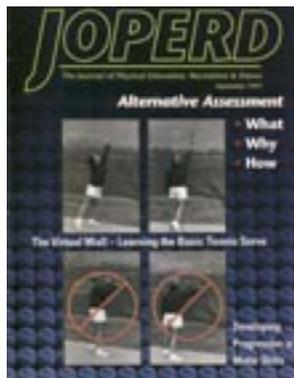


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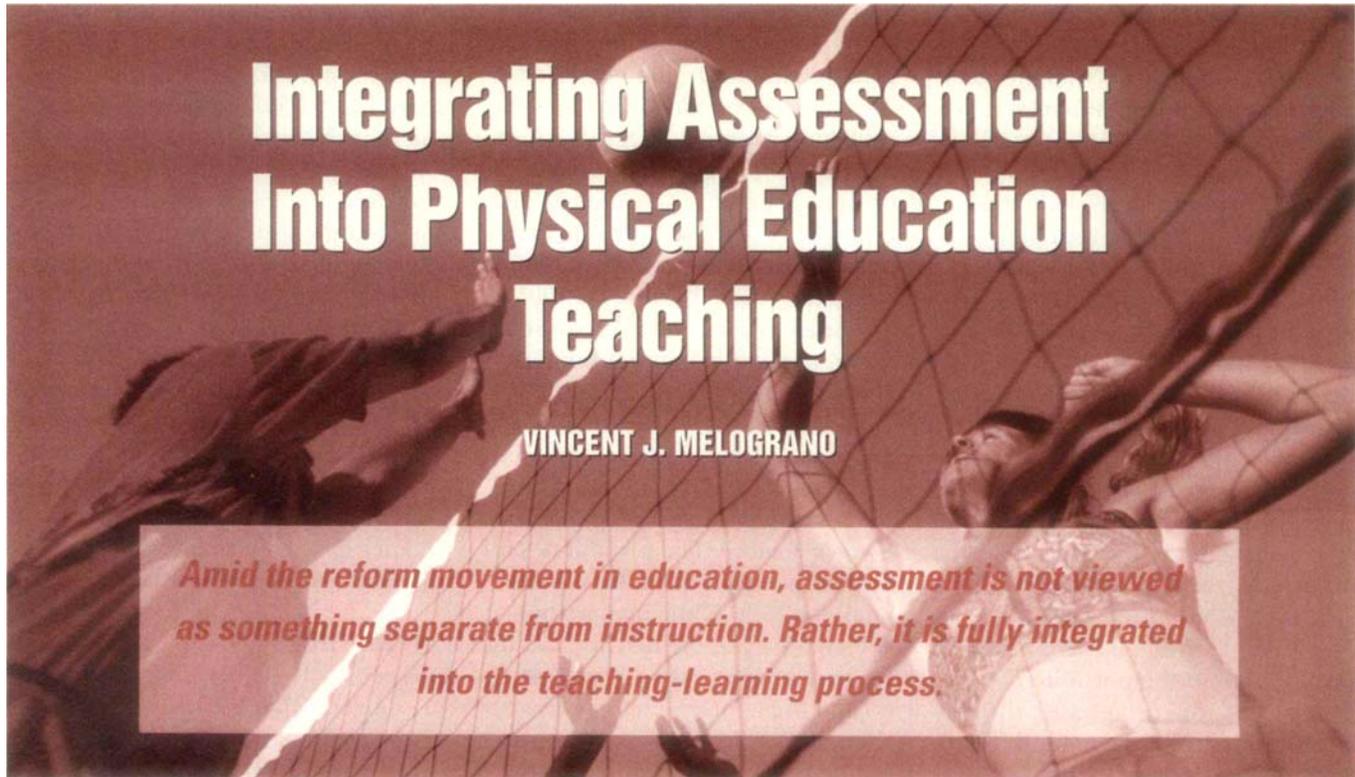
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Integrating Assessment Into Physical Education Teaching

VINCENT J. MELOGRANO

Amid the reform movement in education, assessment is not viewed as something separate from instruction. Rather, it is fully integrated into the teaching-learning process.

Teachers are dissatisfied with traditional forms of assessment—multiple choice tests, group-administered achievement tests, and standardized skill tests. They know that students are learning, but that is often not what is being measured and the tests do not seem to facilitate learning. Students must respond to prompts or perform tasks that have no worthwhile or real-life counterpart. Tests of motor ability, fitness, sport skills, knowledge, and psychosocial traits may be objective and reliable, but they may also fail to measure actual outcomes or objectives of interest to the teacher and students.

The trend towards “authentic” assessment advocates more naturalistic, performance-based approaches (NASPE, 1995; Perrone, 1991). Actual samples of student performance serve as the measure of learning instead of the highly inferential estimates provided by group testing (Meisels, 1993). In physical education, for example, performance in naturalistic game settings (e.g., volleyball bump pass when returning a

“real” serve) is assessed instead of performance on a skill test (e.g., volleyball bump pass from a partner toss).

Many of the current changes in assessment practices are not about assessment at all. Rather, the popularity of performance and portfolio assessment actually reflects fundamental changes in curriculum and instruction. Changes about *what* students should learn and *how* they can be taught best are influencing the way students are being assessed (Ryan, 1995). For example, self-check rating scales may be developed for assessment, but their construction is also an important *curriculum* designing task. And, when used correctly, peer assessment (e.g., task cards, reflections) is also a function of *teaching* because of the interaction between the teacher and student.

The primary purposes of student assessment are to: (1) diagnose (determine entry learning levels, need for remediation, and whether requisite abilities exist), (2) motivate (foster student accountability), (3) make instructional decisions, and (4) record and report (determine peri-

odic achievement and provide information about progress) (Glatthorn, 1993). This article focuses on the third purpose, how assessment plays a very important instructional role. It will:

- Differentiate among several assessment techniques,
- Describe three broad patterns of teaching and corresponding approaches, and
- Suggest a process for integrating assessment into teaching.

Assessment Techniques

Alternative assessment techniques have captured the attention of teachers. While many of the so-called “new” techniques are actually familiar procedures that have been improved, they should not be used to the exclusion of traditional ones. Multiple sources of information are desirable, characterized by: (1) tasks that *directly* examine desired behaviors, (2) an emphasis on *quality* of performance, (3) *criterion-referenced* measurement, and (4) *student involvement* in developing assessment

approaches (NASPE, 1995).

General assessment techniques include traditional, teacher-directed procedures and alternatives that transfer partial responsibility to others such as peer and self-evaluation. Also, portfolio assessment techniques are designed to present a broader, more genuine picture of learning. These assessment techniques are described in table 1 (Melograno, 1994, 1996).

Teaching Aspects

Several constructs for teaching physical education have been proposed (Graham, 1992; Hellison, 1985; Hellison & Templin, 1991; Mosston & Ashworth, 1994; Siedentop, 1991). Whether teaching is described in terms of strategies, styles, reflective approaches, or developmentally appropriate practices, it should evoke the desired responses (intended outcomes) in students — knowledge,

understanding, normative social behaviors, self-reliance, attitudes, values, and physical skills. These constructs have been synthesized into three broad patterns, each of which is comprised of various approaches to teaching.

1. Cohort Pattern. The teacher teaches the same thing to all students at the same time. This group focus means that students practice in the same way, at the same pace, and

Table 1. Assessment Techniques

TECHNIQUE	DESCRIPTION	EXAMPLES
Teacher-Directed	<i>Achievement tests</i> that are usually designed to measure perceptual motor skills, motor ability, physical fitness, and sport skills.	Teacher administers a test to, "Determine students' speed in dribbling a soccer ball around six obstacles using an alternating foot-tap technique."
	<i>Observational inventories</i> that provide a record of students' cognitive, motor, and affective (social, emotional, values) behavior through checklists and rating scales.	Student is observed during a fitness program and, using a 5-point scale, rated on the behavior, "Assumes responsibility for completion of tasks."
	<i>Written tests</i> that provide a direct measure of knowledge and higher-order abilities like application and synthesis.	A teacher-made item is, "Compare the advantages and disadvantages of using a full-court press against a fast-breaking team."
Peer	One student or group of students assesses the ability of another student. Students develop assessment skills, concern for others, and a sense of responsibility by giving and receiving constructive feedback. In small group settings, one person might be an observer, another might be a recorder, and two or three might be performing a given task. Criteria are established by the teacher.	Student compares and contrasts another student's performance with these teacher-determined criteria through task cards, rating scales, or checklists.
Self	Students make critical and valid assessments of their own abilities. Performance is compared to individual target goals, peer standards, teacher-established criteria, or all of these.	Self-check instruments, videotapes, and journals/logs are used where students are given options in relation to selected content.
Portfolio	An ongoing feedback system is used that documents student learning through actual exhibits and work samples. Students are involved in selecting and judging the quality of their own work including self-reflection. The framework for developing portfolios includes their purposes, organization and management, item selection, and variety of items. Portfolios are not to be a collection of anything and everything. Information gathering should be based on multiple methods.	Observations (checklists, rating scales, frequency index scales, peer reviews, anecdotal recordings, parental reflections) Performance samples (self-evaluations, journals, projects, videotapes, reflections, workbook pages) Tests and testlike procedures (pre-tests, quizzes, end-of-unit tasks, self-reports, commercial instruments)

			TEACHING ASPECTS															
			Cohort	Individualization							Interaction							
			Command	Practice	Exploration	Self-Directed Tasks	Guided Discovery	Problem Solving	Contracting	Programmed Tasks	Learning Package	Tutorial Programs	Independent Study	Computer-Assisted	Reciprocal Learning	Role Play/Simulation	Cooperative Learning	
GENERAL ASSESSMENT TECHNIQUES	Teacher-Directed	Motor-related achievement tests	✓	✓	✓		✓	✓					✓					
		Observational inventories	✓	✓	✓		✓	✓						✓	✓	✓	✓	
		Written tests	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
	Peer	Task cards; rating scales; checklists										✓		✓	✓	✓	✓	
	Self	Self-check worksheets; logs; journals; videotape analyses					✓	✓	✓	✓	✓		✓	✓				
PORTFOLIO ASSESSMENT TECHNIQUES	Observations	Checklists; rating scales; frequency index scales	✓	✓	✓		✓	✓						✓	✓	✓	✓	
		Peer reviews											✓		✓	✓	✓	✓
		Anecdotal recordings; narrative descriptions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Performance Samples	Self-ratings; personal reflections	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Projects; logs; journals; independent study								✓		✓	✓	✓	✓			
		Videotapes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Tests and Testlike Procedures	Pretests; quizzes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		Self-reports; end-of-unit tasks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		Commercial instruments	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

are subject to the same kinds of standards and assessment criteria. Commonly used approaches are command and practice.

2. Individualization Pattern. Theoretically, "means" and "ends" are interwoven through the roles of the teacher and student which accommodate the physical, psychological, and sociological differences among students. Numerous approaches are available that can be matched with each student's interests, abilities, achievement level, and preferred learning style. Commonly used approaches are exploration, self-directed tasks, guided discovery, problem solving, contracting, programmed tasks, learning packages, tutorial programs, independent study, and computer-assisted tasks.

3. Interaction. The purpose of this pattern is the *process* itself, not the typical forms of communication between the teacher and students. Students seek to improve achievement while working together as partners or in small groups to discuss, question, report, and provide feedback. The chance to learn social attitudes

and values is maximized. Social outcomes are sought through the use of physical education content. Commonly used approaches are reciprocal learning, role playing and simulation, and cooperative learning.

Process for Integration

Effective teachers use a recurring process: assess-plan-teach-assess-modify plans-teach-assess (Glatthorn, 1993). This process draws a distinction between formative and summative assessment. With formative assessment, information is sought for deciding how to adjust or improve the instructional system while corrections are still possible. This permits changes in the learning process while changes can still affect final performance, and thus provides feedback concerning the teaching-learning process. Assessment of a summative nature is used to decide students' success at an exit level. Students are assessed at the end of an instructional sequence or activity unit.

If physical educators are to be responsive to the new vision of assessment, changes in teaching behavior

may be needed. Traditional instructional systems where teachers inform, direct, and predetermine priorities probably will not work. While there are elements of current practices that could integrate alternative assessment into teaching, other changes are necessary. For example, in the portfolio model, the teacher facilitates, guides, and offers choices; partnerships are established among teachers, students, and parents.

Given that assessment techniques and teaching aspects have been identified, the challenge is to integrate the two. Although it may be simple to conceptualize assessment as an integral part of teaching, the actual integration is a difficult task. To help teachers, a five-step process is recommended.

Step 1: Determine the contexts for assessment. What are your preferred teaching approaches? What are your students' learning (assessment) style preferences and needs? What is the nature of the selected content to which assessment is applied?

Step 2: Identify all possible assessment techniques that "fit" your teaching approaches. Refer to table

2 which shows the relationships among assessment techniques and teaching aspects. Intersections are checked where the assessment technique seems to match a particular teaching approach. It is assumed that the assessment techniques are used for making decisions of a formative nature. All of the techniques could probably be used during summative assessment regardless of the teaching approach.

Step 3: Select appropriate assessment techniques. Attempts should be made to expand your assessment repertoire towards alternative, more progressive techniques. In the case of cohort teaching, assessment is usually limited to teacher-directed techniques. However, the resulting assessment products (e.g., checklists, rating scales, reflections, videotapes, tests) could be used as part of a modified system of portfolio assessment. With individualization, an assessment component is built into many of these approaches. For example, problem solving could include teacher-directed, self, and many of the portfolio assessment techniques. Inherent to interaction approaches is giving and receiving assessment feedback with a peer or group of peers. For example, all approaches could use task cards, rating scales, and checklists designed for peer assessment. With respect to portfolio assessment, selected observations (e.g., checklists, rating scales, anecdotal recordings) and performance sampling techniques (e.g., reflections, videotapes) could be integrated into each interaction approach.

Step 4: Use alternative teaching behaviors as needed. Integrating assessment into teaching is dependent on the teacher's role. To enhance this integration, you may need to: (a) deliberately plan for student involvement; strategies are needed to ensure student input; it cannot be left to chance; (b) provide time for tasks that encourage decision making and reflection; do not become overanxious because tasks look passive; (c) demonstrate expected behaviors (i.e., model expectations); actually

show students what is being sought; (d) help students manage their assessment whether it be peer, self, and/or portfolio in nature; provide assistance just as you would guide students through a difficult motor task; (e) develop positive interactive behaviors; students need to know where they stand; feedback and encouragement are needed because of the emphasis on self-management; and (f) actually use interactions to guide teaching; information derived from alternative assessment techniques could influence what is taught; such adjustments are formative decisions.

Step 5: Convert assessment data to grades, as necessary. An expanded assessment repertoire means that the quantity and quality of evaluation information is also expanded. With authentic assessment, conventional grades may be replaced with anecdotal records, performance samples, and student profiles. Despite new attempts to restructure report cards which emphasize performance, social skills, problem-solving abilities, and other meaningful outcomes, traditional grades still dominate (Burke, 1994). It may be more practical to supplement report cards with anecdotal progress reports. Learners' accomplishments, their strengths and difficulties, and their development can be more easily communicated. In the case of portfolios, for example, scoring rubrics can be used to grade individual artifacts, selected key items, and/or the whole portfolio.

In summary, the view of some teachers regarding assessment is, "I have too many students and not enough time." The reality is to manage students first and deliver some kind of instruction second. Assessment may be a distant third. But, most of the new techniques demand greater student responsibility (e.g., self-management, self-assessment, reflection, peer conferencing). Once a "system" of assessment is learned, time restrictions and sheer numbers are minimized. Use of partners, small groups, and self-directed tasks can reduce the seemingly high stu-

dent-teacher ratios. Obviously, the system needs to be well planned and organized.

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