

“Performance, or Learning...That is the Question”

Assessment in Physical Education

If the “ultimate purpose” of physical education is to facilitate lifetime physical activity, how can physical educators best assess student learning?

Traditional assessment in physical education has measured student learning through skill tests, written tests, and fitness evaluations

VS

Motor learning experts argue that traditional assessments are potentially limited to performance effects

Motor learning experts suggest that student learning of motor skills is best assessed through post-acquisition measures

VS

Physical educators believe that incorporating post-acquisition assessments into their already hectic schedule is simply not feasible

Could alternative assessment be an effective common ground?

Traditional Assessment in Physical Education

Traditional Assessment Defined

- Specific tests that usually assess only one learning domain at a time.
- Traditional assessments in physical education include written tests with selected-response questions (cognitive domain assessment), skills tests (psychomotor domain assessment), and fitness tests.

Advantages of Traditional Assessment

- More objective than performance based assessments
- Relatively easy to create, administer, and evaluate

Disadvantages of Traditional Assessment

- Tests can be artificial in nature and do not challenge students to problem solve and use higher-level thinking skills.
- Place students in a contrived setting for evaluation
- Who cares if a student can hit a target while standing? Will this motivate him/her to participate outside of class?
- Is hitting 5 tennis balls thrown at you from 5 yards away an effective way to assess the forehand or backhand shot?

Barriers to assessment?

- Number of classes / cycle
- Class time
- Class sizes
- Lack of knowledge about alternative assessments
- Not required by administrators

Alternative Assessment

Any type of assessment that differs from a traditional test

- Examples: portfolios, event tasks, journals, authentic skill assessment

Authentic Assessment: emphasizes a test taking place in a “real world setting”

- “Gamelike” as possible
- Requires cognitive engagement (e.g., rules, strategy, positioning)
- Asks students to apply skills in dynamic setting

Authentic Assessment = Transfer Test

- Requires students to apply knowledge and skills
- Assessment can occur following a period of no practice
- Assessment occurs in different context
- Enables assessment of multiple learning domains (e.g., psychomotor, cognitive, affective, and health-related physical fitness)

Examples

- Assess students’ throwing and catching skills in a 3 vs 3 game
- Assess students’ knowledge of personal and general space while they perform a dance routine
- Assess students’ knowledge of fitness concepts through the creation of fitness portfolios

Future Directions

- Develop in-service training on the value and necessity of authentic assessments and on how it should be incorporated into physical education programs.
- Follow recommendations from NASPE regarding assessment of student learning.
- Development of scoring rubrics to assist the authentic assessment of motor skills.

Traditional Assessment in Motor Learning

Foundations

- Infer learning from performance measures
- Immediate performance may not represent learning (e.g., Contextual Interference).
- Test performance in a controlled environment, in order to eliminate other variables

Scientific Method

- Identify the motor learning problem to be studied
- Define an appropriate dependent variable (DV) that can be reliably observed
- Develop experimental design where DV occurs under conditions of independent variable (IV)
- Observe, record, and analyze changes in DV
- Make inferences about motor learning as function of IV manipulation

Post-Acquisition Measures

- Retention Tests:** study persistence of acquired performance over time
- Transfer Tests:** study adaptability of performance
 - Change the task (e.g., opposite side of body)
 - Change the environment (e.g., different location on the court)

Limitations

- Low external validity
- Theory-based with no immediate solutions to practical problems in practical settings

References

Joyner, B., & Elliott, S. Alternative and Authentic Assessment. In Baumgartner, T. A., Jackson, A. S., Mahar, M. T., & Rowe, D. A.(Eds), *Measurement for Evaluation in physical education and exercise science*. New York, NY: McGraw Hill, Inc.
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