

Inclusive Physical Activity, Meaningful Movement & the Third Millennium

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Individuals with disabilities have been present in society throughout history (DePauw, 1986; Hewett & Forness, 1974). During the last 50 years, individuals with disabilities have become increasingly more visible in society and in the schools throughout much of the world. Even sport has become more inclusive.

Recent statistics (in the United States) indicated that 93% of individuals with disabilities are being educated in regular education (including physical education) (United States Department of Education, 1991). Although I am not aware of similar statistics from other countries, it is apparent that discussions about inclusion are being held worldwide at congresses and conferences such as this AIESEP World Congress in Brazil. Thus, it is important that physical educators be not only aware of, but educated about, teaching students with disabilities in their classes. As physical educators, our task is to provide physical education experiences through which all kinds of diverse students develop and learn. The purpose of this lecture is to describe inclusive physical activity, meaningful movement, and the third millennium. This requires an understanding of adapted physical activity (Block, 1993; Craft, 1994a; DePauw & Goc

Karp, 1994a) as well as an understanding of disability and the disability rights movement.

Adapted physical activity refers to a cross disciplinary body of knowledge directed toward the identification and solution of motor problems throughout the life span, development and implementation of advocacy and attitude theories in support of access to sport and active lifestyle, and innovation and cooperative home-school-community service delivery and empowerment systems (DePauw & Sherrill, 1994). Adapted physical activity has become an umbrella term used worldwide to encompass such areas as physical education, recreation, dance, sport, fitness and rehabilitation for individuals with impairments across the life span (DePauw & Doll-Tepper, 1989; Poretta, Nesbitt, & Labanowich, 1993).

Obviously, adapted physical activity encompasses programs beyond those which are typically found in the schools, including disability sport. Disability sport refers to sport that has been designed for, modified to include, or practiced in its unrestricted form by individuals with disabilities (DePauw & Gavron, 1994). Given the increasing emphasis upon connections among school, family and community, it is important for educators to be aware of activity based opportunities for individuals with disabilities which exist beyond the school yard fence.

1. HISTORY OF ADAPTED PHYSICAL ACTIVITY

The history of adapted physical activity dates back to ancient China where the earliest form of exercise was used to alleviate physical disorders and illness (Seaman & DePauw, 1989). The early Greek and Roman cultures also recognized the relationship between physical activity and well being. Over the centuries the name and nature of physical activity programs for individuals with disabilities has changed. Various emphases have included the medical, therapeutic, rehabilitative, healing, remedial, corrective, curative, special, developmental, and adapted (Sherrill, 1988) perspectives. The populations served also changed as has the role and scope of various service delivery systems (McKenzie, 1909; Rathbone, 1934; Sherrill, 1993). [For detailed discussion of the changing nature of adapted physical education, see Sherrill and DePauw (1995) and DePauw and Sherrill (1994)].

Adapted physical activity has been strongly influenced by both a medical and an educational perspective that emanated from the European cultures during the 1800s (Sherrill & DePauw, 1995). Per Henrik Ling (1776-1839) of Sweden advanced medical gymnastics while sensory motor training evolved from the work of Jean Marc Itard (1775-1839) of France. Inasmuch as the medical gymnastics approach was utilized to prevent illness and to promote health, early physical education in the United States took on a medical orientation and the first physical educators were physicians. On the other hand, sensory motor training was used by special educators and perceptual motor theorists in the United States. Throughout the world, physical activity programs have evolved uniquely but they have drawn from these two perspectives.

Recently, adapted physical activity has broadened in scope by offering programs that address the needs of diverse populations (e.g., at risk, those who are HIV+ or have AIDS, severely and multiply impaired individuals) as well as offering programs that challenge those with disabilities (e.g., competitive sport, wheelchair dancing, high risk sports such as mountain climbing, sky diving). Today's physical activity programs provide more individualized activities and offer more choices; lesser emphasis is placed upon the activity and more on the individual's interests and needs. The categorical approach (e.g., activity for specific disability grouping and segregation) that characterized much of early adapted physical education is finally giving way to programs which utilize a non categorical approach and that promote integration and inclusion.

Although full participation by individuals with disabilities in many societies is still far from a reality, the general trend has been one of progressive inclusion and acceptance (DePauw, 1986). Where once individuals with disabilities were excluded from society and schools, there is now at least partial inclusion. Physical education and sport programs have been forced to change as a result of progressive inclusion (DePauw, 1986). True inclusion can only come when all persons have, and are able to exercise, their right to choose in an accessible society.

2. SELECTED RESEARCH FINDINGS

As we move towards increasing inclusion of individuals with disabilities into physical activity programs, it is important to draw upon the rele-

vant research. Some of the relevant literature is summarized below (excerpted from DePauw, 1995).

2.1 Effective Teaching and Learning among Students with Disabilities

Although a body of knowledge exists about effective teaching and effective teachers, relatively little research has been conducted with students with disabilities (Vogler, DePaepe, & Martinek, 1990; Webster, 1993). The limited body of knowledge that does exist includes studies that examined regular physical education, integrated or mainstreamed, and adapted physical education settings. Two early studies concluded that teaching strategies effective with able-bodied children were also found to be effective when teaching students with disabilities (Mawdsley, 1977; Taylor & Loois, 1978). This initial research speaks to the commonality among students in physical education rather than assumed differences due to disability. Selected research findings and their implications for programming are displayed in Table 1.

2.2 Attitudes about disability

Physical education teachers' attitudes toward individuals with disabilities vary according to the student's type of impairment (Aloia, Knutson, Minner, & vonSeggern, 1980; Rizzo, 1984; Rizzo & Wright, 1988). Specifically, physical educators prefer teaching students with learning impairments rather than students with physical impairments. Students with learning impairments were viewed more favorably than students with mild mental retardation and behavioral disordered students (Rizzo & Vispoel, 1991). Perceived teacher competence was found not only to be significantly correlated with positive teacher attitudes (Rizzo & Wright, 1988), but it was also the best predictor of positive attitudes (Rizzo & Vispoel, 1991).

In another study, the age of the teacher was found to be negatively correlated with attitude; as the age of the teacher increased, positive attitudes decreased (Rizzo, 1985). This finding is most likely related to the time during which the teacher received their professional preparation and the lack of emphasis upon adapted physical education as well as the lack of emphasis on inclusion of individuals with disabilities in physical education.

Physical education students and preservice students were found to hold varying attitudes about individuals with disabilities. Rizzo (1984) found that the students with disabilities were perceived more favorably by their peers in the elementary school than in the higher grades. As for preservice or teacher training students, previous exposure to individuals with disabilities, as well as to courses in adapted physical education and special education, was correlated to favorable attitudes among college students (Jansma & Shultz, 1982; Marston & Leslie, 1983; Rizzo, 1985).

Table 1 - Summary of Selected Research Findings and Implications (from DePauw, 1996)

Findings	Implications
<i>Effective Teaching and Learning</i>	
- Teaching strategies effective for able bodied students effective for students with disabilities	- Select teaching strategies and modify as necessary
- Students with disabilities spent little time engaged in appropriate motor activity	- Increase time engaged in motor activity
- Primary and secondary reinforcers increased learning among students with severe/profound impairments	- Use meaningful, tangible reinforcers dependent upon type and level of impairment
- Individualized contingency and token economy effective with mild and behaviorally disordered	
- Feedback improved performance	- Provide quality feedback
- Individualized instruction increased time on task	- Use peer tutors and individualized instruction
- Peer tutoring effective in increasing performance	
- Reverse chaining or random order more effective than blocked practice or drill for students with mental retardation	- Modify practice and learning strategies for students with mental retardation
- Teachers had lower expectations for students with disabilities	- Educate teachers about appropriate expectations
- Experienced teachers had greater repertoire of strategies for effective teaching	- Provide preservice teachers with more experience
<i>Attitudes about Students with Disabilities</i>	
- Perceived teacher competence best predictor of positive attitude toward students with disabilities	- Enhance competence of teachers
- Previous experience with individuals with disabilities resulted in more favorable attitudes	- Increase experiences with disabled persons
- Physical educators preferred students with learning impairments than physical impairments	- Help teachers modify activities for physically impaired
<i>Integration</i>	
- Integrated physical education did not cause differential learning	- Teach students with disabilities in integrated physical education settings
- For students with mild and moderate impairments, social and motor performance enhanced by inclusion	

DePauw and Goc Karp (1990) studied selected college students (physical education, special education and recreation majors) and found that most held stereotyped attitudes toward individuals with disabilities. In addition, the students expressed concern about the integration of learning and physically disabled students into school and community based settings. These concerns tended to be centered on the logistics of

integration (e.g., time limitation, additional burden on teacher, potential discipline problems) rather than the benefits of integration. Most agreed that integration could be beneficial to all students. It is interesting to note here that special education majors were found to strongly favor segregation or separate classes for individuals with disabilities more so than physical education or recreation majors.

Integration

Little research has focused on the integration of students with disabilities into regular physical education (Vogler, DePaepe, & Martinek, 1990). Relevant research, comparing student and teacher behaviors across educational settings (Silverman, Dodds, Placek, Shute, & Rife, 1984; Vogler, van der Mars, Cuisamano, & Darst, 1992), found that education in integrated settings (or inclusion) "did not seem to be an obstacle to the learning process of students with disabilities in physical education" (Block & Vogler, 1994, p. 41). Vogler et al. (1990) found that the mainstreamed environment was a good context for effective teaching based upon time devoted to academic content and emotional climate and that education in an integrated physical education setting did not cause differential learning. Further, for students with mild and moderate impairments, social and motor performance was enhanced by inclusion (Beuter, 1983; Karper & Martinek, 1983).

2.3 Research Framework

In order to examine inclusion and the specific experience of students with disabilities in physical education, it is important to rethink the teaching - learning process and to incorporate disability as another variable in the process. Inasmuch as learning (or change) can be viewed as the result of the individual-environment interaction, DePauw and Goc Karp (1992) proposed an alternative framework for research in sport pedagogy,

or more specifically, pedagogical research on teaching physical education to include diverse populations. The framework, shown in Figure 1, was adapted from Dunkin and Biddle (1976).

This framework emphasizes (a) interaction among variables which influence the teaching learning process, (b) a dynamic not static view of pedagogy, (c) process more so than product, and (d) the influence of socio-historical and socio-cultural perspectives which are brought into the learning environment (DePauw & Goc Karp, 1992). The inclusion of a broader societal context helps us realize that “forces such as politics, economics, social mores, cultural values, legal mandates and traditions” (p. 246) do influence the attitudes, beliefs, expectations, motivation, etc. of those who enter the teaching/learning setting (e.g., teachers, pupils) and the learning environment as well as the interaction among variables. Research conducted using this framework must be viewed as dynamic involving and must involve qualitative and quantitative research designs; action research would be natural for this framework. Using this framework for research, disability can be examined as a social construct and in the context of social relationships rather than as a problem within the individual. Future research must address diversity and societal context and should include collaboration with individuals with disabilities.

2.4 Meaningful Movement

Physical education programs have changed over the years; the purposes of physical education have continued to evolve, the students have become more diverse (e.g., individuals from different cultural backgrounds and ethnic and racial minority status, individuals with disabilities, youth at risk), and the activities taught have become more reflective of the societal context and representative of the “global village”. The settings in which physical activity (education) takes place have also become increasingly more diverse (e.g., physical education, adapted physical education, sport programs, recreation programs, at-risk education, sensory motor therapy, etc.). Education of, through, and in the “physical” now takes place throughout a spectrum of opportunity and can no longer be confined to traditional physical education settings.

Although programs continue to change, the need for assessment of motor performance has remained a constant in the formula for meaningful and appropriate physical education. The ability to provide meaningful and appropriate physical education requires understanding the bases of motor performance. For physical education programs in the future, it will be the process of assessment and interpretation that will be more important than reliance upon specific tests.

The focus here is on the meaningfulness and use of assessment data for planning, implementing and evaluating physical education programs (that include individuals with disabilities or deficits in motor performance). Many tests are available that can be used to evaluate motor performance and a number of pre-designed physical activity programs exist to assist the adapted or regular physical educator. Although these are helpful, the key to meaningful and appropriate physical education is an understanding of motor development and the underlying bases for motor performance. It is also important to understand the ways in which the individual interacts with, and in response to, the environment (the individual - environment interaction), the influences upon learning and the relevance within the broader societal context.

The framework discussed above can also be utilized to demonstrate this individual-environment interaction from a pedagogical perspective (Figure 1). As shown, students and teachers bring their unique backgrounds and perspectives to the educational setting. Variables such as teacher behavior, teaching and learning styles, student behaviors are influenced by the interaction between and among teachers and students and by the environment which includes both the physical setting as well as the learning climate. The products of such interaction include learning, change in behavior and attitude and so on. [For detailed discussion, see DePauw and Goc Karp (1992) and DePauw (1995)].

2.5 Strategies for Individualizing Instruction & Appropriate Modifications

Most activities are appropriate as is or appropriate with modifications for children with disabilities or motor deficits. At least three aspects of the physical education program should be considered for modification: modi-

fication of the instruction, the learning environment, and the activity (Seaman & DePauw, 1989). The type and extent of modification are related to the specific objectives of the physical education program; modifications may differ based upon whether the purpose of the program is for skill development or increased participation.

Modifying the activity is the most commonly utilized type of modification. Possible modifications include: (a) adapting where an individual is “placed” or located for the activity (e.g., hearing impaired person within eye sight of instructor), (b) varying the length of time an individual might participate, (c) adapting the skill to allow an individual to participate (e.g., two bounce in tennis), (d) modifying the equipment (e.g., shortening or extending a racquet, using balloons instead of balls), and (e) changing or modifying the rules as desired or appropriate (e.g., two bounces in tennis).

Although under the control of the physical educator, the instruction is often overlooked as an area for possible modification. It is important for instructors to examine the language used during teaching and to adapt or modify their language in order to facilitate understanding on the part of students. Further, the ability to make concepts concrete is also important. In addition, teachers may need to assist the learner in sequencing the task for successful completion; teachers also need to allow enough time (which varies across individuals) for learning, and should maximize learning by using the multi-senses in learning situations.

The learning environment can also be modified to enhance learning. Possible modifications include (a) adapting the facilities (e.g., lower nets), (b) using space creatively rather than by tradition, (c) providing structure and organization that enhances learning (e.g., adding more structure for those with a need for routine, varying routine to challenge those to cope with change), (d) using innovative class format (e.g., peer instructors, small and large groups, stations), and (e) eliminating distractions.

2.6 Physical Education for the Third Millennium

Physical activity is an integral part of the human experience. It follows that physical education is ideally situated to assume a major role in the lives of individuals with disabilities and progressive inclusion and may foster further acceptance of individuals with disabilities in society.

PRESSAGE

PROCESS/PRODUCT

CONTEXT

Individuals

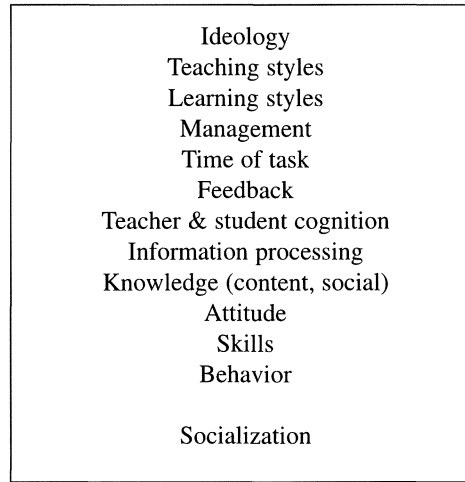
Teacher

- Age
- Gender
- Experience
- Ethnicity/race
- Motivation
- Self-concept
- Disability
- Knowledge
- Family structure
- Socio-economic status

Pupil

- Age
- Gender
- Ethnicity/race
- Motivation
- Self-concept
- Disability
- Knowledge
- Family structure
- Socio-economic status

Individual-environment
interaction



external agents
internal agents

Environment

Physical setting

- Class size
- Resources
- Equipment
- Accessibility
- Space
- Integrated/segregated

**Learning climate
(atmosphere)**

- Multi-sensory
- Class format
- Structure
- Organization
- Nonverbal behavior
- Affirming

Although the benefits of physical activity are well known and documented [e.g., physical, social, health and well being, psychological, vocational & work, intellectual, recreation & leisure, activities of daily living (ADL), physical education programs of the future will increasingly emphasize the social benefits of physical activity. Social benefits are outlined in Table 2.

With increasing attention to its social role and increasing diversity within society, physical education programs must become more inclusive. Several factors are critical to successful programming (see Table 3). Physical education programs should be designed to provide a challenge for all participants across ability levels in an open, affirming climate. The activities taught must be age-appropriate and meaningful (functional) to the individual and relevant to the community(ies) in which the individual resides.

Meaningful and appropriate physical education needs to involve collaborative decision-making among teachers, families, and students and it should offer options and a variety of opportunities for students. A key is the notion of choice; it is crucial that individuals have not only a variety of choices but that emphasis be placed on seeing individuals with disabilities as active agents who are able and afforded the opportunity to choose.

3. CONCLUSION: INCLUSION

Although programs of adapted physical education for students with disabilities are common, the inclusion of students with disabilities in regular physical education is rapidly becoming the reality (Block & Krebs, 1992). This means that programs of physical education will need to change in both curriculum and instruction. Innovative implementation and instructional models will need to be developed and evaluated and teacher preparation programs will need to change (e.g., equal-status relationships through reciprocal modeling [Sherrill, Heikinaro-Johansson, & Slininger 1994], collaboration [Maguire, 1994]).

[For lengthy discussion and debate about inclusion and least restrictive environment concepts, see the Spring 1994 issue of *Palaestra* (Block,

1994; Sherrill, 1994). Specific programming tips and strategies for successful inclusion can be found in the feature on "Inclusion: Physical Education for All" edited by Craft (1994b) in the January 1994 issue of *Journal of Physical Education, Recreation and Dance* and a book entitled *A Teacher's Guide to Including Students with Disabilities in Regular Physical Education* by Block (1994).]

Clearly it will be important to adopt an infusion approach to adapted physical activity in colleges and universities for the 21st century (e.g., DePauw, Lepore, Kowalski, Henderson, & Craft, 1993; Lepore & Kowalski, 1992). For more information and particulars about the role of higher education in preparing physical educators for inclusion and an infusion model for integrating knowledge of disability through the physical education curriculum, please see DePauw and Goc Karp (1994a, 1994b). The benefits of adopting an infusion approach include the following:

1. Increased knowledge and understanding of disability, of individuals with disabilities and of issues of equity,
2. Increased commitment of generalists to disability issues,
3. Increased working knowledge of and respect for professionals,
4. Increased collaboration among colleagues
5. Increased integration of individuals with disabilities
6. Increased commitment to disability and elimination of stigma, and
7. Increased affirming nature of society that enriches our lives.

Increasingly so, we can no longer rely on highly trained adapted physical education specialists to teach students with disabilities in segregated settings. The segregated settings have given way to integrated physical education settings and more recently, to inclusion. Although adapted physical education specialists will be available as teachers and consultants, much of the primary responsibility for teaching students with disabilities will be assumed by regular physical education teachers.

As professionals in adapted physical activity, it is important that we shift the paradigm away from the medical model, we need to stress individual concerns over professional concerns, and we need to provide emancipatory activities and programs. In doing so, we will create oppor-

tunities and an environment through which individuals with disabilities can experience empowerment. That which is useful and meaningful to individuals with disabilities should provide the basis for emancipatory research. Further, it is important to listen to the voices of those with disabilities, exhibit behaviors that dispel myths and reduce stereotypes, and eliminate labels. It is important to understanding the social meaning of our actions as well.

In the third millennium, programs of physical activity will be more diverse and thereby, must be more inclusive. To be viable, it follows that physical education programs must also become inclusive to be meaningful to the individual and relevant in the rapidly changing social context. We must understand the individual-environment interaction and utilize assessment, a process through which meaningfulness and appropriateness can be determined. These are key to planning and implementing successful physical education programs. We need to re-examine what we do in physical education. In this way, we are able to focus upon transforming educational settings into inclusive communities (Stainbeck & Stainbeck, 1992).

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