the keys to minimizing attrition in a Delphi technique is providing participants with an incentive to remain interested (Uhl, 1983). The willingness to participate may be directly related to comparing the costs of participation with the perceived benefits. Students (36.4% completion) were the only group engaged at the district level with a completion rate below 72%. Only two other stakeholder groups representing school districts displayed a completion rate below 80%: central administrators (75.0%) and school board members (73.7%). These groups in some ways are most removed from judgments related to the content of the physical education program.

The three groups with the lowest completion rates (legislators, representatives from the Departments of Education and Community Health) are also distant from the mechanics of the content selection process. While these three groups were engaged by mail, two other groups engaged by mail displayed high completion rates. Seventy-five percent of MAHPERD representatives and 98 percent of subject matter experts completed the study. The major difference between these groups and those direct mail groups with low returns could be the perceived cost/benefit ratio and/or their long-standing commitment to selecting appropriate content for inclusion in programs of physical education.

The cost/benefit rationale for lack of participation in some stakholder groups is

supported also by members of intermediate school districts. For example, representatives from these regional school districts may see their role as more related to delivering instruction than to the process of selecting content.

The demographic data on school districts found in Table 3 show that the fifteen participating school districts provide balance across the four regions of Michigan' lower peninsula, with respect to the demographic variables. Districts involved include three districts from the northern lower peninsula of Michigan and four districts each from west, central and eastern lower Michigan. No school districts from the upper peninsula participated in the study. Districts were nearly equally divided with respect to size (seven above the state average and seven below), public and private (four private schools, at least one from each region except the north), urban/rural setting (six urban, four rural, five a combination), and economic status (six of twelve districts above the state median family income and six below). Private institutions include three parochial and one non-parochial institution. No academies participated in the study.

The number of participants from each district appears to be directly related to the number of students enrolled in the school. Review of Table 3 shows that the four schools with the largest student population (schools A, L, N, O) were represented by 25, 18, 22 and 34 stakeholders respectively (mean =24.75), where as the four smallest school districts (schools B, F, H, I) were represented by 15, 14, 13, and 15 stakeholders (mean =14.25) respectively. Each school district had an acceptable number of representatives from each stakeholder group, with the exception of a small number of students. As would be expected, smaller districts had fewer administrators, and some districts had no community recreation program.

The sample is reasonably balanced by gender (52.2% male, 47.8% female among those who designated gender), and each four regions were represented by at least three school districts. There are few participants however, with family incomes below $30,000. The numbers in some groups limit the statistical analysis that can be conducted, but should

not limit the overall utility of the results.

Conclusion

Generally speaking, this study was adequately represented by stakeholders within and across all demographic variables. Accordingly, it can be used to draw conclusions concerning similarities and differences in content priorities held by different subgroups. Care must be taken in generalizing and assigning statistical significance to stakeholder groups with low numbers. The sample of school districts is also representative of public and private institutions in lower Michigan, particularly those interested in the content included in their programs of physical education. Results can not be considered representative of academies, charter schools or schools in Michigan's northern peninsula.

School districts that participated were also interested in improving their physical education program, and stakeholders selected to represent their districts can be assumed to hold the same interest. It then can be assumed that the responses obtained in this study would be consistent with those found in other districts in Michigan interested in program improvement.

Recommendations

Future Delphi studies of this type could benefit by maximizing the amount of personal contact that occurs with participants throughout the data collection process. Direct mail participation may be enhanced by assigning a facilitator to each stakeholder group that is recognizable and held in high regard by its members. Such a facilitator could maintain contact and provide encouraging reminders to participants while conducting the study. The focus of encouragement should revolve around the ways their participation can benefit the students in the programs of their community.

Future studies should target obtaining better representation of participants with household incomes under $30,000. Finances limit access to many kinds of activities and experiences. Obtaining representation from these income brackets will provide better information concerning content they value.

There is also a need for educating all stakeholder groups of the importance of systematic content selection. Stakeholders who understand the importance of appropriate content and the selection will become better advocates for quality programs. It is reasonable to expect that informed stakeholders will have a greater commitment to the program, and to participate in the rigors of content selection.

Results of the Prioritization Process

Overview

This study's most practical finding is the overall priorities assigned to lifelong activities and program objectives by Michigan stakeholders. Accordingly, these priorities will be discussed in detail. The credibility of this information is enhanced to the degree that priorities held by separate stakeholder groups converged from the first to the final round. Convergence in priorities across stakeholder groups implies increased agreement. Increased agreement in turn may result in increased advocacy for programs that consists of high-priority content. Differences between sub-groups at the conclusion of the study also impact the utility of the results. Accordingly, they will be discussed in conjunction with the overall results.

The three lifelong activities held in highest regard by all participants are competence in swimming, jogging/powerwalking, and weight training, in that order (see Table 4). Swimming and jogging/powerwalking were ranked first and second, respectively in both the first and final round. On the final round, the mean rating for swimming was .32 higher than the second-highest activity (jogging/powerwalking), and jogging/powerwalking's mean was .68 higher than was weight training. Swimming and jogging/powerwalking were the only lifelong activities with mean ratings over 4.00.

Swimming and jogging/powerwalking were ranked first and second respectively in 9 of 12 stakeholder groups (Appendix F). They were ranked in reverse order by central administrators, second and tenth by students, and third and second by legislators. They were ranked first and second in 11 of the 15 school districts. Two districts had their order

reversed, and two other districts ranked swimming first and jogging/powerwalking third. The first and second-place ranking of swimming and jogging/powerwalking also held for all four regions of the state, both genders, and all income categories except those with household incomes less than $15,000.

Weight training was also held in extremely high regard. Ranked third overall, its mean rating is .49 higher than the fourth-ranked activity, which substantially separates it from the other lifelong activities. Weight training is ranked third by 9 of 12 stakeholder groups, third or fourth by 13 of 15 school districts, and third by all regions of the state, both genders, and all income groups earning more than $15,000.

While the three highest-rated lifelong activities have clear fitness-related value, the next four lifelong activities in the rankings are sport-related. Of the first 12 activities (excluding walking) from Table 4, seven could be categorized as individual activities and five would be dual or team in nature. Swimming is unique in that its utility includes fitness, sport, safety and recreation. It also provides a unique bridge to safe participation in many other water sports. Six activities (swimming, jogging/powerwalking, weight training, cycling, aerobic dance, and cross country skiing) are commonly used to achieve or maintain personal fitness level. The high ratings are consistent with the growing body of evidence heralding the benefits of participation in regular physical activity and the cultural increase in physical activity seen in recent years.

Acquiring and maintaining aerobic fitness is the highest-rated program objective, and has the lowest rating dispersion among the first 65 objectives (Table 5). The five other fitness objectives appearing among the top 65 are: abdominal/low back strength, flexibility in the hip/low back, healthy lean-to-fat ratios, the acquisition of muscular strength and endurance in the legs, and acquisition of muscular strength and endurance in the arms. In contrast, only three fitness objectives appear in the 40 lowest-rated objectives: flexibility in the neck, flexibility in the ankle, and strength in the neck.

Nineteen of the 40 highest-rated program objectives are affective in nature (Table

5). Beyond the strong importance assigned to the affective domain, other priorities depicted in the 40 highest-ranked program objectives suggests a concern for acquiring and managing health-related levels of fitness. Six fitness objectives and nine cognitive objectives appear among the top 40, and all are health related. High ratings of motor skill objectives are noticeable by their absence. Only 4 program objectives of a skill nature appear among the 40 highest-rated objectives.

The rank order correlation coefficients comparing the priorities of each subgroup's to those held by all other subgroups demonstrated relatively high levels of agreement (see Table 6) in both the lifelong activities and program objectives. The coefficients increased in value from round one to round three for all stakeholder groups, all school districts except school D's ranking of program objectives, all regions, gender, and categories of household income. However, statistically significant differences could be found for only one stakeholder group (physical education teachers), one school district (school O), two of the four income brackets ($45,000 to $70,000, and over $70,000), and three of the four regions of the state (north, west and central).

The data from Table 6 clearly demonstrates that while there is substantial agreement in overall rank order, differences in rankings of lifelong activities still exist between selected groups at the conclusion of the study. Again, it should be noted that results from students, legislators, and participants with household incomes less than $15,000, must be viewed with caution due to the low numbers of respondents.

Discussion

Stakeholders clearly assign high importance to the acquisition of program objectives categorized as affective in nature (Table 5). Seven of the first ten, and 19 of the 40 highest rated program objectives fall into this category. Additionally, no program objective from the affective domain appears in the 40 lowest rated objectives.

Because personal/social skills are of such high importance in the eyes of stakeholders, and participation in physical activities provides an ideal environment to teach

them, programs of physical education would be well advised to pro-actively include affective program objectives in their curriculum program planning. According to Fraleigh (1990), one of the purposes of physical education is to provide students with access into various movement cultures. Mastery of many of the 19 highest-rated personal-social objectives contribute to that end on two counts. First, socially acceptable behavior (e.g., cooperation, responsibility, respect for rules, competition, etc.) is an important component of successful participation in lifelong activities. Second, personal character traits (e.g., best effort, self-control, perseverance, etc.) are essential to engaging in activities in a manner that results in social acceptance, thereby facilitating lifelong participation and its associated health-related benefits.

It should be noted however, that this content is not unique to programs of physical education. Therefore, basing a program exclusively or predominately on affective objectives exposes the program to elimination or reduction in situations where resources are limited, or it may be perceived that the outcomes can be achieved elsewhere.

While personal/social skills are of high importance, the amount of instructional time needed for direct instruction on these skills is relatively small. Once the concept is introduced, most of the instruction with respect to practice and providing feedback occurs in the context of engaging in physical activity that can focus on other priority objectives. As a result, inclusion of personal/social skill instruction minimally affects the inclusion of other priority objectives.

Next to the importance placed on affective character traits, stakeholders place the highest importance on the ability to acquire and maintain their own health-related levels of fitness. While seven of the first 12 lifelong activities can be considered fitness-related, the remaining five are not void of fitness benefits and are also used by segments of the population as ways of staying fit. Eleven of the 12 highest-rated program objectives that are not affective in nature are directly related to acquiring and maintaining health-related levels of fitness. Of these 11, nine are cognitive objectives that address issues related to managing

one's own personal activity program. The implication for programs of physical education is that while attaining health-related levels of physical fitness is important, at least equally as important is equipping graduates with the knowledge that will enable them to do it by themselves.

The overarching mission of quality programs of physical education is to provide graduates with the skills, knowledge, fitness capacities and attitudes necessary to obtain the potential benefits of living an active lifestyle. Achieving this mission requires constructing a curriculum with some degree of balance across the four domains as well as across activities. The concept of a balanced curriculum incorporating content representing the four common domains (skill, fitness, cognitive, affective) - in contrast to curriculum models advocating a narrower focus- has received support in the literature (Dauer & Pangrazi, 1989; Legwold, 1983).

The combination of high-priority lifelong activities and program objectives from this study supports the concept of achieving balance among the four domains. The high number of affective objectives among the highest-rated program objectives is counterbalanced to a degree by the number of skill and cognitive objectives that are embedded in learning lifelong activities. Among the non-affective program objectives ranked among the highest 50, 12 are cognitive, eight are fitness, and nine are motor skill. The motor skill objectives consist of three locomotor skills (run, walk, skip), four object control skills (overhand throw, catch fly balls, jump rope, hand dribble), and two are postural/non-locomotor (dynamic upright posture, lift and carry posture). Striking skills are probably the only major exclusion.

The balance in relative priorities is further supported in that fitness objectives vary in their relative importance rather than appearing clustered among the program objectives of highest priority. After aerobic fitness (ranked first), the next highest fitness objectives are ranked 15 (abdominal/low back strength), and then 23 (hip/low back flexibility). One-third of the 12 fitness objectives appear among the lower half of the ranked program objectives.

The priorities assigned to program objectives categorized as movement concepts does not support their use as a basis for curriculum construction. Program objectives related to movement concepts are central to the movement education model discussed in Chapter 2. Although movement education models are common in elementary physical education programs, the highest-rated movement concept among participants in this study was personal space, ranked number 47, and only three movement concepts appear among the 50 highest-rated objectives. Additionally, eight movement concepts are among the 15 lowest ranked program objectives. A possible explanation for these data that could be drawn from some of the stakeholder rationales provided during the study are that while movement concepts may be of value in communicating intended learning and managing students and classes, stakeholders see them as enabling objectives and not standing alone as important outcomes.

Individuals responsible for the selection of content in physical education should be interested to note that stakeholders in this study do not perceive movement concepts as high priority content for students to learn. Failure to note these values by promoting a movement concepts program may diminish the base of advocates necessary to build or sustain the resources to develop or maintain a strong physical education program.

The correlation coefficients on Table 6, comparing the first and final rankings for both lifelong activities and program objectives by all participants, increased. The rank order correlation coefficients also increased for both categories (lifelong activities and program objectives) for all stakeholder groups, school districts, categories of household income, and regions of the state. While an increase in correlation occurred in 100 percent of the cases, statistically significant changes occurred infrequently. The small number of significant changes may be due in part to relatively low numbers of participants in some subgroups. The fact remains, however, that while ratings were converging and the rank order of lifelong activities and program objectives were changing within groups, no single group's priorities were diverging from those held by other participants.

The data from Table 6 indicate that there is more agreement on program objectives than on lifelong activities. Less agreement on lifelong activities may be a result of a greater familiarity and/or allegiance to specific lifelong activities than the relatively independent program objectives. Another possible cause may be related to the data collection procedures. Whereas participants rated 15 lifelong activities in each round, they were asked to rate 50 program objectives. Additionally, the lifelong activities were rated prior to the program objectives. Either or both factors may have contributed to the greater variance obtained in the lifelong activities.

The data indicate that while there is a strong correlation among the various groups, there is also a substantial degree of variability between some subgroups. This is most prominent between stakeholder groups and school districts. The largest variation in lifelong activities among stakeholder groups exists between legislators and students. The ten students who completed the study value different activities than other participants. This clearly identifies an area for further research. Understanding why students are attracted to certain activities and not others, and discovering what rationales students offer or accept, are important in understanding how to motivate them and prepare them to engage in a lifetime of activity.

The practical implications of the existing variability in ratings can be observed by determining how the variability would alter the content included in a program of physical education. According to the Michigan Department of Education's Physical Education Core Curriculum document, physical education programs should result in competence (mastery) in selected lifelong activities and exposure-level competence in others. Accordingly, the curriculum construction process requires allocating sufficient instructional time for students to master a given number of lifelong activities, and additional time for students to be appropriately exposed to others.

The effects of the existing variability across groups could be observed by choosing a number of lifelong activities that could commonly be addressed, given common amounts

of instructional time available to schools in Michigan, and then designating half of the activities (those regarded most highly) for competency and the second half as exposure activities. In this example, 10 lifelong activities and 45 program objectives (consistent with resources available for physical programs in Michigan) will be used.

The rank order of the first 15 lifelong activities appears by subgroups in Table 8. While the order varies somewhat with regard to stakeholder groups, the 10 highest-ranked activities match the overall order for three groups (central administrators, classroom teachers, and physical education teachers), and differ by one activity for seven groups (building administrators, school board members, parents, recreation directors, intermediate school district representatives, MAHPERD representatives, and subject matter experts). The student list differs by two activities, and legislators differ on five.

The first five lifelong activities are the same for seven groups and differ by one for the other three groups. If 10 activities were included in the physical education program, these five would be designated for competency. The second set of five activities would be designated for exposure. The second five lifelong activities are the same as the overall results for two groups, and differs by one activity in seven of the eight remaining groups. The greatest deviation from the overall results appears in the ratings of subject matter experts. They rate basketball and cycling lower, while rating golf and soccer higher

The end result is that 90 percent of the activities would be the same for all 10 stakeholder groups, and the degree of emphasis would be the same on 80 percent of the activities for nine of the 10 stakeholder groups.

There is greater variability in the 10 highest-rated lifelong activities among school districts. The first five activities are the same as the overall results in five districts, differs by one in eight districts, and differs by two in two districts. The next five activities exhibit even more variability. The result is that the content does not match the overall results for any of the school districts . The degree of emphasis on lifelong activities would differ by 10 percent in five school districts, 20 percent in two districts, 30 percent in five districts,

40 percent in one district, 50 percent in one district, and 60 percent in one district. Accordingly, the amount of instructional time necessary to accommodate mastery on the knowledge, skills and capacities that constitute these lifelong activities, would be very different. This difference in lifelong activities supports deferring the selection of lifelong activities to local districts.

The practical effect of variability in ranks between stakeholder groups has minimal effect on the content that would appear in a program of physical education. The rank order of program objectives by subgroups appears in Appendix G. With respect to stakeholder groups, the program objectives that were rated in the top 45 would differ from the overall results by one program objective if selected by building administrators, physical education teachers, parents, or recreation directors. Two of the first 45 program objectives differ from the overall results for central administrators, school board members, and students. Three differences from the overall results emerge for classroom teachers and MAHPERD representatives, six for intermediate school representatives, and nine for legislators.

The effect of variability in rank order of program objectives by school district is similar. While the order of program objectives varied, the same program objectives appeared among the 45 highest rated objectives overall for two school districts (F, O), differed by one program objective for four districts (B, C, E, G), by two objectives in four districts (H, I, L, N), three objectives in four districts (A, J, K, M), and eight objectives in one district. Minor differences appear between respondents from different regions of the state,

Conclusion

Swimming, powerwalking and strength training are the most highly regarded lifelong activities by stakeholders in Michigan. Accordingly, and especially in the case of swimming, assisting students in mastering these activities should be a high priority for all physical education programs in Michigan.

Two overarching themes are inherent in the priorities of stakeholders in Michigan.

They are the acquisition of personal/social/attitudinal character traits and obtaining the knowledge, skills, and attitudes necessary to manage one's own health-attaining physical activity program.

Given the opportunity for systematic information exchange, relatively high agreement exists in priorities across stakeholder groups and school districts, especially with respect to program objectives. There was extremely high agreement on the rank order of lifelong activities and program objectives across regions of the state, gender, and household incomes. While there was some variability in overall rankings, the differences were minimal among all stakeholders for the 45 program objectives that could be effectively addressed in programs of physical education in Michigan. The differences among participating school districts, however, was substantial enough to warrant local districts using a Delphi technique to determine what content is most important for stakeholders in their community.

Recommendations

The data obtained from this study represents the informed judgment of stakeholders across Michigan's lower peninsula interested in providing quality physical education programs. It represents the best information currently available on what stakeholders in Michigan think is most important to include in quality physical education programs. Accordingly, the results are appropriate for use in establishing curriculum outcomes for children enrolled in Michigan school districts.

Physical education programs in Michigan should establish and maintain a curriculum balance in terms of skill, cognitive, fitness and affective program objectives. Program objectives from all four domains are among the highest-rated program objectives in this study. Including content from all four domains is more likely to result in equipping graduates with the skills, capacities, knowledge and attitudes to live physically active lifestyles than would a program of more narrow focus. Finally, it will be easier for members of the community to advocate a program with content held in high regard by all

stakeholders from all four domains.

Although the priorities described here appropriately represent stakeholder values, a higher standard is met when the final priorities are obtained from district-specific stakeholders, using standard data as a starting point. Emphasis on lifelong activities differed among school districts in this study. While the rank order of program objectives differed between school districts, the degree of variability in ranking was such that there was little practical differences in what would be included in programs in individual school districts. Due to the fact that the order of program objectives changed, and ratings converged through the Delphi process, engaging local stakeholders could result in better informed stakeholders and greater advocacy.

Based upon the results of this study, physical education programs in Michigan should do everything in their power to include swimming in their curriculum. In addition, quality programs should equip students with personal/social character traits, and the ability to plan, implement and evaluate their own activity programs that result in achieving and maintaining health-related levels of physical fitness.

Teacher preparation programs should prepare their students by informing them of what content is held in high regard by Michigan stakeholders, preparing them to teach high priority lifelong activities and program objectives, and teach the students these program-design techniques. Like local programs of physical education, teacher preparation programs are faced with having too much content to teach their students in too little instructional time. Focusing on high priority content will enable them to prepare their graduates to teach content deemed of highest priority by most stakeholders in Michigan.

While the results from this study may represent the best information available concerning content priorities for stakeholders in Michigan, work must continue to refine the priorities. Better information can be obtained from stakeholders if the number of lifelong activities and/or program objectives under consideration is limited. This will also reduce fatigue and increase motivation which in turn should provide better information. The data

can undergo a more thorough analysis if fewer items were rated using non-ordinal rating techniques.

Priorities clearly changed through the course of this study, but little information is available concerning what kinds of rationales are most convincing to specific audiences. Future Delphi studies should focus on the kinds of arguments with which specific stakeholder groups resonate. This will assist in meeting the needs of stakeholders, motivating students and parents alike in learning and applying the content, and creating advocacy for effective programs.

Effectiveness of the Procedure

Overview

An integral part of curriculum construction should include building consensus among stakeholder groups (Curry & Temple, 1992). The Delphi technique provides a systematic procedure for achieving a consensus within a controversial socio-political arena of debate (Helmer, 1966; Lundberg & Glassman, 1983; Penland, 1983; Sandow, 1972; Spinelli, 1983; Weaver, 1972).

Using the Delphi technique to guide the selection of curricular content is justified when the procedure meets two criteria. First, the technique needs to facilitate a convergence in opinions. A convergence in opinions results in greater support of, and confidence in, the results across stakeholder groups. Second, there should be change in the priorities obtained as a result of the process. The Delphi technique is a rigorous and time consuming procedure when used to prioritize potential content for educational programs. If the process of sharing information and considering the opinions of others does not result in changes in priorities held by stakeholders, then a simple survey technique would suffice.

Discussion

This study resulted in a convergence in ratings of lifelong activities and general program objectives. The number of lifelong activities that received a rating by any participant in the first and final rounds decreased by 21 percent. The dispersion in ratings

on each activity also decreased on 95.3 percent of the lifelong activities. Results on the general program objectives were just as convincing. Here the number of program objectives rated in the final round was not different from the first, but the dispersion in ratings decreased on 97 percent of the objectives.

The data were very similar when analyzed by stakeholder group, as demonstrated in Table 12. There was convergence on a vast majority of lifelong activities for all stakeholder groups, all school districts, within all regions of the state, for all divisions of household income, and for both males and females. Convergence data were just as convincing for the program objectives, with the exception of representatives of intermediate school districts (convergence on 58 of 98 objectives).

The rank order of lifelong activities and general program objectives also changed from the first to the final round, and the change was not attributable to chance (p=.0000). The rank order of the 15 highest-rated lifelong activities[1] differed significantly from the first to the final round for all participants. The order was significantly different for seven of the twelve stakeholder groups at the .05 level. The same was true for 14 of the 15 school districts, three of four income brackets, both males and females, and all regions of the state except for the west.

The rank order of the 50 highest-rated program objectives[2] also changed from the first to the final round. The difference in rank order for all participants from the first to final rounds was significant at the .05 level. The same was true for 10 of 12 stakeholder groups, 11 of 15 school districts, four of five income brackets, both genders, and all regions of the state.

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[1] The number of lifelong activities that can be accommodated by most physical education programs in Michigan when competency, versus exposure, is the intended outcome for at least half of the activities included.

[2] Slightly more than the number of program objectives that can be accommodated by most physical education programs in Michigan when competency, versus, exposure, is the intended outcome.

Conclusion

These data clearly support the notion that use of the Delphi technique can increase agreement in ratings, and change stakeholder priorities when assigning relative value to lifelong activities and program objectives suitable for inclusion in programs of physical education. This finding supports, therefore, the use of the Delphi technique as a viable process for establishing content priorities as part of a eclectic model for developing quality programs of physical education.

Recommendations

One of the difficulties associated with the Delphi technique is requiring participants to engage in multiple rounds. Ideally, successive rounds of the Delphi should be administered until ratings on items stop converging. This requirement must be tempered by the need to balance the quality of information obtained with the time consumed and the potential for increased rates of attrition with each round as respondent interest wanes (Uhl, 1983; Zoski & Jurs, 1990).

While this study resulted in significant findings after three rounds, subsequent studies should be conducted to determine how fewer or more rounds affect the results. Such information may allow the process to be streamlined without compromising the quality of the results. At this point, it is unknown how much convergence occurred from the first to the second, or from the second to the third rounds of this study, or what change would have occurred in subsequent rounds. If little change occurred in the latter round, it may be appropriate to complete the content selection process using just two rounds. Another way to reduce the number of rounds used is to begin the first round with the data and principal rationales obtained in this study.

Finally, a future study should look at the degree to which engaging stakeholders in a Delphi technique to establish content priorities affects advocacy for the program across stakeholder groups. It is clear that the Delphi process used in this study increased awareness of, benefits of, and rationale for, selected physical education content. It is

reasonable to assume that the procedure used in this study would result in increased advocacy for a quality program of physical education. Evidence supporting these assertions would provide another important reason for school districts use a Delphi technique in their content selection process.

Conclusion

Engaging stakeholders in a Delphi procedure resulted in greater agreement in content priorities with respect to potential lifelong games, sports and activities, and general program objectives. The process resulted in a convergence in ratings, changes in relative order, and greater agreement across stakeholder groups, school districts, regions of the state, income bracket, and genders for both categories of content. Consequently, use of the Delphi can increase the likelihood that content included in programs of physical education better represent the priorities held by stakeholders.

Differences still existed in relative priorities on lifelong activities and program objectives between stakeholder groups, and school districts at the end of the Delphi study. However, a practical difference exists predominately with respect to the activities selected by school districts. It would be wise then to engage school districts in selecting content that best matches the needs and values of the local constituency.

Students participating in this study held markedly different opinions on what lifelong activities should be included in a program of physical education. Significant differences in how lifelong activities are regarded do exist between school districts. The acknowledgment that differences do exist is an important component in meeting the needs of local constituents and creating advocacy for programs of physical education.

With regard to the procedure itself, special care must be taken to emphasize the importance of participation in stakeholders who are not directly affected by the results. Face-to-face invitation and personal contact through the procedure may result in larger numbers completing the study.

Limitations

Because the primary purpose of the study was identify the relative importance of content appropriate for programs of physical education, the participants were asked to limit the number of activities and program objectives assigned to each rating. This was done because of the tendency to rate large numbers of items in the highest category, thus failing to discriminate among them. While the procedure successfully ordered the potential content, the resultant data were ordinal in nature. This restricted the kinds of research questions that could be asked and limited the analysis to non-parametric procedures.

The data were collected from individuals and schools who were interested in improving the quality of programs of physical education. Care must be taken then in generalizing the results to all school districts and/or all stakeholder groups. The results may or may not represent the priorities of all stakeholders. Stakeholders interested in providing a quality physical education program that are engaged in a similar consensus-building procedure can be expected to obtain similar results.

APPENDIX A

Invitation to Participate

Date

Appropriate Name
School District Name
School District Address

Dear Administrator's Name:

Your school district has been identified as a potential candidate to participate in a state-wide study conducted by Michigan's Exemplary Physical Education Curriculum Project (MI-EPEC). The study, described in the enclosed flier titled "Identifying Content for Physical Education Programs in Michigan," will provide the project with information it needs to assist schools in developing exemplary physical education programs.

Some of the products participating districts will receive include:
- a list of potential program objectives consistent with state and national content standards documents, prioritized according to the values of stakeholders in the local community
- a parallel document representing the priorities of stakeholders state-wide
- a document describing the procedures to use in conjunction with the documents above to attain Level 4 of the Governor's Exemplary Awards Ladder
- access to consultation in applying local results in the construction of a curriculum model
- acknowledgment in state and national reports as having participated in this study

Some of the ways local districts can benefit from this information include:
- the information allows programs to match the amount of program content (in terms of the number of program objectives addressed) to local resources (including instructional time, facilities, budget, etc.) in a defensible, systematic fashion
- the resulting product clearly communicates the intent of the physical education's program to parents, administrators and students
- the procedure engages stakeholders in the community, resulting in a consensus by all participants as to the important potential outcomes that result from a quality physical education program
- the information allows local programs to tailor their program to meet the needs of their unique constituency

There is no cost of participation beyond assigning a facilitator to recruit a representative group of stakeholders to participate (see the enclosed document titled "Criteria for the Selection of Stakeholders," and conduct the three rounds of meetings described in the enclosed document titled "Content Priority Meetings" (the first meeting needs to be held between October 30 and November 5). The facilitator will be listed as a district facilitator in state-wide reports.

Only 20 school districts from across the state representing a variety of demographic variables will participate. Should you want to be a part of this important study and receive the valuable information resulting from it, I urge you to determine your interest in participating as quickly as possible. Direct your inquiries to the address provided on the enclosed flier.

Sincerely,

Ray Allen
MI-EPEC

Identifying Content for Physical Education Programs in Michigan

Content (objectives) included in programs of physical education in Michigan should reflect the values of all groups involved in the educational venture. Physical education specialists, parents, building and central administrators, legislators, school board members, and other teachers all have a perspective regarding what content is most important for graduates in the general content areas of motor skill development, health-related physical fitness, knowledge of activity, personal character traits and social skills. Michigan's Exemplary Physical Education Curriculum project (MI-EPEC) is conducting a study that will identify and share these individual values with other study participants in a way that individual perceptions inform each other, and a consensus regarding what content is most important to include in quality programs of physical education is established. We invite your participation in this important study. The results of the study will be used to guide the development of curriculum and instructional materials that will enable schools to create exemplary programs for the children of Michigan.

Help us determine content priorities for Michigan!

The need for your participation

Selecting appropriate content for a physical education program is crucial to meeting the needs of its graduates. Preparing graduates to engage in the right kinds and amounts of physical activity over their lifetime requires decision makers to consider public needs, opinions and priorities. Content decisions then should be based on informed judgments resulting from an open exchange of information by all stakeholders. Your opinions are valued and necessary to meet the needs of the youth in Michigan and your community.

How to participate

Apply to participate in the study by:

- enlisting a facilitator to oversee the recruitment of representative stakeholders from the community and the data collection from those stakeholders
- identifying individuals from the local community that fulfill the criteria for the selection of stakeholders willing to participate by completing three rounds of interactive surveys.
- Contacting:

Ray Allen
Room 39 I.M. Sports Circle
Michigan State University
East Lansing, MI 48824
Phone (517) 353-4805
fax (517) 432-5016
e-mail: allenhar@pilot.msu.edu

The benefits of participation

Results from the study will equip MI-EPEC to concentrate on developing materials and procedures related to the values of important stakeholders.

Participating school districts will receive the content priorities resulting from data obtained exclusively from their local stakeholders as well as from other districts across the state. This information will allow districts to:

- create or modify their K-12 curriculum content according to expressed client needs
- balance curricular content with local resources in accordance with stakeholders' values
- complete the steps necessary to achieve level four status on the Governor's Exemplary Awards Ladder.

School districts participating in the study will also be included among the list of contributors on the following documents:

- state-wide and regional reports of content priorities for the children of Michigan
- reports of priority content specific to school district(s) in your legislative area
- articles published in Michigan's Association for Health, Physical Education, Recreation and Dance professional journal.

Content Priority Meetings
Tentative Schedule of Events

By October 15: Obtain administrative support

Discuss the opportunity to participate in the study with the person(s) responsible for curriculum in the district.
Share the flier with them and point out the advantages in participating for the physical education program.
Explain that participation will entail:

- Inviting stakeholders to represent the values and priorities for the community
- Conducting three sets of meetings. The meetings are tentatively scheduled on or near October 31, November 21 and December 19. Participants will be asked to read important information and fill out a survey at each meeting.

By October 25: Recruit representative stakeholders

Select individuals residing in the community that meet the criteria described in the "Stakeholder Criteria" document.
Share the flier with them.
Describe the benefits that will be derived through their participation in the study.
Explain their responsibilities, should they choose to participate.
Share the dates of the meetings with them.

Between October 25 and October 28

Remind stakeholders of the meeting date(s).
Review the overheads and narrative. Call Ray Allen for any clarifications necessary.

Between October 30 and November 7

Conduct the meeting(s)[1].
Use the overheads and narrative provided.
Remind them of the date(s) for the second meeting.

Between November 15 and November 18

Remind stakeholders of the meeting date(s).
Review the overheads and narrative. Call Ray Allen for any clarifications necessary.

Between November 20 and November 22

Conduct the meeting(s)
Use the overheads and narrative provided.
Remind them of the date(s) for the third meeting.

Between December 13 and December 16

Remind stakeholders of the meeting date(s).
Review the overheads and narrative. Call Ray Allen for any clarifications necessary.

Between December 18 and December 20

Conduct the meetings.
Use the overheads and narrative provided.
Inform them there will be a meeting scheduled after the first of the year to present their results and discuss how those results will be used.

After January 15

Select a date to report the findings to the local district and discuss the implications.

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[1] It is strongly recommended you schedule one two-hour meeting, with a second meeting scheduled for those who are unable to attend.

Facilitator Selection

Facilitator Characteristics

Providing Michigan and your local community with concrete information upon which to base physical education curriculum decisions depends primarily on the effectiveness of the person selected to facilitate the process in the local district.
The facilitator must be:
- respected in the school and community
- organized and a good communicator
- possess the initiative and perseverance to execute the responsibilities listed below in a timely manner
- a physical education coordinator, teacher, or person connected to the physical education department (e.g., curriculum director, assistant superintendent, principal, etc.)

Upon successful completion of the study, and for their crucial role in the collection of date, the facilitator will receive:
- a $100 honorarium
- special published acknowledgment (e.g., the MAHPERD Journal) for their contribution to the study.

Responsibilities

The facilitator for each school district involved in the study will be expected to:
1. Recruit participants from the local community who meet the criteria provided in the *Criteria for the Selection of Stakeholders* document. Fulfilling this responsibility will require the facilitator to communicate:
   - the importance of the study's results for the citizens of Michigan and the local community
   - the procedures that will be followed, including the participants' rights and responsibilities should they choose to participate
   - How and when the facilitator will distribute and collect instruments during the three rounds
2. Obtain confirmation of each individual's willingness to participate through completion of the demographic information form and returning them to the study center.
3. Provide participants with a schedule, outlining the dates in which each survey will be distributed and collected.
4. Provide participants with the survey, and remind them of the dates they will be collected.
5. Collect the completed surveys within five days after distributing them.
6. Support local participants by entertaining procedural questions and contacting the study center for information when necessary.
7. Encourage their state legislators to participate in the study by sending the attached letter and complete the outlined phone call.
8. Plan local meetings in conjunction with school district administrators to disseminate local results of the study. The meeting should include:
   - orienting participants
   - sharing local results of the study
   - describing how the results will be used by the school district

Facilitators will be provided with all materials and checklists to help complete all responsibilities.

Criteria for the Selection of Stakeholders

Participants representing school districts will be selected in accordance with the following criteria.

Administration

- Two central administrators (persons who service the entire school district. Examples include superintendents, assistant superintendents and curriculum directors)
- Smaller districts where the superintendent is the only central administrator may enlist only one central administrator.
- One high school building administrator
- One middle school building administrator
- At least one elementary school building administrator

  Note: Participants representing the administration should be as equally divided by gender as possible.
- At least one male and one female school board member

Teachers

- One classroom teacher currently teaching at the high school level, with at least three years experience
- One classroom teacher currently teaching at the middle school level, with at least three years experience
- One classroom teacher currently teaching at the elementary school level, with at least three years experience

  Note: Classroom teachers should be as equally represented by gender as possible.
- All physical education teachers. If it is not possible, at least one high school, one middle school and one elementary school physical education teacher.

  Note: Physical education teachers should be as equally represented by gender as possible.

Community

- Two male and two female parents/guardians representing different children currently enrolled in the elementary, middle and high school (a total of at least four parents).
  Note: Select parents that represent different families (vs. a husband and wife), have expressed prior interest in the school's educational program, and are thought to represent the demographics (e.g., cultural diversity and socio-economic status of the district)
- One male and one female student and/or recent graduate from the school district
  Note: Students selected should be in or beyond the eleventh grade
- One representative from the community recreation department

APPENDIX B

Consent Form and Demographic Information

Physical Education Content Prioritization Study
Consent form

The purpose of this study is to identify the relative importance of content (program objectives) appropriate for inclusion in physical education programs in Michigan. The major focus of the study will be to rank the potential content using the relative importance of ratings by stakeholders representing all areas of the state.

Participants in the study will complete three rounds of an interactive survey over a seven week period. Completing each survey will require the participant to read statements pertaining to program objectives, rate the importance of each objective relative to other objectives, and provide briefly stated reasons for ratings made. Completing each instrument will require approximately 45 to 75 minutes. Participants will also be asked to provide the demographic information on the reverse side of this form to help interpret the survey data.

Participation in the study is voluntary. By completing and returning the demographic form, you are indicating your agreement to participate. You may choose to not to participate, you may refuse to complete certain procedures, or you may discontinue your participation at any time without penalty. However, because an important component to creating consensus is responding to arguments posed by participants in successive rounds, it is important that those choosing to participate intend to complete all three rounds.

Your responses will be entirely confidential. Data will be analyzed by stakeholder groups and not by individual participants. The last four digits of your social security number and first letter of your last name will be used to match responses in survey rounds with demographic grouping. To assure confidentiality, please do not put your name on survey forms.

Your honest responses are valued. Thank you for your willingness to participate in this study. If you have any questions or concerns regarding participation in the study, please contact Ray Allen (phone # 517-353-4805).

Participation Agreement

Having read the information provided on the reverse side of this form, I understand the following:

- My participation is completely voluntary. I may choose not to participate, refuse to complete certain procedures, or discontinue my participation at any time without penalty. I do however, understand the important contribution my participation will play in curricular decisions in my local district and at state and national levels by completing the study.
- Participating in this study will entail filling out three surveys on three different occasions over a seven-week period.
- All information I provide will remain confidential. Data obtained from my responses will be recorded without reference to my name, and data will be analyzed and reported by stakeholder groups, not by individual participants. The demographic information will be used only to compare values and priorities of subpopulations of participants.

Finally, by completing the demographic items below, and signing and returning this form, I consent to participating in this study.

Name: (signature)_____

(print)_____

Demographic Information

Last four digits of social security number ____ ____ ____ ____

Name of Local School District:_____

Mailing Address _____
street city, state, zip

Stakeholder Group(s)

Primary Association (check only one)		Secondary Association (check as many as appropriate)
_____	Central School Administrator	_____
_____	Building School Administrator	_____
_____	Local Board of Education Member	_____
_____	Classroom Teacher	_____
_____	Physical Education Teacher	_____
_____	Parent	_____
_____	Student (current of former)	_____
_____	Community Recreation Reps.	_____
_____	ISD Representative	_____
_____	Legislator	_____
_____	MAHPERD Representative	_____
_____	College/University Physical Education Rep.	_____
_____	Department of Education Rep.	_____
_____	Department of Health Rep.	_____

Sex

M _____ F _____

Socio-Economic Status

(check the range representing your total family annual income

_____ less than $15,000
_____ $15,000 - $29,999
_____ $30,000 - $44,999
_____ $45,000 - $69,999
_____ $70,000 or more

APPENDIX C

Round One Instrument

Rating Potential Content for Physical Education Programs:
Overview of the Survey Materials

This survey consists of 2 separate documents:

1. Rating Form for Lifelong Activities (yellow)
2. Rating Form for Program Content (white)

The Rating Form for Lifelong Activities (yellow) will be used first. The form lists a variety of games, sports and activities important to consider in preparing students for a lifetime of physical activity. Filling out this form will enable our project focus on preparing materials for lifelong activities that stakeholders across Michigan deem most important. It will provide local districts with information that will help guide them in preparing their graduates to live physically active lifestyles.

The Rating Form for Program Content (white) provides a structure for organizing physical education content and defines outcomes intended for successful graduates. The description of program content has several important parts:

- 15 content areas
- A rationale statement (immediately below each content area) explaining the value of achieving competency in the area.
- Several specific elements of content (called program objectives) under each content area, in the left hand column. Each program objective represents a discrete element of potential program content. By demonstrating competence on a selected number of these program objectives, students demonstrate competence in the content area.
- Directly to the right of the program objectives is a brief description of competence for that objective (i.e., what needs to be achieved before a person can be called competent). At times, as with the locomotor skills under Content Area 1, competency is defined for groups of program objectives by a single statement.

Rating Form for Lifelong Activities

*** Use this form first ***

The Rating Form for Lifelong Activities (yellow) will be used first. The form lists a variety of games, sports and activities important to consider in preparing students for a lifetime of physical activity. Filling out this form will enable our project focus on preparing materials for lifelong activities that stakeholders across Michigan deem most important. It will provide local districts with information that will help guide them in preparing their graduates to live physically active lifestyles.

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the page.***

- Review the games, sports and lifelong activities listed.
- List any games, sports and/or activities you think are high priority and have been omitted on the lines provided.

2. Rate the 3 lifelong activities you believe are most important for graduates of a physical education program to acquire with a 5.
3. Rate the 3 next most important with a 4.
4. Rate the 3 next most important with a 3.
5. Rate the 3 next most important with a 2.
6. Rate the 3 next most important with a 1.

Note: Rate only 15 of the lifelong activities.

7. Record your top three games, sports and activities (those rated 5) in the space provided on the bottom of the page.
8. Provide a reason for selecting these three as being higher priority than the other activities.

First Letter of Last Name: _____ Final Digits of Soc. Sec.# ___-___-___-___

Rating Form For Program Content

___ aerial darts
___ archery
___ back packing
___ badminton
___ basketball
___ bocce ball
___ bowling
___ camping
___ canoeing
___ climbing (rock)
___ crew
___ croquet
___ cycling
___ dance: aerobic
___ dance: ballet
___ dance: line
___ dance: creative
___ dance: folk/ethnic
___ dance: jazz
___ dance: modern
___ dance: social
___ dance: square
___ dance: tap
___ diving: springboard
___ diving: SCUBA
___ diving: skin
___ fencing
___ fishing: baitcasting
___ fishing: flycasting
___ fishing: spincasting
___ football: flag/touch
___ frisbee: skills/games
___ frisbee: ultimate
___ golf
___ gymnastics: apparatus
___ gymnastics: rhythmic
___ gymnastics: tumbling / floor exercise
___ handball
___ hiking
___ hocker
___ hockey: field
___ hockey: ice/inline/floor
___ horseback riding
___ horseshoes
___ jogging/powerwalking
___ kayaking
___ korfball
___ lacrosse
___ martial arts: judo
___ martial arts: karate
___ martial arts: others
___ orienteering
___ paddleball
___ pickle ball
___ racquetball
___ rope jumping
___ rugby (modified)
___ sailing
___ shooting: riflery
___ shooting: clays/trap
___ shooting: other
___ shuffleboard
___ skating: ice
___ skating: inline
___ skating: roller
___ skiing: cross country
___ skiing: downhill
___ skiing: water
___ soccer
___ softball
___ speedball
___ squash
___ swimming
___ swimming: life saving
___ swimming: synchronized
___ swimming: WSI
___ table tennis
___ tai-chi
___ team handball
___ tennis
___ tennis: platform
___ tetherball
___ track: field
___ track: running
___ volleyball
___ walking: race
___ water polo
___ weight training
___ wrestling

additions:

___ _____
___ _____
___ _____
___ _____

Activity: _____
Rationale: _____

Activity: _____
Rationale: _____

Activity: _____
Rationale: _____

Rating Form for Program Content

*** Use this form Second ***

The Rating Form for Program Content (white) provides a structure for organizing physical education content and defines outcomes intended for successful graduates. The description of program content has several important parts:

- 15 content areas
- A rationale statement (immediately below each content area) explaining the value of achieving competency in the area.
- Several specific elements of content (called program objectives) under each content area, in the left hand column. Each program objective represents a discrete element of potential program content. By demonstrating competence on a selected number of these program objectives, students demonstrate competence in the content area.
- Directly to the right of the program objectives is a brief description of competence for that objective (i.e., what needs to be achieved before a person can be called competent). At times, as with the locomotor skills under Content Area 1, competency is defined for groups of program objectives by a single statement.

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the page.***

- Read the rationale statement below each content area.
- Review the program objectives and read the intended instructional outcome.
- Record any program objective you think is of high priority that was omitted the survey.

2. Rate the 10 program objectives from among all 15 content areas you believe are most important for graduates of a physical education program to acquire with a 5.
3. Rate the 10 next most important with a 4.
4. Rate the 10 next most important with a 3.
5. Rate the 10 next most important with a 2.
6. Rate the 10 next most important with a 1.

Note: Rate only 50 objectives.

7. Record your top ten program objectives (those rated 5) in the space provided on the last page.
8. Provide a reason for selecting the objective as being higher priority than the other potential objectives.

First Letter of Last Name: _____ Final Digits of Soc. Sec.# ___-___-___-___

Rating Form For Program Content

Goal Area 1: Demonstrate competence in selected motor skills.

Content Area 1: Demonstrate competence in selected fundamental motor skills.

Rationale: Fundamental motor skills (run, hop, throw, catch...) are prerequisites to successful participation in the games, sports and other activities of the culture. Competence in fundamental motor skills is a prerequisite to learning complex motor skills, provides the basis for learning activities used to achieve and maintain fitness, and provides the base for learning and participating in leisure activities that are not taught within the program. Acquisition of motor skill positively influences a person's attitude toward participation in physical activity, and successful participation in motor activities appears to contribute to cognitive and social development.

Rating	Program Objective	Intended Instructional Outcomes
	Locomotor Skills	
___	gallop	Demonstrate competence when executing the skill (all key elements of form) in the context of playing high priority games, sports or activities.
___	hop	
___	skip	
___	slide	
___	jump: horizontal	Demonstrate all elements of form while executing the skill well enough to use it successfully in games and activities and in combination with other skills.
___	jump: vertical	
___	leap	
___	run	
	Object Control Skills	
___	bat	Demonstrate all elements of form while executing the skill well enough to use it successfully in games and activities and in combination with other skills.
___	catch: fly balls	
___	catch: rolling balls	
___	dribble: with hands	
___	dribble: with feet	
___	jump rope	
___	kick: instep	
___	kick: toe	
___	pass: chest	
___	pass: overhead	
___	punt	
___	roll a ball	
___	strike: backhand	
___	strike: overhand	
___	strike: forehand	
___	strike: underhand	
___	throw: overhand	
___	throw: underhand	

Content Area 2: Demonstrate competence in selected postural skills.

Rationale: Proper posture in various positions and movements helps prevent injury and contributes to anatomical and physiological function, thus affecting health, wellness, and the general quality of life.

Rating	Program Objective	Intended Instructional Outcomes
___	posture: lift and carry	Demonstrate appropriate postural alignment when executing the listed skills within their context of use.
___	posture: push and pull	
___	posture: sit	
___	posture: walk/stand	

Content Area 3: Demonstrate competence in selected body control and non-locomotor skills.

Rationale: Control of the body promotes kinesthetic awareness, a deterrence to injury, and with fundamental motor skills, forms a foundation for acquiring sports, games and dance skills. It also contributes to competence in physical tasks common to many work environments. Learning body control skills also contributes to precise communication to communication and understanding of movements necessary to learn other motor skill.

	Body control skills	
___	balance: dynamic upright	Demonstrate appropriate balance when executing the listed skill.
___	balance: inverted	
___	balance: static upright	
___	climb a rope ladder	Demonstrate appropriate technique when climbing and descending a 15-foot rope ladder.
___		
___	land from a horizontal fall	Demonstrate appropriate technique when executing the listed skills when falling
___	shoulder roll: backward	
___	shoulder roll: forward	
___	vault	Demonstrate appropriate technique when vaulting over waist-high obstacles.
	Non-Locomotor skills	
___	relaxation	Demonstrate the ability to systematically relax the body's musculature in times of stress.

Content Area 4: Demonstrate competence in selected rhythmical skills.

Rationale: Like fundamental motor skills and body control skills, basic rhythmical skills provide a basis for acquiring competence in games, activities and dances which require moving in time to rhythmical beats. Competence in rhythmical skills like tempos and uneven beats can also facilitate the learning of some motor skills.

___	accent	Demonstrate competence in moving in time to the selected rhythms at fast, moderate, and slow speeds using appropriate forms of locomotion.
___	even beat	
___	tempo	
___	uneven beat	

Content Area 5: Demonstrate competence on selected health-enhancing lifelong physical activities.

These priorities are completed elsewhere. Please move to the next category.

Goal Area 2: Demonstrate the ability to assess, achieve and maintain physical fitness.

Content Area 6: Develop and maintain health-related levels of cardiovascular fitness.

Rationale: Cardiovascular fitness contributes to the quality of life and to the absence of disease associated with sedentary living. For children, it is an important stimulus to normal growth and development and contributes to motor skill acquisition, health, and may be important to habituating lifelong participation in physical activity.

Rating	Program Objective	Intended Instructional Outcomes
___	aerobic fitness	Achieve and maintain health-related levels of aerobic fitness.

Content Area 7: Develop and maintain health-related levels of muscular strength and endurance.

Rationale: Muscular strength and endurance facilitates motor skill acquisition, reduces the potential for injury, and enhances the ability to perform motor skill.

___	abdomen, low back	Achieve and maintain health-related levels of muscular strength and endurance in the selected body parts.
___	neck	
___	legs	
___	shoulders	
___	arms	

Content Area 8: Develop and maintain health-related levels of flexibility in selected body joints.

Rationale: Flexibility facilitates motor skill acquisition, reduces potential for injury and enhances the ability to perform motor skills.

___	ankle	Achieve and maintain health-related levels of flexibility in the selected joints of the body.
___	hip, low back	
___	neck	
___	shoulder	
___	trunk	

Content Area 9: Develop and maintain healthy levels of lean and fat tissue.
Rationale: Appropriate ratios of fat-to-lean tissue affect both health and physical performance.

Rating	Program Objective	Intended Instructional Outcomes
___	lean/fat ratio	Develop and maintain health-related ratio of lean to fat tissue.

Goal Area 3: Demonstrate the ability to apply selected activity-related cognitive concepts

Content Area 10: To know and apply movement concepts to movement.
Rationale: Knowledge of these concepts enable the precise communication necessary to provide specific feedback in setting up and safely managing a physical education learning environment.

Rating	Program Objective	Intended Instructional Outcomes
___	body parts	Know selected body parts, planes (front, back, etc.)
___	body actions	and actions (shaking, twisting, bending, etc.) well
___	body planes	enough to correctly respond to teaching, feedback and communications.
___	shapes	Recognize selected words as they relate to shapes
___	size	(straight, bent, twisted, etc.) and size (big, small, etc.).
___	use of force	Recognize words as they relate to the amount of effort
___	use of flow	(hard, soft, etc.), the degree of smoothness (even,
___	use of time	flowing, etc.) and periods of time (now, soon, later, etc.).
___	positions in space	Recognize selected words as they relate to positions
___	levels of space	(in, out, around, etc.), levels (high, medium, low),
___	directions in space	and directions (forward, up, diagonal) in space.
___	personal space	Use one's own personal space (surrounding one's own body)
___	boundaries of space	and general space (shared by others) while participating in physical activity in a way that is safe and efficient.
___	turn	Alter the direction (turning), or action
___	twist/rotate	(twisting/rotating) of the body, or body part in compliance with instructions.

Content Area 11: Knowledge of how to learn a motor skill.

Rationale: Physical education programs can not include sufficient instruction on all physical activities that should be incorporated in a comprehensive program. Accordingly, knowledge of how to learn a motor skill enables graduates to subsequently learn activities unavailable to them during their school years. It also enables them to help others learn skills they have mastered.

Rating	Program Objective	Intended Instructional Outcomes
___	how to learn motor skills	Know how to identify the important components of a skill, break them down into learnable parts, practice and assess progress in a way that results in skill acquisition.

Content Area 12: Knowledge of the beneficial and detrimental effects of activity and inactivity on one's health and well-being.

Rationale: Knowledge of the potential detrimental and beneficial affects of participating in physical activity enables one to discern the benefits and risks of living an active lifestyle. Equally important is the knowledge of consequences of sedentary living.

___	benefits of physical activity	Understand the immediate and long term affects of various kinds and amounts of physical activity on well-being.
___	detrimental affects of physical activity	Understand the potential dangers and risks associated with participation in various kinds and amounts of physical activity

Content Area 13: Knowledge of how to design, implement and evaluate a personal physical activity program.

Rationale: Knowing how to assess fitness levels, and how to design, implement and evaluate a personal activity program to achieve health and/or performance related standards allows graduates to assume the responsibility for their own fitness. It also enables them to judge the appropriateness of commercial materials and procedures advocated by commercial vendors.

___	assess status on health-related fitness indicators	Demonstrate the ability to assess and interpret one's health-related status.
___	prevent injuries	Apply principles and take actions during the course of preparing for, participating in, and concluding physical activity that optimizes safe participation.
___	care for common athletic injuries	
___	design a personal activity program	Plan and implement an activity program that will result in achieving selected health-related standards.
___	effects of selected performance modifiers	Articulate the effects of substances, conditions (cold, humidity, altitude, etc.) and health issues (high blood pressure, nutrition, stress, etc.) that affect performance, and apply actions that minimize the potential detrimental affects.
___	nutritional habits	Specify and implement nutritional habits that match selected activity programs, resulting in the achievement of intended outcomes in a safe, effective manner.

Goal Area 4: Exhibit appropriate personal-social-attitudinal character traits while participating in physical activity and assign value to living an active lifestyle.

Content Area 14: Demonstrate appropriate behavior on selected personal/social/ attitudinal character traits that are common to physical activity settings.

Rationale: There is a current surge in the understanding of the importance of selected personal/social/attitudinal behavioral traits to maintaining a functioning democratic society. While the teaching of affective behavior is not unique to physical education and sport, it provides rich contexts in which such characteristics can be obtained.

Rating	Program Objective	Intended Instructional Outcomes
___	best effort	Demonstrate earnest attempts to achieve educational objectives through a consistent and exemplary expenditure of energy and time.
___	competitiveness	Strive to achieve personal and/or corporate outcomes with levels of intensity and at times that are appropriate for the situation, reflecting the purpose of the activity, and respond appropriately to both winning and losing efforts.
___	cooperation	Restrain personal and immediate gratification while working with others to achieve a common end or mutual benefit.
___	compassion for others	Show interest in and concern for the struggles and achievements of others and participate in their suffering or celebration.
___	courage	Demonstrate a state or quality of mind and/or spirit that faces difficulties or stress with self-control and determination to achieve.
___	decision-making	Seek information and /or counsel, weigh consequences and make decisions that are consistent with the facts and good counsel.
___	follow directions	Listen to, seek to understand and implement instructions provided by persons in positions of authority over short and long duration.
___	initiative	Show enterprise and determination to identify and begin a needed task without prompting or direction from others.
___	leadership	Encourage and guide the actions and opinions of others so as to enhance their ability to achieve a common outcome.
___	perseverance	Adhere to a course of action, belief or purpose while involved with a plan or task that requires care, effort and/or labor.
___	self-control	Display behavior during periods of stress conducive to the safety and well-being of others.
___	realistic perception of one' ability	Accurately assess personal competencies, attempt to perform within one's abilities, and set challenging and achievable goals.
___	respect for others	Recognize the worth of others as exemplified by consideration, appreciation, and tolerance of their weaknesses.

Rating	Program Objective	Intended Instructional Outcomes
___	respect for rules	Exemplifies an attitude of consideration and appreciation for established procedures or behaviors designed for the welfare of the participants.
___	respect for property	Show an attitude of consideration and appreciation for materials, equipment and facilities owned by self and others.
___	responsibility	Consistently make rational decisions on one's own and being accountable for one's behavior.

Content Area 15: Value physical activity and its contribution to lifelong health well-being, and the general quality of life.

Rationale: Physical activity, when its benefits are understood and it is used in appropriate ways, can influence health, performance, and the quality of life. Competence in specific kinds of activity can result in personal satisfactions and self-esteem, and an appreciation for the accomplishments others. Talent, opportunity, and hard work resulting in elite performance can be enjoyed for its artistry and enrichment similar to other forms of fine art.

Rating	Program Objective	Intended Instructional Outcomes:
___	appreciation of fitness	Recognize the value in being able to demonstrate excellence on fitness indicators and appreciate the dedication associated with meeting such standards.
___	appreciation of skilled performance	Recognize and hold in high regard the talent, discipline and hard work involved in acquiring outstanding physical skills.
___	enjoyment of movement	Display a desire for and pleasure in participating in and watching others execute skillful movement activities.
___	value an active lifestyle	Articulate valuable reasons for and a desire to regularly participate in physical activities.

Rationales for Assigning a 5 to Program Objectives

Name of Objective:	Rationale for selecting this objective above alternatives:
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	
_____ :	

APPENDIX D

Round Two Instrument

Rating Form for Lifelong Activities

*** Use this form first ***

The Rating Form for Lifelong Activities (yellow) will be used first. The first page of the form lists all activities that received a rating from the first round in rank order according to their overall mean ratings. Each activity is preceded by its overall rank and followed by its mean rating. The first fifteen are preceded to the far left by numerals 5-1, designating which activities would have received each rating on average. The rating form appears on pages 2-11. Each activity is listed according to rank, and is accompanied by its mean, interquartile range, and rationales as to why participants thought it should be one of the top three activities. The interquartile range designates the range of the middle 50 percent of the ratings given by participants. For example, if an interquartile range were 1-3, the middle 50 percent of the ratings were 1, 2, or 3. One-fourth of the ratings were lower (0 or 1) and one-fourth were higher rating (4 or 5).

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the page.***

- Read through the rank order of activities on the cover page, considering which ones you agree with and which ones you think are out of order.
- Read the rationales provided for those activities you think are rated too high or too low. This is extremely important, in that we must seek to understand what others were thinking and consider the strength of their arguments.

2. Rate the three activities you believe are most important for graduates of a physical education program to acquire with a 5.
3. Rate the three next most important with a 4.
4. Rate the three next most important with a 3.
5. Rate the three next most important with a 2.
6. Rate the three next most important with a 1.

Note: Rate only 15 activities.

7. **Important:** Provide a rationale each time you rate an activity outside the interquartile range

Examples:

If you rate an objective "2" and the interquartile range is "3-5", explain why you think the objective was rated too high.

If you rate an objective "4" and the interquartile range is "0-2", share why you think the objective is rated too low.

If you rated the objective "4", and the interquartile range is "3-5", you need not give a rationale.

Ranking of Lifelong Activities by Mean Rating
Round One Results

(Composite Ratings)	Rank	Activity	Mean Rating	Rank	Activity	Mean Rating	Rank	Activity	Mean Rating
	1	swimming	3.53	29	skating: roller	0.45	58	climbing (rock)	0.12
5's	2	jogging/powerwalking	2.44	30	tennis: platform	0.45	59	rugby (modified)	0.12
	3	basketball	2.28	31	canoeing	0.41	60	horseshoes	0.11
	4	weight training	2.01	32	gymnastics: apparatus	0.39	61	fishing: spincasting	0.10
4's	5	golf	2.00	33	badminton	0.38	62	gymnastics: rhythmic	0.10
	6	softball/baseball	1.98	34	skating: ice	0.35	63	team handball	0.10
	7	tennis	1.95	35	bocce ball	0.34	64	hockey: field	0.09
3's	8	volleyball	1.79	36	back packing	0.33	65	fishing: flycasting	0.09
	9	dance: aerobic	1.72	37	track: field events	0.31	66	shooting: riflery	0.09
	10	soccer	1.49	38	dance: ballet	0.31	67	sailing	0.08
2's	11	cycling	1.45	39	speedball	0.29	68	martial arts: others	0.08
	12	swimming: life saving	1.22	40	frisbee: skills/games	0.27	69	skiing: water	0.07
	13	hiking	1.10	41	dance: square	0.26	70	frisbee: ultimate	0.06
1's	14	bowling	0.95	42	table tennis	0.23	71	diving: SCUBA	0.06
	15	skiing: cross country	0.94	43	fishing: baitcasting	0.23	72	dance: modern	0.05
	16	track: running	0.88	44	archery	0.22	73	dance: jazz	0.05
	17	skating: inline	0.78	45	hocker	0.22	74	shuffleboard	0.04
	18	rope jumping	0.77	46	handball	0.19	75	pickle ball	0.04
	19	dance: social	0.74	47	martial arts: karate	0.18	76	martial arts: judo	0.04
	20	football: flag/touch	0.73	48	orienteering	0.17	77	dance: tap	0.03
	21	walking	0.72	49	water polo	0.16	78	diving: springboard	0.03
	22	camping	0.67	50	dance: folk/ethnic	0.16	79	lacrosse	0.03
	23	kayaking	0.63	51	swimming: wsi	0.15	80	CPR/lifesaving	
	24	skiing: downhill	0.61	52	tai-chi	0.15			
	25	racquetball	0.52	53	dance: creative	0.13			
	26	gymnastics: tumbling /f	0.49	54	horseback riding	0.13			
	27	wrestling	0.48	55	dance: line	0.13			
	28	hockey: ice/inline/floor	0.46	56	swimming: synchronizec	0.12			

First Letter of Last Name: _____ Final Digits of Soc. Sec.# ___-___-___-___

Rating of Lifelong Activities:
Round Two*

Rating

___ **Swimming**

3.5 **Mean**

5-2 **Interquartile Range**

Rationale:

Swimming is an activity that exercises most of the major muscle groups.
It is a good cardiovascular activity that uses a relatively large number of kilocalories.
With the abundance of water in Michigan, the skill of swimming is important for safety and an important prerequisite for participation in other water sports and activities.
With the availability of pools, it is an activity that can be done year round.
It is a relatively low impact exercise, and it can be done practically all of one's life.
It may enhance flexibility in the arm and shoulder joints.
It can be a recreational, social, or a competitive activity.
Because physical education services almost all students, it is a place to ensure all can swim.
It provides an activity to those unable to walk or run because of physical conditions.

___ **Jogging/Powerwalking**

2.4 **Mean**

5-0 **Interquartile Range**

Rationale:

An excellent cardiovascular exercise requiring little skill, so all ages and abilities can do it.
It is a relatively low impact type of exercise.
It is an effective method of weight control for anyone.
It can be done by an individual or by a group, as a recreation, competition or social event.
The intensity, duration and frequency is easily controlled by the participant.
Inexpensive activity, requiring little equipment.
It's health-related benefits may enhance one's ability to perform other related activities.
Teaching people how to do it properly can prevent injury and lead to lifelong participation.
It may contribute to stress reduction and lower high levels of blood pressure.
Low incidence of injury allows for long term participation and benefits from being physically active.

___ **Basketball**

2.3 **Mean**

4-0 **Interquartile Range**

Rationale:

A group activity that encourages team work or can be done individually.
It can be played throughout the majority of one's lifetime.
Good aerobic and conditioning activity that can help control body fat.
A popular activity with all ages that is relatively simple and inexpensive.
Requires hand/foot/eye coordination as well as use of fine and gross motor skills.
It requires strength, speed, agility, endurance, coordination, mental decision making skills.
An activity that provides opportunity to develop a healthy competitive outlook.
It is growing in popularity among women.

* This document is a sample of the study's round-two instrument. It's intent is to illustrate the instrument's format and sample rationales. The complete set of data can be obtained by contacting the author.

___ **Weight Training**

2.01 **Mean**

4-0 **Interquartile Range**

Rationale:

It can enhance the development of lean body tissue, including muscle mass, bone density and tendon and ligament strength.
If done correctly, it can help maintain flexibility and posture.
It builds muscular strength and endurance, as well as improve one's overall appearance.
Improving one's strength improves one's ability to participate in other activities.
It can be modified to meet our changing needs as we age, including loss of lean body mass.
Learning proper techniques and gaining necessary strength will minimize the risk of injury for anyone, any time they need to life heavy objects.
Doing it can benefit anyone (young, old, disabled, etc.).
It can be an aerobic or an anaerobic exercise.
It is a relatively easy skill to learn, its inexpensive, and can be done most anywhere.

___ **Golf**

2.0 **Mean**

4-1 **Interquartile Range**

Rationale:

Most will have the chance to play as adults, but may not have the opportunity for instruction outside physical education.
A life-long activity that one can benefit from playing as one gets older, into retirement.
Excellent form of outdoor exercise, readily available to the public.
Requires a high level of skill, but anyone of any skill level can play.
It is often used as a medium to conduct business.
Provides a context to learn patience.
Can be played as a recreation or competitively.
A low impact sport.
Can be played in a group or by an individual, locally or around the world.

___ **Softball/baseball**

1.98 **Mean**

3-0 **Interquartile Range**

Rationale:

It is a sport that accommodates individuals of most ages and levels of ability.
It provides opportunities for social interaction, ranging from recreational play to highly competitive athletics.
It includes the major skill areas of throwing, catching and striking, which are critical for success in many other areas.
Through rule modifications, it can be played with small numbers or traditional teams.
Because of its popularity, softball diamonds and equipment are generally available in each community.
Leagues with are available for all ages at various levels of ability and competition.
Summer recreation leagues are growing rapidly and a student is likely to get involved after their education is done.

Rating Form for Program Content

*** Use this form Second ***

Product
The document's cover page lists all program objectives in rank order, according to overall mean ratings. Each objective is preceded by its rank and followed by its mean. To the far left, numerals 5-1 are placed to designate how on average the objectives would be rated after the first round (i.e., the first 10 objectives would receive a "5" rating).

On subsequent pages, the objectives are again listed in rank order. The objective's mean and interquartile range is immediately below each objective. The interquartile range is the range in which the ratings of the middle 50 percent of the respondents fall. For example, the interquartile range for aerobic fitness is 4-5. This implies that the middle 50 percent of respondents rated this objective either a 4 or 5. Finally, the rationales provided by participants is provided below the objective.

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the page.***

- Read through the rank order of objectives on the cover page, considering which ones you agree with and which ones you think are out of order.
- Read the rationales provided for those objectives you think are rated too high or too low. This is extremely important, in that we must seek to understand what others were thinking and consider the strength of the arguments.

2. Rate the 10 program objectives you believe are most important for graduates of a physical education program to acquire with a 5.
3. Rate the 10 next most important with a 4.
4. Rate the 10 next most important with a 3.
5. Rate the 10 next most important with a 2.
6. Rate the 10 next most important with a 1.

Note: Rate only 50 objectives.

7. **Important:** Provide a rationale each time you rate an objective outside the interquartile range

Examples:

If you rate an objective "2" and the interquartile range is "3-5", explain why you think the objective was rated too high.

If you rate an objective "4" and the interquartile range is "0-2", share why you think the objective is rated too low.

If you rated the objective "4", and the interquartile range is "3-5", you need not give a rationale.

Ranking of Program Objectives by Mean Rating

Round One Results

(Composite Ratings)

	Rank	Program Objective	Mean		Rank	Program Objective	Mean	Rank	Program Objective	Mean
	1	aerobic fitness	4.34		31	initiative	2.06	61	flexibility: neck	1.2
	2	benefits of physical activity	4.25		32	posture: walk/stand	2.04	62	flexibility: ankle	1.2
	3	nutritional habits	3.81		33	respect for property	2.04	63	knowledge: body actions	1.2
	4	value an active lifestyle	3.72		34	realistic perception of ability	2.03	64	balance: static upright	1.1
	5	cooperation	3.50	2's	35	strength: legs	1.97	65	knowledge: space boundaries	1.1
5's	6	best effort	3.48		36	catch: fly balls	1.92	66	strike: forehand	1.1
	7	respect for others	3.40		37	courage	1.73	67	gallop	1.1
	8	responsibility	3.37		38	balance: dynamic upright	1.71	68	knowledge: use of force	1.0
	9	self-control	3.26		39	strength: arms	1.66	69	leap	1.0
	10	appreciation of fitness	3.23		40	appreciate skilled performance	1.65	70	dribble: with feet	1.0
	11	lean/fat ratio	3.17		41	effects of perf. modifiers	1.64	71	slide	0.9
	12	how to learn motor skills	3.17		42	care for athletic injuries	1.49	72	kick: instep	0.9
	13	design a personal activity pgm	3.15		43	skip	1.43	73	kick: toe	0.8
	14	strength: abdomen, low back	3.03		44	knowledge: personal space	1.41	74	catch: rolling balls	0.8
4's	15	follow directions	2.84	1's	45	jump rope	1.34	75	knowledge: twist/rotate	0.8
	16	respect for rules	2.80		46	dribble: with hands	1.33	76	land from a horizontal fall	0.8
	17	run	2.78		47	posture: sit	1.28	77	knowledge: positions in space	0.8
	18	relaxation	2.76		48	strength: shoulders	1.24	78	knowledge: turn	0.7
	19	decision-making	2.72		49	jump: vertical	1.19	79	shoulder roll: forward	0.7
	20	prevent injuries	2.66		50	flexibility: trunk	1.18	80	roll a ball	0.7
	21	detrimental affects of phys. act.	2.59		51	even beat	1.5	81	balance: inverted	0.7
	22	perseverance	2.58		52	knowledge: body parts	1.4	82	pass: chest	0.6
	23	assess status: fitness indicators	2.49		53	bat	1.4	83	shoulder roll: backward	0.6
	24	leadership	2.36		54	posture: push and pull	1.4	84	uneven beat	0.6
	25	compassion for others	2.28		55	tempo	1.3	85	strike: overhand	0.6
3's	26	throw: overhand	2.21		56	flexibility: shoulder	1.3	86	climb a rope ladder	0.6
	27	competitiveness	2.18		57	jump: horizontal	1.3	87	knowledge: use of time	0.6
	28	enjoyment of movement	2.17		58	throw: underhand	1.3	88	accent	0.6
	29	posture: lift and carry	2.15		59	hop	1.3	89	knowledge: directions in space	0.5
	30	flexibility: hip, low back	2.13		60	strength: neck	1.2	90	strike: backhand	0.5

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Rating of General Program Objectives:
Round Two

Rating

___ **Aerobic fitness**

4.34 **Mean**

5-4 **Interquartile Range**

Rationale:

Aerobic fitness is necessary for maintaining physical and mental health throughout life.
It is an essential component of total fitness.
It provides special health related benefits including the delay or prevention of cardiovascular disease, obesity, high cholesterol, blood pressure and type II diabetes.
Benefits of aerobic fitness include reduction of stress and certain types of mental illness.
Its base should be established in childhood and maintained thereafter because many of the degenerative diseases have their "genesis" in childhood.
It has been established as the foundation for anaerobic fitness, thus it rises to the top priority in any program designed to promote total fitness.
Aerobic fitness is necessary to enable one to engage in daily activities, both work and leisure and to be productive.
Aerobic fitness is a major component in weight loss or maintenance.
Aerobic fitness facilitates the strength and endurance to safely participate in all activities.
Aerobic fitness helps to develop strong muscles, heart and lungs in order to combat major health concerns.

___ **Benefits of physical activity**

4.25 **Mean**

5-4 **Interquartile Range**

Rationale:

People need to understand the benefits of activity to make healthy decisions.
Individuals who understand the benefits of physical activity are in the best possible position to make informed choices about their own health status and quality of life.
Knowledge of activity's benefits is essential in order to dispel the myths that surround activity programs.
Those knowledgeable about the benefits are more likely to initiate and sustain program of physical activity.
Knowing what the benefits are helps us be smarter consumers, able to sift through accurate and inaccurate information.

___ **Nutritional habits**

3.8 **Mean**

5-3 **Interquartile Range**

Rationale:

Lack of knowledge of proper nutrition contributes to poor food choices.
Nutritional habits play a role in obesity and other diseases.
A balanced diet is essential to a healthy body.
Proper nutrition is necessary for successful participation in physical activity.

___ **Value an active lifestyle**

3.72 **Mean**

5-3 **Interquartile Range**

Rationale:

Assigning a value to being active is important to developing a lifetime commitment to physical activity and a healthy lifestyle.
This will influence behavior long after the student leaves physical education class, having a long term positive affect on quality of life.

___ **Cooperation**
3.50 **Mean**
5-3 **Interquartile Range**

Rationale:

Cooperation is necessary for groups to compete or perform at a high level.
Sharing one's contributions and enjoying those of others while working together for a common goal is a positive experience that reinforces the value of teamwork.
Effective cooperative behavior is essential to successfully working with others in all aspects of life.
Physical education provides an ideal setting for teaching cooperation.

___ **Best effort**
3.48 **Mean**
5-3 **Interquartile Range**

Rationale:

Giving one's best effort is a cross-curricular goal, essential to being successful in all aspects of life.
Knowing what it means, and the value of acquiring it, will help people learn how to be focused on their personal performance, drawing satisfaction from their effort in contrast to potential outcomes (i.e., win or lose).
Learning how to give one's best effort consistently leads to improvement, which will provide long term motivation.
This trait is necessary to becoming physically active and fit.

___ **Respect for others**
3.40 **Mean**
5-2 **Interquartile Range**

Rationale:

Respect for others is necessary to foster positive interactions between people.
A quality lacking in today's society, mutual respect for each other could result in a happier, more peaceful place to live.
Physical activity offers an ideal environment to teach this trait.
Showing respect for others improves personal and professional relationships.

___ **Responsibility**
3.37 **Mean**
5-2 **Interquartile Range**

Rationale:

People need to learn that their choices and actions can both positively and negatively affect others.
Responsible behavior with cultivate a sense of trust and respect by others.

___ **Self-control**
3.26 **Mean**
5-2 **Interquartile Range**

Rationale:

Self control is necessary for positive and effective interactions in personal, social and professional aspects of life.
It is needed to develop and/or maintain habits that contribute to health-related levels of body composition and/or fitness levels.
It is a necessary skill for dealing with the stress, frustration and conflict that are natural parts of life.
Self control must be taught to counter the many examples of lack of self control prevalent in the realm of sport today.
This will keep the individual accountable for his/her own activity.

APPENDIX E

Round Three Instrument

Rating Form for Lifelong Games, Sports and Activities

*** Use this form first ***

The Rating of Lifelong Games, Sports and Activities (yellow) will be used first. The form's first page lists all activities in rank order, according to the overall mean ratings from the second round. This page will be the recording sheet. The subsequent pages list each activity in rank order. Each activity is followed by the rationales provided for rating the objective higher, then the rationales provided for rating the objective lower. If either or both categories do not appear below an objective, no rationales were provided.

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the rating form (next page).***

- Remove the rating form from the rest of the document.
- Use pages 2-9 as a worksheet. Read through the activities, noting their order.
- Read the rationales for rating objectives higher and lower before recording your rating on the recording sheet (page 1). This is extremely important, in that we must seek to understand what others were thinking and consider the strength of their arguments.

2. Rate the three activities you believe are most important for graduates of a physical education program to acquire with a 5.

   Note: Rate the activities you feel are the most important outcomes, regardless of available facilities. The availability of resources will affect curriculum content, but should not diminish the intrinsic value of acquiring competency in a specific activity.

3. Rate the three next most important with a 4.
4. Rate the three next most important with a 3.
5. Rate the three next most important with a 2.
6. Rate the three next most important with a 1.

Note: Rate only 15 activities.

Return the single page of the rating form only.

First Letter of Last Name: _____ Final Digits of Soc. Sec.# ___-___-___-___

Ratings of Lifelong Activities: Round Three

New Rating	Activity	Previous Mean
____	Swimming	4.43
____	Jogging/Powerwalking	4.09
____	Weight Training	3.33
____	Basketball	3.30
____	Tennis	3.17
____	Golf	2.76
____	Volleyball	2.74
____	Softball	2.68
____	Cycling	2.27
____	Dance: aerobic	2.24
____	Soccer	2.18
____	Skiing: cross country	1.51
____	Hiking	1.31
____	Track: running	1.04
____	Skating: inline	0.88
____	Walking	0.86
____	Dance: Social	0.82
____	Bowling	0.81
____	Rope Jumping	0.62
____	Swimming: life saving	0.56
____	Gymnastics: tumble /floor	0.46
____	Football: flag	0.26
____	Camping	0.22
____	Badminton	0.22
____	Track: field events	0.20
____	Racquetball	0.14
____	Skating: roller	0.14
____	Martial Arts: karate	0.12

New Rating	Activity	Previous Mean
____	Table tennis	0.09
____	Canoeing	0.08
____	Skating: ice	0.08
____	Backpacking	0.07
____	Fishing: baitcasting	0.06
____	Dance: line	0.06
____	Skiing: downhill	0.06
____	Dance: square	0.06
____	Dance: creative	0.06
____	Tai Chi	0.06
____	Step aerobics	0.05
____	Archery	0.04
____	Horseback riding	0.04
____	Swimming: wsi	0.04
____	Frisbee: skills/games	0.03
____	Team handball	0.03
____	Martial arts: judo	0.03
____	Wrestling	0.03
____	Gymnastics: rhythmic	0.03
____	Martial arts: others	0.03
____	Handball	0.03
____	Dance: ballet	0.02
____	Climbing (rock)	0.02
____	Dance: tap	0.02
____	Hockey: field	0.02
____	Kayaking	0.02
____	Shooting: riflery	0.02
____	Snowshoeing	0.02

New Rating	Activity	Previous Mean
____	Croquet	0.01
____	Gymnastics: apparatus	0.01
____	Sailing	0.01
____	Diving: springboard	0.01
____	Fencing	0.01
____	Fishing: spincasting	0.01
____	Frisbee: ultimate	0.01
____	Water polo	0.01
____	Card games	0.01
____	Paddleball	0.01
____	Skiing: water	0.01
____	Bocce ball	0.00
____	Crew	0.00
____	Lacrosse	0.00
____	Shooting: clays/trap	0.00
____	Speedball	0.00
____	Aerial darts	0.00
____	Boxing	0.00
____	Boxing	0.00
____	Dance: jazz	0.00
____	Diving: SCUBA	0.00
____	Diving: skin	0.00
____	Fishing: flycasting	0.00
____	Hocker	0.00
____	Pickle ball	0.00
____	Rugby (modified)	0.00
____	Self defense	0.00
____	Shooting: other	0.00

Lifelong Activities Rationale Composite:
Round Three

Swimming (4.43)

Higher

Swimming ability, drownproofing and rescue skills saves lives and opens doors to a wide array of active water sports.

It is a non-weight bearing activity where participation can extend throughout the lifespan.

Swimming and water activities can be designed which involve all the muscles of the body, serving as a full body conditioner.

There is easy access for most people in most communities.

Lower

The special facility needs may reduce availability to some communities.

It requires access to pools to teach students.

Teaching a large amount of schools requires a significant amount of time and resources.

Jogging/Powerwalking (4.09)

Higher

It can be done by almost anyone, anywhere, any time of the day.

Because of the variability of intensity, it can be an appropriate conditioner at any age.

It is inexpensive and can be done year round.

Lower

It may result in injuries due to repetitive stress injuries.

It may not be an attractive activity to all ages.

Weight Training (3.33)

Higher

It is the primary way to increase and maintain muscular strength and endurance, and can be used for a cardiovascular effect.

It can be used to improve flexibility and posture, and can be done at one's own pace.

Participation results in increases in lean body mass and body metabolism, thus increasing the consumption of calories.

Participation is not dependent on extensive motor skills.

Few people understand how to do it safely, and in ways to derive specific benefits. They need to be taught.

Anyone can participate, and participation aids performance of daily tasks which requires muscular strength and endurance.

It can help delay the onset of osteoporosis- especially for women.

It is of high interest to students who are interested in shaping their physique or enhancing their sport performance.

It can protect individuals from injury- particularly lower back pain- and can contribute to the rehabilitation of injuries.

Lower

Participation typically depends upon extensive equipment and facilities.

It is not an acceptable activity to many females.

Improper lifting techniques can result in injuries.

It can be time consuming.

* This document is a sample of the study's round-three instrument. It's intent is to illustrate the instrument's format and sample rationales. The complete set of data can be obtained by contacting the author.

Basketball (3.30)

Higher

Basketball is a very popular sport, especially among students, providing a social and/or competitive outlet.
It includes a variety of skills and mental alertness to play well.
It requires team work to succeed when teams are evenly matched.
It is a good aerobic and anaerobic conditioner.
Can be played by men and/or women, at various levels of intensity and among groups of various sizes.
Adult leagues are commonly available.

Lower

Participation may not be suitable for older individuals and is often contingent upon having teams.
There is substantial potential for injuries, especially to ankles and knees.
It requires competence in a variety of skills, and lack of competencies may limit the ability to participate.

Tennis (3.17)

Higher

It is relatively inexpensive to play, and facilities are readily available in most communities.
It can be played at varying intensity levels by people of most ages, and by those with certain disabilities.
It contributes to aerobic and anaerobic fitness, eye-hand coordination and strength of involved muscles.
It provides a challenging, competitive outlet.

Lower

The length of good weather in different parts of the state, and the availability of courts may limit participation.
Most often, court time and partners need to be scheduled, and playing the game normally takes at least one hour.
Skill competence is necessary to obtain full benefits.
Equipment and other expenses may make it prohibitive to some.

Golf (2.76)

Higher

A good lifelong activity with particular value for older individuals.
It can be challenging and/or relaxing.
It provides a competitive outlet.
A popular sport that can be enjoyed by either sexes and people with various skill levels.
Participation can contribute to the development of personal-social skills such as patience, honesty and persistence.
It is expensive, but attainable for many people.

Lower

Golf is difficult to teach to large groups.
It is a difficult sport to master with respect to shooting low scores.
The exercise intensity is very low.
Participation costs, time blocks of two to four hours, and the need for reservations may deter participation by some.

Rating Form for Program Objectives

*** Use this form second ***

The Rating of Program Objectives (white) will be used second. The form's first page lists all program objectives in rank order, according to the overall mean ratings from the previous round. This page will be the recording sheet. The subsequent pages list each objective in rank order (paralleling the recording sheet). Each activity is followed by the rationales provided for rating the objective higher, then the rationales provided for rating the objective lower. If either or both categories do not appear below an objective, no rationales were provided.

Instructions for completing the form:

1. ***Record the first letter of your last name and the last four digits of your social security at the top of the rating form (next page).***

- Remove the rating form from the rest of the document.
- Use pages 2-11 as a worksheet. Read through the activities, noting their order.
- Read the rationales for rating objectives higher and lower before recording your rating on the recording sheet (page 1). This is extremely important, in that we must seek to understand what others were thinking and consider the strength of their arguments.

2. Rate the ten program objectives you believe are most important for graduates of a physical education program to acquire with a 5.
3. Rate the ten next most important with a 4.
4. Rate the ten next most important with a 3.
5. Rate the ten next most important with a 2.
6. Rate the ten next most important with a 1.

Note: Rate only 50 objectives.

Return the single page of the rating form only.

First Letter of Last Name: _____ Final Digits of Soc. Sec.# ___-___-___-___

Rating of Program Objectives:
Round Three

New Rating	Program Objective	Previous Mean
_____	aerobic fitness	4.69
_____	benefits of physical activity	4.59
_____	nutritional habits	4.44
_____	respect for others	4.38
_____	value an active lifestyle	4.36
_____	best effort	4.27
_____	cooperation	4.23
_____	responsibility	4.22
_____	self-control	3.91
_____	design a personal activity pgm	3.84
_____	appreciation of fitness	3.71
_____	follow directions	3.60
_____	relaxation	3.56
_____	how to learn motor skills	3.54
_____	respect for rules	3.47
_____	strength: abdomen, low back	3.47
_____	lean/fat ratio	3.29
_____	run	3.29
_____	prevent injuries	3.20
_____	perseverance	3.11
_____	decision-making	3.02
_____	leadership	2.80
_____	compassion for others	2.69
_____	assess fitness indicators	2.63
_____	flexibility: hip, low back	2.54
_____	throw: overhand	2.52
_____	enjoyment of movement	2.50
_____	detrimental affects of phys. act	2.40
_____	realistic perception of ability	2.21
_____	respect for property	2.18
_____	posture: walk/stand	2.14
_____	catch: fly balls	2.14
_____	competitiveness	2.05
_____	initiative	2.04
_____	strength: legs	2.01
_____	balance: dynamic upright	1.84
_____	strength: arms	1.83
_____	posture: lift and carry	1.82
_____	appreciate skilled performance	1.65
_____	care for athletic injuries	1.37
_____	courage	1.35
_____	jump rope	1.34
_____	dribble: with hands	1.22
_____	knowledge:personal space	1.21
_____	effects of performance modifiers	1.21
_____	skip	1.18
_____	flexibility: trunk	1.00
_____	strength: shoulders	0.98
_____	jump: vertical	0.93
_____	even beat	0.88
_____	knowledge: body parts	0.83
_____	posture: sit	0.82
_____	bat	0.64
_____	throw: underhand	0.60
_____	knowledge: body actions	0.55
_____	strike: forehand	0.54
_____	tempo	0.48
_____	jump: horizontal	0.46
_____	hop	0.41
_____	knowledge: boundaries in space	0.40
_____	posture: push and pull	0.39
_____	sportsmanship	0.38
_____	dribble: with feet	0.36
_____	kick: instep	0.35
_____	flexibility: shoulder	0.32
_____	knowledge:use of force	0.27
_____	flexibility: neck	0.26
_____	balance: static upright	0.25
_____	gallop	0.24
_____	catch: rolling balls	0.24
_____	leap	0.23
_____	pass: chest	0.23
_____	roll a ball	0.23
_____	knowledge: positions in space	0.22
_____	slide	0.22
_____	strike: overhand	0.21
_____	flexibility: ankle	0.20
_____	kick: toe	0.18
_____	shoulder roll: forward	0.17
_____	strength: neck	0.16
_____	strike: backhand	0.16
_____	knowledge:use of time	0.15

Program Content Rationale Composite:
Round Three*

Aerobic fitness (4.69)

Higher

Aerobic fitness is an important concept for all ages and genders, necessary for maintaining a healthy lifestyle.

It is needed as a base for sport involvement and effective participation in a healthy lifestyle.

Lower

Obtaining fitness levels in our students does not guarantee they will be active or fit over their lifetime.

Benefits of physical activity (4.59)

Higher

Those who understand the benefits are in a position to make informed decisions and assign value to living an active lifestyle.

Lower

Benefits of physical activity are best learned in conjunction with other physical skills and objectives, and does not have to be taught as a separate entity.

Nutritional habits (4.44)

Higher

Sound nutritional habits contribute to overall health, healthy function, and growth and development.

Proper nutrition is a requisite for reaping the potential benefits of participation in physical activity.

Lower

This subject matter is best taught in other classes or academic areas.

Students have little control over what they eat; they will eat what their parents provide.

Respect for others (4.38)

Higher

Respect for others promotes general learning.

Recognizing and appreciating the abilities of others, while acknowledging one's own limitations, enhances the chances of developing successful relationships with others.

Treating others with respect is important enough to be taught proactively in the curricula.

Lower

Teaching basic skills to be physically active is more important.

Teaching respect for others is not unique to physical education and should be addressed as a secondary objective.

Value an active lifestyle (4.36)

Higher

Assigning an importance to living an active lifestyle over the participation of alternative activities is necessary for students to develop such a lifestyle outside school.

Lower

As students become proficient at activities and skills and learn the benefits of physical activity, attaching value to living an active lifestyle will naturally occur.

Values are difficult to teach as unique entities and should be a derivative of other meaningful experiences.

Best effort (4.27)

Higher

It is essential to being successful in all aspects of life, including other objectives included in the physical education program.

An individual who learns to give their best effort assigns intrinsic value to the process, regardless of the outcome.

Lower

This is not exclusive to physical education. It should be taught by all teachers in all classes, and thus should be a secondary objective.

Cooperation (4.23)

Higher

It is an important interpersonal skill necessary at all ages and in all areas.

It is necessary for successful interactions with others, and doing it will result in mutual benefits.

Lower

It is not unique to physical education and should be taught in all areas all of the time as a secondary objective.

Teaching basic skills to be physically active is more important, with personal/social skills existing as secondary objectives.

Responsibility (4.22)

Higher

It is important for students to take responsibility for their own learning and lifestyles and know the implications in doing so.

Responsible behavior cultivates trust and respect from others.

Lower

Teaching basic skills to be physically active is more important.

This is very difficult to assess.

Teaching responsibility is not unique to physical education and should be taught in other areas as well.

Self-control (3.91)

Higher

A skill that enhances interactions in personal, social and professional aspects of life, and thus becomes essential to meeting all other educational objectives.

Learning self control enhances the chances of success in any stress-laden endeavor, and sports and games provide an ideal situation to teach it.

Lower

Teaching fundamental motor skills is more important than teaching self control.

It should be a secondary objective, taught in the context of teaching something specific to physical education.

Design a personal activity program (3.84)

Higher

Important to give students the skills to determine what activities they like and how to incorporate them into a plan for a lifetime of activity.

It enables students to tailor their personal program to meet their specific needs in ways that are consistent with their interests, which should enhance the possibility of maintaining an active lifestyle.

It adds relevance to what is taught in physical education class.

Lower

This is an applied skill. Other prerequisites are of higher priority and should be taught first.

APPENDIX F

Rank Order of Lifelong Activities

Lifelong Activities:
Rankings By Groups

		Stakeholders													
Activity	all	cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	disp.
swimming	1	2	1	1	1	1	1	2	1	1	3	1	1	2	0.33
jogging/powerwalking	2	1	2	2	2	2	2	10	2	2	2	2	2	9	0.75
weight training	3	3	3	3	3	3	3	5	3	3	10	4	3	7	0.83
basketball	4	4	5	4	5	5	4	1	4	4	24	5	6	23	2.42
tennis	5	6	4	5	4	4	9	6	5	5	17	3	4	14	2.00
volleyball	6	7	6	6	6	6	5	4	10	6	12	10	7	8	1.58
golf	7	5	8	11	7	7	10	15	6	9	16	6	5	11	2.75
cycling	8	10	7	8	9	10	8	9	7	11	1	7	11	10	1.83
softball	9	9	9	7	8	9	6	8	9	7	23	12	10	17	2.25
dance: aerobic	10	8	13	9	10	8	11	16	11	8	5	9	8	11	2.00
soccer	11	11	10	10	11	11	7	3	8	15	20	16	9	17	3.08
walking	12	13	12	15	12	12	13	11	13	10	4	8	12	11	1.75
skiing: cross country	13	12	11	12	13	13	15	22	12	13	9	11	13	13	1.83
track: running	14	15	15	14	15	18	14	7	16	12	6	19	20	14	2.92
hiking	15	17	14	13	14	16	16	13	17	17	13	23	16	10	1.92
skating: inline	16	16	18	17	16	15	17	24	15	19	34	18	19	19	3.00
dance: social	17	14	20	18	17	19	18	51	18	16	8	14	17	43	4.83
bowling	18	19	16	19	19	17	21	17	21	23	11	13	18	12	2.50
rope jumping	19	18	17	21	20	14	22	18	27	14	32	17	14	18	3.83
swimming: life saving	20	29	19	20	18	24	12	12	14	22	26	42	25	30	6.08
gymnastics: tumble /floor	21	20	25	16	21	23	20	30	20	18	33	15	22	18	3.75
badminton	22	26	30	22	25	20	32	19	31	21	35	21	15	20	5.08
step aerobics	23	48	26	44	24	21	24	23	19	40	7	39	31	41	9.17
racquetball	24	25	28	25	23	25	23	47	24	29	37	35	21	26	5.00
football: flag/touch	25	28	23	38	22	22	28	20	22	28	25	31	28	18	3.92
track: field	26	23	32	26	43	35	19	21	25	24	36	46	39	27	7.75
camping	27	21	21	24	26	28	26	31	41	26	14	22	23	27	4.42
hockey: ice/inline/floor	28	36	55	32	38	26	34	14	28	34	41	20	30	41	7.33
back packing	29	22	24	33	31	47	31	28	34	43	22	41	35	25	6.25
dance: line	30	27	40	41	32	29	44	48	32	30	21	25	26	27	6.58
skating: ice	31	31	33	23	30	34	29	41	23	27	18	40	42	24	5.92
dance: square	32	24	29	46	29	27	57	61	40	32	39	28	24	37	9.50
table tennis	33	38	34	36	33	32	30	26	44	39	28	44	34	18	4.33
skiing: downhill	34	32	22	29	39	44	37	38	26	41	19	30	38	25	6.58
swim: WSI	35	44	49	28	28	43	27	35	39	48	49	29	27	22	8.17
self defense	36	49	61	61	27	38	39	32	52	55	56	59	60	34	9.58
tai-chi	37	50	51	54	55	46	25	52	29	33	40	32	36	30	9.42
fishing: baitcasting	38	33	45	43	45	33	53	40	30	37	15	33	41	38	7.17
frisbee: skills/games	39	30	35	31	44	40	51	33	45	49	50	54	29	25	7.92
martial arts: karate	40	51	54	56	37	48	33	37	33	42	45	50	55	23	7.25
canoeing	41	34	39	27	48	42	38	43	42	20	29	26	37	28	6.58
archery	42	52	42	30	41	41	55	36	37	46	30	27	33	28	7.00
wrestling	43	40	46	50	52	31	52	39	43	38	44	49	54	23	5.67
skating: roller	44	53	43	34	50	36	50	29	35	44	46	51	45	24	6.17
orienteering	45	35	44	49	40	45	43	25	50	53	54	37	32	29	6.92
team handball	46	41	52	37	47	30	62	64	64	64	64	64	48	34	10.58

Lifelong Activities
Rankings By Groups (cont'd).

		Stakeholders													
Activity	all	cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	disp.
dance: modern	47	54	31	35	53	51	45	49	56	57	57	24	49	33	7.92
dance: creative	48	55	60	60	42	37	56	34	48	31	38	47	43	29	8.42
martial arts: others	49	56	47	51	58	53	35	53	46	50	51	55	57	23	4.33
crew	50	57	38	47	62	64	36	54	58	36	43	48	53	28	8.33
card games	51	58	27	45	61	62	49	59	60	60	60	61	62	35	5.67
snow shoeing	52	59	62	62	63	39	42	56	59	59	59	60	61	24	4.42
gymnastics: apparatus	53	60	48	52	54	52	41	42	53	25	27	43	51	35	8.00
dance: folk/ethnic	54	39	41	48	34	54	54	60	61	61	61	34	44	27	9.25
speedball	55	61	63	63	64	50	47	44	38	47	48	53	56	26	7.17
handball	56	45	50	53	51	58	48	58	36	45	47	52	46	22	4.58
lacrosse	57	42	59	59	35	60	61	63	63	63	63	63	64	29	5.25
fishing: spincasting	58	46	57	42	46	55	46	57	49	52	53	57	40	17	5.17
sailing	59	43	56	57	36	56	59	45	54	35	42	36	50	24	7.92
shuffleboard	60	47	37	40	56	49	63	46	55	56	31	45	52	32	7.08
kayaking	61	62	64	64	60	59	40	55	47	51	52	56	58	24	5.50
hocker	62	63	58	58	57	63	64	27	51	54	55	58	59	37	5.25
horseshoes	63	37	36	39	49	57	60	50	57	58	58	38	47	24	7.83
skiing: water	64	64	53	55	59	61	58	62	62	62	62	62	63	11	2.25

Lifelong Activities
Rankings By Groups (cont'd).

	School Districts																
Activity	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	range	disp.
swimming	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0.13
jogging/powerwalking	1	3	2	2	2	2	2	1	2	2	2	2	3	2	2	2	0.27
weight training	3	4	4	3	8	5	3	3	3	3	4	3	4	4	3	5	0.80
basketball	7	2	3	6	4	4	4	4	6	6	3	4	5	5	4	5	1.00
tennis	4	9	5	5	6	3	5	9	8	4	7	6	2	3	6	7	1.67
volleyball	9	5	7	4	3	6	6	8	7	7	5	5	10	6	5	7	1.40
golf	8	7	6	9	11	9	11	5	4	5	10	9	7	7	9	7	1.80
cycling	6	13	9	11	5	7	7	7	5	9	8	10	6	10	12	8	2.07
softball	13	6	8	7	7	10	10	6	9	11	6	7	9	11	8	7	1.73
dance: aerobic	10	15	38	8	12	11	8	14	11	8	11	8	12	8	7	31	3.73
soccer	11	8	10	10	9	8	9	10	12	10	9	13	8	9	10	5	1.07
walking	15	11	11	18	10	15	13	12	13	12	12	11	16	12	11	8	1.60
skiing: cross country	5	10	16	13	13	12	14	11	10	14	15	17	11	14	17	12	2.33
track: running	18	14	15	16	16	13	15	19	16	16	13	12	13	16	13	7	1.60
hiking	14	12	14	15	15	14	19	13	14	19	22	19	17	18	14	10	2.27
skating: inline	12	21	19	12	14	17	12	24	18	17	16	20	23	21	25	13	3.53
dance: social	16	23	37	24	20	39	22	20	23	13	18	16	15	13	22	26	5.27
bowling	20	16	12	19	19	19	16	15	17	18	21	14	25	20	27	15	2.87
rope jumping	22	18	20	14	18	20	20	18	19	22	14	15	19	40	15	26	3.40
swimming: life saving	17	20	17	23	28	16	18	27	15	15	19	27	14	17	16	14	3.47
gymnastics: tumble /floor	21	29	23	17	22	21	17	23	21	20	17	23	21	22	21	12	1.93
badminton	35	17	18	22	17	25	60	37	24	21	27	26	48	19	20	43	8.27
step aerobics	19	30	27	32	27	47	21	54	47	24	33	21	18	25	18	36	8.27
racquetball	23	35	22	30	21	29	27	31	29	38	26	18	34	15	19	23	5.47
football: flag/touch	30	19	25	21	24	28	24	22	20	23	23	22	22	31	24	12	2.47
track: field	36	48	24	35	26	27	23	35	26	25	24	25	29	33	41	25	5.60
camping	27	28	29	29	38	22	35	25	22	28	40	33	20	27	29	20	4.13
hockey: ice/inline/floor	31	22	31	28	34	26	25	50	39	27	20	36	39	44	23	30	6.80
back packing	26	24	33	42	41	24	29	16	25	30	34	47	46	39	28	31	7.33
dance: line	25	46	50	38	37	41	63	21	40	26	30	35	30	38	33	42	7.73
skating: ice	32	25	30	39	47	23	33	28	44	29	25	41	28	28	46	24	6.40
dance: square	58	59	13	36	30	40	57	56	46	49	57	46	55	37	32	46	10.47
table tennis	49	26	43	37	23	30	46	29	32	36	35	32	35	24	30	26	5.80
skiing: downhill	33	33	36	25	25	18	47	30	35	32	32	49	33	41	47	31	6.20
swim: WSI	24	53	51	44	35	35	28	44	53	37	31	28	36	30	37	29	7.20
self defense	55	60	60	46	52	46	31	58	61	34	59	31	32	23	31	38	11.80
tai-chi	60	41	54	45	51	50	26	40	55	55	50	30	31	32	52	34	8.80
fishing: baitcasting	42	43	40	49	62	43	58	17	30	39	38	38	42	47	53	45	7.40
frisbee: skills/games	46	31	39	27	31	32	41	39	31	43	37	56	51	34	38	29	6.13
martial arts: karate	28	40	46	41	32	33	30	51	52	54	43	24	27	43	48	30	8.20
canoeing	29	34	44	31	39	42	40	38	37	33	36	50	38	42	40	21	3.93
archery	39	49	41	43	29	37	56	26	33	42	41	48	47	46	43	30	5.73
wrestling	57	50	26	54	49	31	55	47	36	44	53	51	40	53	26	31	8.20
skating: roller	43	32	42	26	58	54	50	43	45	31	29	40	54	49	39	32	7.60
orienteering	40	39	53	59	36	49	42	61	34	35	39	57	52	29	35	32	8.40
team handball	54	38	32	20	33	62	38	53	49	60	55	59	57	62	42	42	10.47

Lifelong Activities
Rankings By Groups (cont'd).

	School Districts																
Activity	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	range	disp.
dance: modern	50	61	21	55	61	55	53	59	38	45	60	52	41	50	45	40	7.60
dance: creative	44	37	56	47	40	60	49	32	57	47	46	34	44	58	34	28	7.27
martial arts: others	59	36	58	40	55	56	37	57	59	53	58	29	37	51	51	30	8.07
crew	38	56	57	61	56	58	43	34	58	50	48	61	61	56	36	27	7.13
card games	64	52	62	58	57	52	45	52	28	63	28	55	50	36	60	36	8.53
snow shoeing	63	27	61	63	54	64	36	63	62	62	63	63	63	64	57	37	5.60
gymnastics: apparatus	62	54	49	57	42	36	44	48	27	61	45	54	49	45	44	35	6.87
dance: folk/ethnic	34	44	35	34	59	44	51	42	51	51	42	39	26	52	54	33	7.33
speedball	56	58	34	33	53	63	34	55	50	40	56	60	58	63	63	30	8.13
handball	37	51	45	48	48	34	48	41	41	48	44	37	43	54	56	22	5.07
lacrosse	61	62	64	56	60	48	52	60	64	59	61	53	45	26	50	38	6.80
fishing: spincasting	48	45	55	53	43	53	39	36	56	56	49	45	60	48	55	24	5.60
sailing	41	47	48	51	45	59	54	46	43	57	52	43	24	57	59	35	6.67
shuffleboard	47	55	52	52	44	57	61	33	54	46	47	44	59	55	61	28	5.93
kayaking	52	57	59	62	46	45	32	49	60	64	54	62	62	61	62	32	6.53
hocker	51	63	28	60	64	61	64	62	48	58	62	58	56	60	64	36	5.40
horseshoes	53	42	47	50	50	51	59	45	42	52	51	42	53	35	58	24	4.93
skiing: water	45	64	63	64	63	38	62	64	63	41	64	64	64	59	49	26	6.00

Lifelong Activities
Rankings By Groups (cont'd).

	Region						Gender			
Activity	1	2	3	4	range	disp.	male	female	range	disp.
swimming	1	1	1	1	0	0.00	1	1	0	0.00
jogging/powerwalking	2	2	2	2	0	0.00	2	2	0	0.00
weight training	3	3	3	3	0	0.00	3	3	0	0.00
basketball	4	4	4	5	1	0.25	4	5	1	0.50
tennis	5	5	6	4	2	0.50	5	4	1	0.50
volleyball	7	6	7	6	1	0.50	6	6	0	0.00
golf	6	10	5	8	5	1.75	7	8	1	0.50
cycling	9	7	8	10	3	1.00	9	9	0	0.00
softball	8	8	9	9	1	0.50	8	7	1	0.50
dance: aerobic	13	11	10	7	6	1.75	11	10	1	0.50
soccer	11	9	11	11	2	0.50	10	11	1	0.50
walking	12	12	12	12	0	0.00	12	12	0	0.00
skiing: cross country	10	13	13	14	4	1.00	13	13	0	0.00
track: running	17	16	14	13	4	1.50	14	16	2	1.00
hiking	14	15	15	16	2	0.50	15	14	1	0.50
skating: inline	15	14	19	24	10	3.50	19	15	4	2.00
dance: social	21	21	16	15	6	2.75	20	18	2	1.00
bowling	16	18	17	20	4	1.25	16	20	4	2.00
rope jumping	20	17	20	17	3	1.50	17	19	2	1.00
swimming: life saving	18	20	18	18	2	0.50	18	17	1	0.50
gymnastics: tumble /floor	25	19	21	23	6	2.00	21	23	2	1.00
badminton	19	24	23	21	5	1.75	23	22	1	0.50
step aerobics	26	22	28	22	6	2.50	26	21	5	2.50
racquetball	24	26	32	19	13	3.75	24	24	0	0.00
football: flag/touch	23	25	22	25	3	1.25	22	27	5	2.50
track: field	32	23	27	31	9	3.25	28	25	3	1.50
camping	27	31	26	26	5	1.50	27	26	1	0.50
hockey: ice/inline/floor	28	28	31	27	4	1.00	25	32	7	3.50
back packing	29	34	24	39	15	5.00	32	34	2	1.00
dance: line	33	44	25	33	19	4.75	34	29	5	2.50
skating: ice	30	38	30	36	8	3.50	29	35	6	3.00
dance: square	22	37	54	37	32	8.00	33	28	5	2.50
table tennis	35	29	34	30	6	2.50	30	38	8	4.00
skiing: downhill	37	27	33	52	25	7.25	31	39	8	4.00
swim: WSI	34	35	39	29	10	2.75	36	30	6	3.00
self defense	62	39	40	28	34	8.75	57	31	26	13.00
tai-chi	57	33	56	32	25	12.00	38	33	5	2.50
fishing: baitcasting	52	59	29	53	30	7.75	35	54	19	9.50
frisbee: skills/games	40	32	45	45	13	4.50	37	43	6	3.00
martial arts: karate	41	36	58	34	24	7.25	43	36	7	3.50
canoeing	38	45	38	40	7	2.25	39	41	2	1.00
archery	39	46	36	46	10	4.25	44	46	2	1.00
wrestling	43	55	49	35	20	6.50	40	59	19	9.50
skating: roller	46	43	35	54	19	5.50	42	55	13	6.50
orienteering	53	48	41	38	15	5.50	46	37	9	4.50
team handball	44	30	62	57	32	11.25	49	45	4	2.00

Lifelong Activities
Rankings By Groups (cont'd).

	Region						Gender			
Activity	1	2	3	4	range	disp.	male	female	range	disp.
dance: modern	31	54	51	55	24	6.75	47	53	6	3.00
dance: creative	49	58	42	42	16	5.75	53	44	9	4.50
martial arts: others	50	47	59	41	18	5.25	45	56	11	5.50
crew	48	50	44	50	6	2.00	54	48	6	3.00
card games	63	52	37	51	26	6.75	56	40	16	8.00
snow shoeing	36	41	64	64	28	12.75	41	64	23	11.50
gymnastics: apparatus	60	51	47	43	17	5.25	48	50	2	1.00
dance: folk/ethnic	42	53	53	48	11	4.00	61	42	19	9.50
speedball	51	40	46	61	21	6.50	55	58	3	1.50
handball	47	57	52	56	10	3.50	50	60	10	5.00
lacrosse	64	64	63	44	20	5.25	62	47	15	7.50
fishing: spincasting	55	49	50	58	9	3.50	58	51	7	3.50
sailing	54	60	57	47	13	4.00	59	49	10	5.00
shuffleboard	58	62	43	59	19	5.00	51	62	11	5.50
kayaking	61	42	60	62	20	5.25	52	61	9	4.50
hocker	45	56	61	63	18	5.75	64	52	12	6.00
horseshoes	56	61	55	49	12	3.25	60	57	3	1.50
skiing: water	59	63	48	60	15	4.00	63	63	0	0.00

Lifelong Activities
Rankings By Groups (cont'd).

	Household Income						
Activity	<$15,000	< $30,000	<$45,000	<$70000	≥$70,000	range	disp.
swimming	4	1	1	1	1	3	0.67
jogging/powerwalking	10	2	2	2	2	8	1.67
weight training	1	3	3	3	3	2	0.83
basketball	5	4	4	4	5	1	1.00
tennis	3	5	5	5	4	2	1.33
volleyball	14	6	6	6	6	8	2.33
golf	8	9	9	8	7	2	1.83
cycling	2	7	10	10	8	8	3.17
softball	13	8	7	7	10	6	2.83
dance: aerobic	21	15	8	11	9	13	5.00
soccer	6	10	11	9	11	5	2.83
walking	12	12	12	12	12	0	2.00
skiing: cross country	9	13	13	13	13	4	2.83
track: running	7	18	14	15	15	11	4.50
hiking	11	16	15	17	14	6	3.83
skating: inline	22	14	17	19	16	8	4.67
dance: social	24	27	20	20	17	10	5.67
bowling	15	17	18	14	20	6	4.33
rope jumping	17	21	19	16	18	5	4.17
swimming: life saving	23	11	16	18	19	12	5.50
gymnastics: tumble /floor	27	19	22	22	21	8	5.17
badminton	26	22	21	21	24	5	5.00
step aerobics	25	30	25	25	22	8	5.50
racquetball	28	36	27	24	23	13	7.33
football: flag/touch	16	28	23	23	25	12	6.17
track: field	29	47	33	28	26	21	9.17
camping	30	23	35	27	27	12	7.00
hockey: ice/inline/floor	18	33	29	26	29	15	7.83
back packing	19	25	30	33	32	14	8.50
dance: line	32	48	31	37	31	17	9.17
skating: ice	36	34	39	32	28	11	8.17
dance: square	31	20	34	30	34	14	8.17
table tennis	39	41	24	29	39	17	11.00
skiing: downhill	40	51	43	31	30	21	12.17
swim: WSI	33	29	28	34	43	15	8.83
self defense	34	49	61	46	33	28	14.83
tai-chi	35	50	52	35	35	17	11.17
fishing: baitcasting	20	46	41	38	40	26	11.50
frisbee: skills/games	44	32	26	42	41	18	11.50
martial arts: karate	37	39	44	39	36	8	8.17
canoeing	42	24	36	47	49	25	13.00
archery	47	42	47	53	37	16	11.33
wrestling	59	35	45	43	44	24	11.67
skating: roller	55	57	50	48	42	15	12.00
orienteering	38	40	40	49	46	11	9.50
team handball	46	54	32	56	47	24	13.17

Lifelong Activities
Rankings By Groups (cont'd).

	Household Income						
Activity	<$15,000	< $30,000	<$45,000	<$70000	≥$70,000	range	disp.
dance: modern	54	38	55	36	60	24	15.83
dance: creative	45	31	57	50	45	26	12.67
martial arts: others	56	58	53	41	56	17	12.67
crew	49	26	37	52	57	31	15.83
card games	41	52	38	45	54	16	12.00
snow shoeing	64	64	64	40	50	24	17.00
gymnastics: apparatus	51	37	59	61	38	24	16.00
dance: folk/ethnic	43	53	46	54	51	11	11.50
speedball	58	60	42	57	63	21	13.67
handball	60	45	60	55	52	15	13.00
lacrosse	48	55	62	64	48	16	14.17
fishing: spincasting	52	44	49	60	55	16	12.33
sailing	50	43	48	58	58	15	12.50
shuffleboard	62	62	56	51	61	11	13.00
kayaking	61	61	54	44	62	18	14.33
hocker	53	56	63	62	64	11	13.33
horseshoes	57	59	51	59	53	8	11.83
skiing: water	63	63	58	63	59	5	12.00

APPENDIX G

Rank Order of Program Objectives

General Program Objectives: Rankings by Groups

Program Objective	all	Stakeholders												rating	
		cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	dispersion
aerobic fitness	1	2	1	2	5	1	3	10	1	1	8	3	1	9	2.00
value an active lifestyle	2	4	4	1	4	2	1	2	3	17		11	2	16	2.92
benefits of physical activity	3	3	7	7	2	3	2	6	4	2	7	5	3	5	1.75
nutritional habits	4	1	2	3	8	4	4	5	2	3	1	9	5	8	1.92
respect for others	5	6	5	4	3	6	5	8	5	11	17	1	13	16	3.17
cooperation	6	7	3	10	1	5	6	7	12	6	13	2	8	12	2.83
best effort	7	9	6	9	9	8	9	9	11	5	4	13	7	9	1.75
responsibility	8	10	9	8	6	7	8	3	7	14	18	8	18	15	3.17
self-control	9	13	10	6	7	11	7	1	10	16		7	16	15	4.00
appreciation of fitness	10	15	8	5	11	9	10	14	6	21	2	14	17	19	4.33
respect for rules	11	11	11	11	10	13	11	4	13	13	47	10	15	43	4.58
design a personal activity program	12	5	15	12	13	10	12	23	9	8	38	15	11	33	5.08
follow directions	13	12	13	14	12	12	13	12	18	15	30	4	20	26	3.75
how to learn motor skills	14	17	19	17	18	14	16	25	17	20	32	6	6	26	4.58
strength: abdomen/low back	15	16	16	13	20	15	15	27	15	9	37	27	9	28	5.58
relaxation	16	14	14	20	14	18	17	20	8	12	26	37	28	29	5.83
prevent injuries	17	19	12	16	16	21	14	19	14	4	11	17	23	19	3.67
decision-making	18	21	18	18	19	17	18	15	21	24	22	12	27	15	3.00
run	19	8	21	19	25	16	21	21	20	22	45	28	14	37	5.33
leadership	20	23	17	21	17	22	19	11	16	26	24	20	26	15	3.50
perseverance	21	25	22	23	15	19	22	22	19	37	31	26	31	22	4.50
compassion for others	22	22	20	15	21	24	20	13	28	29	20	16	30	17	4.17
flexibility: hip/low back	23	18	23	27	26	23	27	30	24	7	36	25	19	29	4.75
assess personal. fitness	24	20	24	32	24	27	25	40	23	23	14	34	10	30	5.67
lean/fat ratio	25	24	25	38	29	30	26	16	22	30	6	41	24	35	6.42
respect for property	26	39	27	26	23	28	24	17	37	43	5	23	39	38	7.92
throw: overhand	27	29	35	22	38	20	36	38	34	19		19	4	34	10.50

Program Objective Rankings by Groups (cont'd):

Program Objective	all	Stakeholders												rating	
		cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	dispersion
enjoy of movement	28	35	33	35	27	25	31	31	27	35	15	30	22	20	4.50
realistic perception of ability	29	27	29	30	22	31	23	26	39	32	16	21	41	25	5.58
strength: legs	30	31	30	25	36	29	29	32	25	34	62	33	29	37	5.08
posture: walk/stand	31	28	26	29	32	35	28	33	30	10	21	18	21	25	5.25
initiative	32	34	28	37	28	37	30	29	31	36	19	29	40	21	4.33
catch: fly balls	33	30	37	24	40	26	40	43	36	25	71	22	12	59	10.67
strength: arms	34	32	32	33	37	33	38	34	29	27	55	38	32	28	4.17
detrimental affects of activity	35	26	31	28	30	36	35	24	44	50	61	40	50	37	8.92
care for common injuries	36	36	34	31	33	39	33	28	32	31	33	35	44	16	2.75
competitiveness	37	43	39	39	31	34	34	18	35	66	27	47	61	48	9.67
posture: lift and carry	38	47	40	34	34	41	32	36	26	18	41	32	33	29	5.33
sportsmanship	39	33	36	57	35	32	41	37	33	49	68	52	43	36	8.67
balance: dynamic upright	40	37	38	43	39	43	37	45	38	28	34	42	25	20	4.25
appreciate skilled performance	41	44	41	41	41	38	42	39	45	67	52	36	46	31	5.00
jump rope	42	40	43	42	46	40	46	42	43	33	72	24	36	48	6.42
dribble: with hands	43	38	47	40	50	42	44	47	48	44	73	45	34	39	5.67
courage	44	57	42	44	43	47	39	35	41	63	35	58	66	31	8.33
strength: shoulders	45	45	44	58	48	44	45	49	40	47	75	46	42	35	5.25
flexibility: shoulder	46	49	45	61	45	45	43	55	46	41	23	49	38	38	5.83
knowledge: personal space	47	42	46	36	42	53	47	66	51	42	39	31	49	35	6.67
knowledge: body parts	48	52	49	52	44	50	50	46	42	38	25	43	48	27	5.25
skip	49	41	51	45	47	48	55	60	56	52	59	39	35	25	6.50
knowledge: body actions	50	65	52	65	52	56	51	41	47	48	28	63	57	37	7.58
jump: vertical	51	48	56	47	57	51	57	44	50	39	65	48	56	26	5.50
self-respect	52	73	50	49	49	55	52	48	53	88		57	68	40	12.17
throw: underhand	53	54	61	48	62	46	61	70	59	46	3	44	53	67	10.58
bat	54	46	58	46	58	52	56	58	57	78	74	56	54	32	6.08

Program Objective Rankings by Groups (cont'd):

		Stakeholders												rating	
Program Objective	all	cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	dispersion
posture: push and pull	55	50	48	59	53	58	54	54	55	75	63	70	64	27	6.25
strike: forehand	56	53	64	56	66	49	64	97	68	45	88	51	37	60	13.00
posture: sit	57	56	54	54	51	63	48	50	49	69	42	73	80	38	8.42
effects of performance modifiers	58	59	53	72	55	60	49	57	52	72	70	60	55	23	6.00
even beat	59	60	62	50	65	61	53	78	54	68	64	50	47	31	7.00
dribble: with feet	60	62	67	53	76	54	62	68	72	82	76	59	45	37	8.83
flexibility: neck	61	76	55	73	56	62	58	61	58	57	77	86	77	31	8.83
kick: instep	62	58	65	51	74	59	70	77	64	80	78	55	52	29	8.75
knowledge: boundaries in space	63	55	60	92	54	71	59	52	63	89	43	68	74	49	11.17
knowledge: use of force	64	64	76	64	61	65	63	51	65	74	79	65	51	28	5.83
strike: overhand	65	70	81	62	73	57	74	100	73	40	60	62	59	60	10.92
hop	66	51	69	63	60	64	73	67	61	70	81	53	58	30	6.50
flexibility: ankle	67	77	57	83	59	75	60	81	60	65	82	85	87	30	9.92
jump: horizontal	68	61	75	55	83	72	66	56	67	55	83	61	69	28	7.92
tempo	69	75	78	91	68	70	65	80	62	58	69	66	60	33	7.00
balance: static upright	70	63	66	88	67	76	67	89	70	59	50	79	65	39	8.25
leap	71	92	71	76	75	73	88	59	69	54	54	64	63	38	9.33
catch: rolling balls	72	68	70	60	77	66	80	82	78	83	84	71	71	24	6.50
gallop	73	81	91	70	70	69	85	74	88	73	85	54	62	37	8.83
strike: backhand	74	86	80	69	79	67	82	101	83	62	80	92	67	39	8.33
kick: toe	75	71	72	79	69	77	77	62	66	53	87	84	90	37	8.42
strike: underhand	76	85	88	68	80	68	94	102	85	71	49	80	78	53	10.00
pass chest	77	84	77	66	72	78	83	79	81	61	89	67	81	28	6.33
slide	78	67	84	74	81	74	98	98	76	77	9	69	73	89	12.33
flexibility: trunk	79	89	59	85	63	82	79	63	74	93	91	83	96	37	9.75
strength: neck	80	90	63	75	64	90	68	76	75	92	86	82	99	36	9.83
knowledge: use of time	81	96	74	89	71	86	69	53	80	90	40	87	88	56	12.42

Program Objective Rankings by Groups (cont'd):

		Stakeholders												rating	
Program Objective	all	cad	bad	sb	crt	pet	pnt	std	rec	isd	leg	mpd	sme	range	dispersion
land from a fall	82	66	86	87	86	84	71	96	71	84	56	81	75	40	8.58
shoulder roll: forward	83	69	79	86	84	85	75	93	77	60	90	90	70	33	8.17
knowledge: positions in space	84	79	68	90	78	87	86	94	92	56	93	77	72	38	9.33
pass: overhead	85	101	87	67	88	80	90	72	79	86	94	97	82	34	7.58
roll a ball	86	83	85	80	85	79	92	69	82	81	10	74	84	82	9.83
shoot a basketball overhand	87	74	96	101	90	81	78	85	101	51	92	101	92	50	10.33
knowledge: twist/rotate	88	78	82	84	87	88	76	64	89	76	51	91	83	40	7.92
knowledge: directions in space	89	88	94	97	89	91	72	71	94	64	48	78	85	49	11.25
knowledge: body planes	90	91	73	99	82	94	81	73	97	97	44	95	79	55	11.75
punt	91	87	93	71	92	83	96	84	93	87	12	98	97	86	12.08
knowledge: levels of space	92	98	95	100	99	89	95	65	84	101	96	100	89	36	6.42
shoulder roll: backward	93	82	99	78	94	92	89	92	86	85	53	89	91	46	7.00
uneven beat	94	72	83	94	95	95	93	99	90	91	67	75	76	32	8.67
climb a rope ladder	95	93	92	77	98	93	87	91	91	99	57	96	100	43	7.00
balance: inverted	96	99	89	81	91	98	84	87	87	95	58	76	93	41	7.67
knowledge: use of flow	97	80	98	98	96	100	91	83	100	79		93	101	22	13.92
knowledge: shapes	98	97	100	96	100	96	101	88	99	100		99	86	15	11.33
knowledge: size	99	102	102	102	102	101	97	86	102	102	46	102	102	56	6.50
knowledge: turn	100	94	90	93	93	97	99	90	95	94	66	72	98	33	6.08
vault	101	100	101	82	101	102	102	75	96	96		94	94	27	13.42
accent	102	95	97	95	97	99	100	95	98	98		88	95	12	10.08

Program Objective Rankings by Groups (cont'd):

Program Objective	School Districts															range	rating dispersion
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
aerobic fitness	4	10	1	1	5	2	1	9	6	4	7	7	11	1	3	10	2.80
value an active lifestyle	1	7	3	3	1	1	2	1	2	1	2	3	10	2	1	9	1.47
benefits of physical activity	6	1	2	6	3	4	3	4	8	7	3	1	2	7	2	7	1.87
nutritional habits	2	8	7	17	8	3	4	5	7	2	1	2	8	3	6	16	2.93
respect for others	3	11	8	18	6	5	7	2	1	3	5	4	1	5	8	17	2.93
cooperation	5	2	4	26	4	8	5	6	3	6	6	5	3	4	4	24	2.53
best effort	9	5	9	21	2	9	9	10	5	10	4	9	5	6	5	19	3.00
responsibility	7	3	5	25	10	6	10	7	4	8	13	6	12	10	7	22	3.33
self-control	13	4	11	14	12	11	8	3	9	5	14	10	7	9	10	11	2.67
appreciation of fitness	11	12	10	13	7	10	6	11	10	9	12	13	13	14	9	8	1.80
respect for rules	12	6	6	22	13	12	12	8	12	11	16	8	4	11	12	18	3.00
design a personal activity program	8	18	12	9	11	7	11	18	11	12	8	11	9	12	13	11	2.20
follow directions	15	9	14	19	14	19	13	12	15	13	9	12	6	17	11	13	2.73
how to learn motor skills	20	33	19	7	9	16	16	19	13	19	10	16	17	8	17	26	4.33
strength: abdomen/low back	17	30	18	4	17	21	14	20	19	15	19	17	21	15	14	26	3.47
relaxation	10	21	17	23	19	14	17	14	18	16	15	14	28	18	16	18	3.00
prevent injuries	14	26	15	16	20	15	24	21	16	17	11	19	14	13	20	15	3.27
decision-making	16	15	13	40	15	17	22	13	14	14	29	20	33	19	18	27	5.40
run	28	22	22	2	16	24	15	23	22	18	24	15	29	16	19	27	4.73
leadership	19	13	16	41	24	18	25	15	17	21	22	21	18	23	15	28	4.33
perseverance	24	16	23	34	18	13	19	16	20	22	18	22	22	34	21	21	4.07
compassion for others	18	17	25	51	21	23	20	17	21	20	17	18	15	35	22	36	5.07
flexibility: hip/low back	25	31	33	11	31	25	21	30	25	24	20	28	23	20	26	22	4.00
assess personal. fitness	21	39	21	27	22	30	30	25	26	25	30	35	43	22	23	22	5.00
lean/fat ratio	22	36	20	20	33	22	29	36	27	26	23	24	31	28	24	16	4.33
respect for property	23	19	26	49	25	20	35	24	23	23	32	25	26	27	27	30	4.33
throw: overhand	34	44	35	5	26	33	18	37	32	32	37	26	19	21	35	39	7.20

Program Objective Rankings by Groups (cont'd):

Program Objective	School Districts															range	rating dispersion
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
enjoy of movement	26	41	36	38	23	27	33	26	24	31	21	29	30	30	25	20	4.47
realistic perception of ability	27	20	27	45	28	26	36	28	28	29	31	23	40	31	28	25	4.07
strength: legs	31	40	38	10	29	28	23	34	29	30	25	38	27	26	30	30	4.87
posture: walk/stand	30	37	29	30	40	31	31	35	38	36	35	27	20	24	29	20	4.20
initiative	36	23	31	47	27	29	34	27	30	27	33	39	34	41	32	24	4.67
catch: fly balls	37	43	40	8	30	37	32	40	37	34	38	32	24	25	40	35	6.00
strength: arms	35	34	34	12	36	32	27	38	39	38	34	36	36	33	36	27	3.53
detrimental affects of activity	33	24	30	54	32	38	43	22	33	28	39	30	37	36	31	32	5.53
care for common injuries	32	25	32	35	38	34	45	39	31	37	27	37	44	39	37	20	4.20
competitiveness	39	14	28	58	37	35	28	31	34	39	36	33	35	45	33	44	5.87
posture: lift and carry	29	29	37	67	39	36	26	32	36	35	50	55	16	32	38	51	8.20
sportsmanship	38	32	24	55	46	43	39	43	35	33	26	40	25	40	34	31	6.47
balance: dynamic upright	40	42	42	24	35	39	37	42	44	41	43	41	32	29	39	20	4.00
appreciate skilled performance	41	27	41	62	34	40	44	41	40	40	41	34	53	51	41	35	5.13
jump rope	46	35	39	15	44	45	42	44	50	47	57	42	49	37	42	42	5.73
dribble: with hands	51	38	45	28	43	42	41	45	47	48	51	45	46	38	43	23	4.00
courage	42	28	43	79	41	41	47	33	41	42	44	43	41	52	44	51	5.67
strength: shoulders	50	47	49	31	45	44	40	54	45	46	42	46	45	44	45	23	3.07
flexibility: shoulder	61	70	54	69	67	58	54	56	51	57	45	73	65	72	56	28	6.93
knowledge: personal space	43	45	46	46	42	48	59	29	42	43	58	49	42	56	46	30	5.07
knowledge: body parts	45	46	44	56	48	49	51	46	48	44	46	44	61	47	48	17	3.07
skip	49	48	58	36	47	59	49	47	52	51	59	47	52	42	52	23	4.47
knowledge: body actions	52	49	51	61	52	60	46	55	49	56	47	50	62	61	54	16	4.33
jump: vertical	56	50	52	37	59	47	48	57	57	52	66	48	54	49	50	29	4.80
self-respect	47	52	53	80	53	53	50	48	46	53	52	56	56	70	47	34	5.27
throw: underhand	54	56	55	43	58	52	52	51	65	58	64	52	50	43	53	22	4.47
bat	55	57	56	32	49	50	55	49	56	54	60	53	39	57	61	29	5.07

Program Objective Rankings by Groups (cont'd):

Program Objective	School Districts															range	rating dispersion
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
posture: push and pull	57	71	59	29	61	56	60	60	66	63	28	31	66	79	70	51	10.40
strike: forehand	58	59	57	33	55	54	66	58	67	50	77	60	47	46	59	44	6.93
posture: sit	48	54	47	76	62	55	53	62	53	49	54	64	48	62	51	29	5.73
effects of performance modifiers	53	61	48	81	51	51	58	50	54	55	48	57	86	71	55	38	7.60
even beat	59	84	72	39	57	65	61	63	62	61	62	58	51	59	57	45	5.93
dribble: with feet	70	72	66	48	56	57	56	59	63	64	65	62	55	48	71	24	6.13
flexibility: neck	65	73	73	77	68	75	57	82	59	65	49	74	69	68	63	33	6.47
kick: instep	66	62	82	44	54	61	62	68	71	66	73	67	57	53	72	38	7.07
knowledge: boundaries in space	62	53	60	59	60	63	81	52	58	59	55	63	63	63	66	29	4.33
knowledge: use of force	60	51	61	74	75	62	64	74	55	62	67	54	64	81	64	30	6.27
strike: overhand	67	66	74	52	63	64	67	66	72	69	83	75	58	54	58	31	6.13
hop	63	63	87	50	76	66	65	64	74	60	68	61	67	64	68	37	5.40
flexibility: ankle	82	74	67	82	87	78	82	69	60	67	61	79	81	82	81	27	6.73
jump: horizontal	64	75	76	53	69	67	63	70	64	70	71	65	71	73	82	29	4.87
tempo	71	85	75	68	70	76	68	71	73	72	53	76	72	89	60	36	5.67
balance: static upright	72	86	62	75	77	79	69	75	75	68	56	59	87	77	73	31	6.47
leap	87	67	83	71	65	84	71	72	83	73	78	85	68	67	67	22	6.47
catch: rolling balls	83	64	63	63	71	70	78	76	76	77	74	68	59	60	74	24	6.07
gallop	76	79	77	64	78	80	72	65	68	74	79	77	73	74	78	16	3.87
strike: backhand	84	76	78	60	66	71	90	73	77	75	80	70	60	58	83	32	7.33
kick: toe	77	65	64	70	72	77	73	77	84	90	75	69	82	84	75	26	5.53
strike: underhand	78	87	84	65	88	72	83	78	78	82	84	80	74	55	79	33	5.87
pass chest	74	60	68	66	89	68	84	79	61	83	85	81	83	66	92	32	8.93
slide	75	68	79	57	79	85	74	89	85	91	86	71	75	75	69	34	7.00
flexibility: trunk	44	58	50	42	50	46	38	53	43	45	40	51	38	50	49	20	4.73
strength: neck	73	80	69	83	80	81	70	90	69	71	63	92	84	87	89	29	7.40
knowledge: use of time	68	90	70	95	64	69	88	67	79	84	72	86	78	90	65	31	9.13

Program Objective Rankings by Groups (cont'd):

Program Objective	School Districts															range	rating dispersion
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
land from a fall	85	88	80	84	90	86	75	83	80	78	87	72	88	76	90	18	4.67
shoulder roll: forward	88	91	71	72	91	87	76	91	86	92	88	66	92	78	93	27	6.80
knowledge: positions in space	69	81	96	89	81	82	99	61	70	76	69	93	93	95	84	38	9.47
pass: overhead	91	77	85	78	82	73	89	92	81	85	76	87	89	69	76	23	5.87
roll a ball	89	69	88	73	83	83	85	84	87	79	89	88	90	65	85	25	5.33
shoot a basketball overhand	92	55	65	98	92	88	79	93	88	93	90	82	70	96	62	43	10.20
knowledge: twist/rotate	79	82	89	88	84	89	77	80	89	86	81	94	85	85	94	17	4.07
knowledge: directions in space	80	92	81	96	93	90	80	85	90	87	91	89	76	91	91	20	4.40
knowledge: body planes	81	89	90	90	94	91	91	81	91	94	70	83	91	86	86	24	4.40
punt	90	78	86	85	73	74	86	94	82	95	82	95	79	92	87	22	5.73
knowledge: levels of space	93	83	97	91	95	92	94	95	92	80	92	90	77	83	77	20	5.13
shoulder roll: backward	94	96	98	86	96	93	93	96	93	96	93	91	94	80	88	18	3.07
uneven beat	95	97	99	87	85	94	92	97	94	88	94	78	80	93	95	21	4.53
climb a rope ladder	86	93	91	99	74	95	95	86	95	97	95	96	95	88	80	25	4.93
balance: inverted	96	98	92	92	97	96	87	87	96	81	96	97	96	97	96	17	3.07
knowledge: use of flow	97	94	93	97	98	97	96	98	97	98	97	98	97	94	97	5	1.00
knowledge: shapes	98	99	100	93	99	98	100	99	98	89	98	99	98	98	98	11	1.47
knowledge: size	99	95	94	100	100	99	101	100	99	99	99	84	99	99	99	17	1.93
knowledge: turn	100	100	101	94	86	100	102	88	100	100	100	100	100	100	100	16	2.33
vault	101	101	95	101	101	101	98	101	101	101	101	101	101	101	101	6	0.60
accent	102	102	102	102	102	102	97	102	102	102	102	102	102	102	102	5	0.33

Program Objective Rankings by Groups (cont'd):

	Region				rating		Gender		rating	
Program Objective	North	West	Central	East	range	dispersion	male	female	range	dispersion
aerobic fitness	2	1	6	2	5	1.25	3	1	2	1.00
value an active lifestyle	3	2	1	1	2	0.75	2	2	0	0.00
benefits of physical activity	1	3	4	4	3	1.00	1	3	2	1.00
nutritional habits	4	4	2	3	2	0.75	4	4	0	0.00
respect for others	7	5	3	6	4	1.25	5	5	0	0.00
cooperation	5	6	5	5	1	0.25	6	6	0	0.00
best effort	8	8	9	7	2	0.50	7	7	0	0.00
responsibility	6	11	8	8	5	1.25	8	9	1	0.50
self-control	12	9	7	10	5	1.50	9	8	1	0.50
appreciation of fitness	10	7	10	11	4	1.00	10	10	0	0.00
respect for rules	9	12	11	9	3	1.25	11	11	0	0.00
design a personal activity program	11	10	13	13	3	1.25	12	12	0	0.00
follow directions	14	15	12	12	3	1.25	13	13	0	0.00
how to learn motor skills	21	13	17	14	8	2.75	14	15	1	0.50
strength: abdomen/low back	18	14	18	15	4	1.75	15	16	1	0.50
relaxation	13	17	14	18	5	2.00	16	14	2	1.00
prevent injuries	15	18	15	17	3	1.25	17	17	0	0.00
decision-making	16	21	16	20	5	2.25	18	18	0	0.00
run	23	16	22	16	7	3.25	19	19	0	0.00
leadership	17	25	20	19	8	2.25	20	20	0	0.00
perseverance	19	20	21	22	3	1.00	21	22	1	0.50
compassion for others	20	24	19	21	5	1.50	22	21	1	0.50
flexibility: hip/low back	25	22	25	23	3	1.25	25	23	2	1.00
assess personal. fitness	22	27	24	24	5	1.25	23	24	1	0.50
lean/fat ratio	26	29	26	26	3	0.75	24	29	5	2.50
respect for property	27	31	23	29	8	2.50	26	28	2	1.00
throw: overhand	33	19	33	25	14	5.50	29	25	4	2.00

Program Objective Rankings by Groups (cont'd):

Program Objective	Region					rating	Gender			rating
	North	West	Central	East	range	disp.	male	female	range	dispersion
enjoy of movement	34	30	27	28	7	2.25	27	30	3	1.50
realistic perception of ability	24	34	29	30	10	2.75	28	31	3	1.50
strength: legs	37	23	31	32	14	3.75	30	27	3	1.50
posture: walk/stand	28	32	35	27	8	3.00	31	26	5	2.50
initiative	35	33	28	35	7	2.25	35	32	3	1.50
catch: fly balls	39	26	37	31	13	4.75	34	34	0	0.00
strength: arms	38	28	38	34	10	3.50	37	33	4	2.00
detrimental affects of activity	31	41	30	33	11	3.25	32	37	5	2.50
care for common injuries	32	38	32	38	6	3.00	39	35	4	2.00
competitiveness	30	36	36	40	10	2.50	33	38	5	2.50
posture: lift and carry	29	37	39	39	10	3.00	38	36	2	1.00
sportsmanship	36	45	34	36	11	2.75	36	40	4	2.00
balance: dynamic upright	41	35	43	37	8	3.00	40	39	1	0.50
appreciate skilled performance	40	44	40	42	4	1.50	41	41	0	0.00
jump rope	42	39	48	41	9	2.50	42	42	0	0.00
dribble: with hands	45	40	46	43	6	2.00	44	45	1	0.50
courage	43	48	41	45	7	2.25	46	44	2	1.00
strength: shoulders	48	42	47	44	6	2.25	43	48	5	2.50
flexibility: shoulder	61	62	56	65	9	2.50	59	61	2	1.00
knowledge: personal space	44	47	42	46	5	1.75	48	43	5	2.50
knowledge: body parts	46	51	45	47	6	1.75	47	47	0	0.00
skip	49	46	50	48	4	1.25	49	49	0	0.00
knowledge: body actions	50	52	51	57	7	2.00	51	51	0	0.00
jump: vertical	53	50	58	51	8	2.50	52	52	0	0.00
self-respect	51	58	49	53	9	2.75	50	58	8	4.00
throw: underhand	54	53	60	50	10	2.75	55	50	5	2.50
bat	56	49	55	54	7	2.00	53	56	3	1.50

Program Objective Rankings by Groups (cont'd):

Program Objective	Region					rating	Gender			rating
	North	West	Central	East	range	disp.	male	female	range	dispersion
posture: push and pull	59	54	54	58	5	2.25	56	54	2	1.00
strike: forehand	55	55	59	52	7	1.75	58	55	3	1.50
posture: sit	52	61	53	60	9	4.00	57	57	0	0.00
effects of performance modifiers	57	60	52	61	9	3.00	54	60	6	3.00
even beat	64	56	61	55	9	3.50	65	53	12	6.00
dribble: with feet	66	57	62	56	10	3.75	60	59	1	0.50
flexibility: neck	74	67	63	71	11	3.75	66	67	1	0.50
kick: instep	62	59	70	62	11	2.75	63	63	0	0.00
knowledge: boundaries in space	60	68	57	66	11	4.25	62	62	0	0.00
knowledge: use of force	58	66	64	64	8	2.00	61	66	5	2.50
strike: overhand	63	63	74	59	15	3.75	64	64	0	0.00
hop	67	65	66	63	4	1.25	67	65	2	1.00
flexibility: ankle	82	86	65	87	22	6.50	87	73	14	7.00
jump: horizontal	71	64	71	73	9	2.25	69	69	0	0.00
tempo	72	69	67	74	7	2.50	70	68	2	1.00
balance: static upright	73	75	68	70	7	2.50	68	75	7	3.50
leap	69	71	76	72	7	2.00	71	71	0	0.00
catch: rolling balls	76	73	78	68	10	3.25	72	70	2	1.00
gallop	77	70	73	75	7	2.25	76	72	4	2.00
strike: backhand	83	76	77	67	16	4.25	73	74	1	0.50
kick: toe	68	74	83	83	15	6.00	74	76	2	1.00
strike: underhand	90	77	84	69	21	7.00	79	78	1	0.50
pass chest	65	78	79	79	14	3.75	80	79	1	0.50
slide	78	72	96	76	24	6.50	82	77	5	2.50
flexibility: trunk	47	43	44	49	6	2.25	45	46	1	0.50
strength: neck	80	79	72	92	20	5.25	77	84	7	3.50
knowledge: use of time	79	87	75	84	12	4.25	81	82	1	0.50

Program Objective Rankings by Groups (cont'd):

Program Objective	Region					rating	Gender			rating
	North	West	Central	East	range	disp.	male	female	range	dispersion
land from a fall	84	83	81	82	3	1.00	84	80	4	2.00
shoulder roll: forward	85	80	97	78	19	6.00	75	89	14	7.00
knowledge: positions in space	75	94	69	90	25	10.00	85	81	4	2.00
pass: overhead	87	84	85	80	7	2.00	83	85	2	1.00
roll a ball	88	81	86	81	7	3.00	89	83	6	3.00
shoot a basketball overhand	70	90	98	77	28	10.25	78	92	14	7.00
knowledge: twist/rotate	86	82	82	95	13	4.25	88	87	1	0.50
knowledge: directions in space	81	89	88	89	8	2.25	90	88	2	1.00
knowledge: body planes	91	91	80	88	11	3.50	92	86	6	3.00
punt	89	85	89	93	8	2.00	86	93	7	3.50
knowledge: levels of space	93	95	90	85	10	3.25	93	90	3	1.50
shoulder roll: backward	96	92	99	86	13	4.25	91	94	3	1.50
uneven beat	97	88	93	94	9	2.50	96	91	5	2.50
climb a rope ladder	94	99	91	91	8	2.75	94	95	1	0.50
balance: inverted	98	93	87	98	11	4.00	95	96	1	0.50
knowledge: use of flow	92	97	100	96	8	2.25	98	97	1	0.50
knowledge: shapes	99	96	94	99	5	2.00	99	100	1	0.50
knowledge: size	95	102	92	97	10	3.00	97	102	5	2.50
knowledge: turn	101	98	95	100	6	2.00	100	98	2	1.00
vault	100	100	101	101	1	0.50	101	99	2	1.00
accent	102	101	102	102	1	0.25	102	101	1	0.50

Program Objective Rankings by Groups (cont'd):

Program Objective	Household Income					rating	
	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000	range	dispersion
aerobic fitness	11	8	1	2	2	10	3.20
value an active lifestyle	1	1	3	3	1	2	0.80
benefits of physical activity	12	2	4	1	3	11	2.60
nutritional habits	2	3	8	5	4	6	1.60
respect for others	3	4	2	6	6	4	1.40
cooperation	13	6	5	4	8	9	2.40
best effort	4	9	7	8	5	5	1.60
responsibility	5	5	9	7	7	4	1.20
self-control	6	12	6	9	9	6	1.80
appreciation of fitness	14	10	10	13	10	4	1.40
respect for rules	15	7	12	10	12	8	2.00
design a personal activity program	7	13	11	11	11	6	1.20
follow directions	40	11	13	12	13	29	6.00
how to learn motor skills	41	18	14	15	14	27	6.20
strength: abdomen/low back	21	25	15	14	15	11	3.40
relaxation	8	16	17	17	19	11	2.40
prevent injuries	42	14	22	16	16	28	6.80
decision-making	16	17	16	20	25	9	2.60
run	30	26	19	18	17	13	4.20
leadership	17	15	20	19	20	5	1.60
perseverance	18	23	18	22	18	5	1.80
compassion for others	9	19	21	21	26	17	3.80
flexibility: hip/low back	22	28	23	24	22	6	1.60
assess personal. fitness	43	30	28	23	28	20	4.40
lean/fat ratio	19	21	29	25	24	10	2.80
respect for property	10	24	24	26	34	24	5.20
throw: overhand	50	32	25	30	21	29	7.20

Program Objective Rankings by Groups (cont'd):

Program Objective	Household Income					rating	
	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000	range	dispersion
enjoy of movement	44	22	27	27	31	22	5.20
realistic perception of ability	31	20	33	28	27	13	3.40
strength: legs	23	38	30	29	29	15	3.20
posture: walk/stand	24	34	38	31	32	14	3.40
initiative	32	31	34	36	36	5	1.80
catch: fly balls	51	33	26	35	23	28	7.40
strength: arms	25	43	35	32	30	18	4.60
detrimental affects of activity	26	27	41	33	35	15	4.60
care for common injuries	33	35	36	38	33	5	1.60
competitiveness	27	36	31	39	37	12	3.60
posture: lift and carry	28	39	32	40	42	14	4.40
sportsmanship	34	29	43	34	38	14	3.60
balance: dynamic upright	35	40	42	37	39	7	2.00
appreciate skilled performance	45	41	37	41	43	8	2.00
jump rope	52	47	46	42	40	12	3.40
dribble: with hands	53	50	39	43	41	14	4.60
courage	36	37	40	48	48	12	4.60
strength: shoulders	29	56	47	47	44	27	6.00
flexibility: shoulder	37	60	61	61	65	28	5.80
knowledge: personal space	46	45	48	45	45	3	0.80
knowledge: body parts	47	42	44	46	55	13	3.20
skip	54	51	51	49	46	8	2.00
knowledge: body actions	55	48	54	50	63	15	4.00
jump: vertical	56	52	49	51	52	7	1.60
self-respect	38	44	59	55	54	21	6.40
throw: underhand	57	71	52	54	53	19	4.60
bat	58	53	50	56	49	9	3.00

Program Objective Rankings by Groups (cont'd):

Program Objective	Household Income					rating	
	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000	range	dispersion
posture: push and pull	39	61	66	52	47	27	8.20
strike: forehand	59	80	57	57	50	30	6.40
posture: sit	20	54	67	60	60	47	10.60
effects of performance modifiers	60	49	60	53	61	12	3.80
even beat	61	55	55	62	56	7	2.60
dribble: with feet	62	81	53	63	57	28	6.80
flexibility: neck	63	62	69	70	75	13	4.00
kick: instep	64	72	58	59	59	14	3.80
knowledge: boundaries in space	65	57	64	64	66	9	2.00
knowledge: use of force	66	63	56	58	76	20	5.60
strike: overhand	67	82	62	66	58	24	5.80
hop	68	64	68	65	62	6	2.00
flexibility: ankle	69	83	92	82	79	23	5.40
jump: horizontal	70	84	65	68	68	19	4.20
tempo	71	58	63	72	70	14	4.40
balance: static upright	72	65	72	71	71	7	1.60
leap	73	73	73	67	80	13	2.60
catch: rolling balls	74	85	70	69	67	18	4.60
gallop	75	66	71	74	72	9	2.40
strike: backhand	76	86	76	73	64	22	5.00
kick: toe	77	67	78	75	73	11	3.00
strike: underhand	78	87	77	79	69	18	4.00
pass chest	79	88	82	76	74	14	4.00
slide	80	74	75	77	77	6	1.60
flexibility: trunk	81	46	45	44	51	37	8.60
strength: neck	48	68	79	78	86	38	9.80
knowledge: use of time	49	59	88	85	88	39	13.60

Program Objective Rankings by Groups (cont'd):

Program Objective	Household Income					rating	
	<$15,000	<$30,000	<$45,000	<$70,000	≥$70,000	range	dispersion
land from a fall	82	75	74	88	81	14	4.20
shoulder roll: forward	83	89	80	80	78	11	2.80
knowledge: positions in space	84	76	89	81	83	13	3.20
pass: overhead	85	90	83	86	82	8	2.20
roll a ball	86	77	81	83	87	10	3.00
shoot a basketball overhand	87	78	98	84	91	20	5.40
knowledge: twist/rotate	88	69	84	91	89	22	5.40
knowledge: directions in space	89	79	90	87	93	14	3.40
knowledge: body planes	90	70	86	89	92	22	5.20
punt	91	91	87	92	84	8	2.40
knowledge: levels of space	92	92	91	90	95	5	1.20
shoulder roll: backward	93	93	100	93	85	15	3.00
uneven beat	94	94	85	95	90	10	2.80
climb a rope ladder	95	95	101	94	98	7	2.00
balance: inverted	96	96	94	96	94	2	0.80
knowledge: use of flow	97	97	93	98	96	5	1.20
knowledge: shapes	98	98	95	99	99	4	1.00
knowledge: size	99	99	99	97	100	3	0.60
knowledge: turn	100	100	96	100	97	4	1.40
vault	101	101	102	101	101	1	0.20
accent	102	102	97	102	102	5	1.00

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