

Establishing a Goals-Based Assessment Model

By Susan M. Tendy and Kellie Green Hall

Many physical educators are aware of the impact the tightening fiscal climate has on physical education programs at all levels. Shrinking resources have generated a need to protect and promote the quality of physical education programs in this country (Baker, 2001). Additionally, administrators need to be proactive when attempting to target physical education programs. They must be prepared to present school boards with documented evidence of the effectiveness of their program by establishing data points that display how goals have been met through measurable objectives. An ongoing and comprehensive assessment program is part of a rational approach to establishing the importance of physical education in today's academic settings.

The purpose of this article is to present a goals-based assessment model that systematically lays out the process for assessing goal attainment at any level in a physical education program. This matrix is based on a hierarchical model of goals (i.e., institutional, to program, to course level) that are supported by objectives and operationally defined within the context of the program. Each goal should have one or more quantifiable standards that may be used to assess the level of goal fulfillment in pre-defined areas of performance. When complete, the matrix will provide an easy overview of the relationship between the hierarchy of goals at all levels, data collection strategies and tools, and acceptable performance standards.

Establish Goals

The basis for establishing a successful assessment plan is the identification of what the program is trying to accomplish. Goal statements can then be written in a form that describes what students should know and

be able to perform as a result of successful participation. For example, do the students have the knowledge and skills that prepare them for an activity or foster further endeavors? Once these goals have been formulated, a systematic assessment process should be developed and conducted at appropriate intervals to monitor their fulfillment. A rigorous assessment should also be part of the internal process of maintaining program quality and would help ensure that advances in methodology, curriculum, technology, and philosophy are reflected in the program.

Demonstrate Accomplishment

Program viability can be demonstrated with both direct and indirect evidence. Indirect methods such as student surveys, position papers, and presentations based on expert testimony may be used to substantiate program effectiveness. However, indirect evidence alone cannot be the basis for establishing success. Valid and measurable goals are needed to accurately assess the degree of goal fulfillment for a program. A solid assessment program relies on direct evidence that yields quantitative measurements taken from embedded indicators within a program. The identification of measurable standards will provide data to support the effectiveness of a program and its elements. A quantitative and systematic approach to assessment offers strong evidence in support of a program, and can be further strengthened by qualitative evidence.

Steps to Success

There are six key steps to constructing a model of assessment for physical education programs: 1) Establish a hierarchical alignment of well defined goals by determining

at the course level what goals support the mission of the program and the institution; 2) Identify measurable, embedded indicators that will support goal attainment; 3) Determine valid and practical data collection strategies; 4) Establish acceptable performance standards; 5) Develop met/not met criteria for goal fulfillment; and 6) Determine an implementation plan and timetable.

1. Establish, align, and define goals

Viable goals provide and sustain motivation, give direction to individual and group efforts, and provide a standard for measuring progress or accomplishment. Physical education program goals should reflect the institutional vision statement, available resources, student demographics, and professionally accepted standards. Carefully constructed program goals reflect unique aspects of a program and elements common to similar programs. The process of aligning goals from the top down (i.e., institution, to program, to course) contributes to a focused, effective learning experience and facilitates a systematic and comprehensive assessment process. Properly defining terms within the context of the program is an essential step and helps identify and clarify important constructs and facilitate how they are measured (Vogt, 1993).

2. Identify measurable, embedded indicators

A goal stated in terms of measurability will provide valid and meaningful data. For example, a goal might state: *"Demonstrate skills and knowledge of recreational and competitive activities to promote lifetime participation."* A final grade in an activity course does not give the detail needed to support this statement. However, embedded indicators serving as examples of

Table 1. Measuring the goal

An example of a hierarchy of supportive goals

Institutional goal:

Graduates will be prepared for the intellectual, ethical, and physical demands of professional service.

Physical education program goal:

Students will demonstrate a personal and professional commitment to participation in sports and physical activity.

Physical education course goal (assessment level):

Students will demonstrate skills and knowledge of recreational and competitive activities to promote lifetime participation.

Examples of embedded assessment Activities demonstrating “skills & knowledge of recreational and competitive activities”	Examples of standards of judgment	RESULTS-DIRECT INDICATOR 80% standard of judgment: Indicates % of students	RESULTS-DIRECT INDICATOR Indicates % who agree on course-end commitment item ¹
Aerobics course: Graded teaching assignment	A student must score 80% or above to be successful	86.5% of all students have met the criteria	76 % (n=46)
Ice skating: Compulsory routine containing basic figures	A student must score 72 out of 110 points to be successful	88% have met the criteria	73 % (n=39)
Basketball: Naismith basketball obstacle course	A student must score 80% or above to be successful; students given multiple opportunities to achieve their best score	91% have met the criteria	86 % (n=83)
General fitness course for promotion of a lifetime of fitness: One mile run	A student must score at the 50th percentile of the National Physical Fitness Award Standards to be successful; students given multiple opportunities for their best score	82% have met the criteria	85 % (n=102)

¹ *I am more committed to participate in sports and physical activity throughout my career because of my experiences in this course.*

measurable learning experiences might be events such as a graded teaching assignment, a compulsory routine in an ice skating or gymnastics class, a practical skills test in a sport such as basketball, or a fitness test as a component of a health-related fitness assessment. Statements of goal fulfillment must be supported by specific evidence and not just assumed by a final grade.

The assessment process should support the use of multiple sources of evidence to assess goal accomplishment. To the degree possible, goal attainment should be quantitative and easily measured. However, acceptable evidence of goal attainment should include both direct and indirect indicators. Examples might be: 1) specific skill results and examination

questions; 2) items from self-report and interest surveys related to specific goals; and 3) observations of student behavior (King, Morris and Fitz-Gibbon, 1987). A combination of techniques may produce a more complete and accurate picture of the program in question. Multiple sources of evidence provide different measurement perspectives and help confirm the validity of a goal.

3. Determine valid and practical data collection strategies

Data collection is an important step in the assessment process. How data is gathered, reported and stored should be examined globally, so that information can be retrieved and sorted in an organized manner. Survey items should be goals-based, so that an item

directly reflects a goal to be measured. Similarly, embedded indicators such as skills and fitness tests should directly support and measure goal attainment. Program directors may use the data to provide evidence of accomplishments, areas of concern, or to ensure that changes in the curriculum, methodology, and technology are addressed. Data collection strategies that are neither meaningful nor useful should be discarded.

4. Establish performance standards

Once a matrix of goals and data sources has been established, the fourth step is to establish acceptable performance standards. The standard for each source should be definitive, quantitative in nature, and lend itself to a decision statement concerning fulfillment. For example, what percentage of students

would be expected to meet the standard in order for a successful outcome to be determined? An example of a performance standard for a fitness test might be that a certain percent of students, or perhaps the class average, should meet or exceed the average on a nationally recognized and standardized fitness test measuring a particular health-related indicator of fitness.

5. Standards of judgment: Decision criteria

Once individual performance standards have been determined, the next step in the model is to construct a method, formula, or standard of judgment to determine goal fulfillment. Problems that need to be addressed are the relative weight or importance of each data source, how to integrate multiple sources of evidence for a decision, and the feasibility of meeting all of the standards concurrently to claim fulfillment. Establishing criteria for goal fulfillment at the beginning of the assessment process forms the basis for a solid blueprint that allows for an honest look at one's program. There is no right or wrong formula for a decision to be made in a particular direction. An educated opinion as to performance expectations forms the basis for an initial decision; these

expectations can be adjusted over time.

6. Implementation plan and timetable

The final stage is to construct a timetable with detailed, step-by-step instructions to guide all aspects of the assessment process. The timetable could be based on an academic or calendar year, as long as discrete blocks of goals-based indicators are examined throughout the cycle. Institutionalization of the assessment process into an annual cycle will be more productive if the process is integrated into the normal teaching and learning routine, rather than viewed as a separate activity scheduled at the end of the year.

Summary

A successful assessment project requires setting some initial groundwork. It also requires a working knowledge of the assessment process and the cooperation at all levels within the program. Examining goals and goal alignment would be the logical starting point for establishing this model. Once this step has been accomplished, the remaining phases can be developed concurrently. A visual matrix examining one goal

(shown in Table 1) provides a relatively simple overview, reduces the complexity of the assessment process into smaller more manageable tasks, and makes it easier to track progress.

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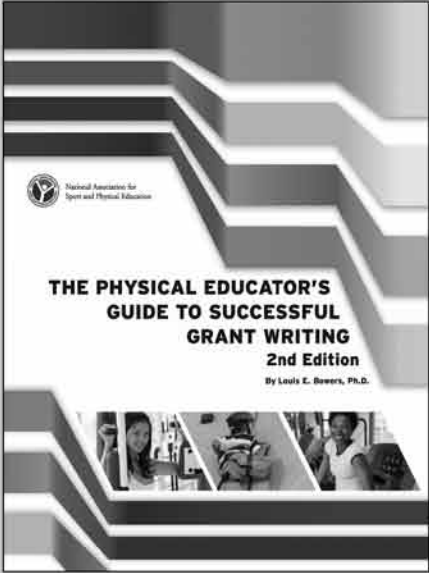
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Susan M. Tandy is a professor in the Department of Physical Education at The United States Military Academy, West Point, NY, while Kellie Green Hall is a professor in the Department of Kinesiology at California Polytechnic State University in San Luis Obispo, CA.

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