

Authentic Assessment to Enhance Student Learning in Primary School Physical Education 運用真實性評價提高小學生的體育學習

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Abstract

There has been an effort to introduce the notion of authentic assessment to physical education teachers as part of the current reform movement within physical education. However, the marginalized status of physical education has not helped the move towards authentic assessment modes that authenticate both students' learning and achievement. Traditional assessment practices, when used in Singapore primary schools, are limited predominantly to measuring students' attributes such as physical fitness and sport and movement competency, and much less their cognitive and affective abilities. The problems of traditional assessment modes across different learning domains are discussed in this paper. A variety of authentic assessment options available to physical education teachers are also highlighted, together with some concerns and challenges with the implementation of these strategies effectively.

摘要

向體育教師介紹真實性評價的理念已成為體育學科目前正在進行的改革運動中的一項內容。然而，體育課的副課性阻礙了體育課向真實性評價模式的靠攏。新加坡小學一貫採用的傳統評估模式大多局限於測量學生的身體機能，例如體能和運動能力，而很少測量學生的認知和情感能力。本文對傳統評估模式在不同學習領域中存在的問題進行了討論。在著重介紹各種適用於體育教學的真實性評價方法的同時，本文也提出了有效實施這些方法可能面臨的問題和挑戰。

Introduction

Assessment has always been an integral part of the school curriculum in Singapore. Throughout the education system, students have been inundated with numerous formal and informal

written reports and examinations, verbal presentations, practical assessments and physical fitness tests. With the move to an ability-driven education system, project work and participation in community service have been included as the latest modes of assessment.

Unlike the academic content areas where assessment is a norm, recent assessment initiatives did not necessarily include physical education. For the most part, physical education has been viewed as a 'non-core,' 'non-examinable' and 'academically-soft' subject, and as such, has been accorded a marginalized and endangered status in a school curriculum. This situation is typical for physical education in other parts of the world. Historically, the field has not been successful at reform efforts and change to improve school programmes in physical education (Rink & Mitchell, 2003). For this reason, among others, there is a lack of accountability in school physical education and for assessment practices that authenticate students' learning.

For many teachers, assessment is regarded as unimportant to the overall purpose of physical education. Physical education is perceived as providing students with enjoyable activities to keep them busy, active and out of trouble. If assessment is required for students, physical education teachers are usually given full autonomy in determining the criteria (e.g., effort and participation) used in formulating grades and learning expectations, rather than against established standards (Wood, 1996).

However, recently this lack of accountability is beginning to change for physical education. The standards, assessment and accountability movement in physical education has been very active and involved in establishing clear content expectations and competencies in outcomes-based physical education programmes and authentic forms of student assessment (NASPE, 1995; Rink & Mitchell, 2003). In Singapore, the Ministry of Education in 1999 published the revised physical education syllabus for all grade levels (CPDD, 1999) identifying expected learning outcomes and recommending schools adopt alternative assessments in physical education for the first time ('Assessment and Grading in PE,' 2000). This has encouraged teachers, individual schools and clusters to develop their own assessment tools and grading systems (Tahir, 2002).

Within the ability-driven education framework, every content area and schooling endeavour should provide opportunities for educational advancement to all students according to their aptitude and abilities. As physical education professionals acknowledge the essential role of assessment in effective teaching and learning in physical education, and strive to account to parents their children's learning and achievement, developing and using reliable assessment materials takes on an important priority. This paper, therefore, examines some of the issues of assessment in primary school physical education and provides

recommendations for alternative assessment modes. Specifically, this paper discusses several areas currently deemed problematic in the practice of assessment and use of assessment techniques in primary school physical education. This paper also seeks to provide brief descriptions of some authentic assessment modes for primary school physical education teachers, and to offer practical suggestions for their implementation. Finally, the importance of appropriate assessment for motivating student learning and performance will also be highlighted.

Issues in Assessment in Physical Education

As assessment is an integral component of the current wave of educational, standards-based reform, it is important to first understand some of the problems of the traditionally recommended assessment practices in primary school physical education content. This is to provide a better understanding of the plethora of authentic assessment procedures proposed later in this paper.

Assessment is defined as 'the process of gathering evidence about a student's level of achievement in a specified subject area and of making inferences based on that evidence for a variety of purposes' (NASPE, 1995, p. vii). In Singapore, the content of primary school physical education consists primarily of movement education (in fundamental skills, track and field, dance and educational gymnastics), traditional and modified games and physical fitness and conditioning activities. The standards¹ in physical education, as expressed in the physical education syllabus (CPDD, 1999) include the following:

- Perform a variety of physical activities with understanding.
- Develop and maintain physical fitness.
- Demonstrate positive self-esteem.
- Exhibit a physically active lifestyle.
- Demonstrate responsible social habits and safety skills.
- Demonstrate understanding of fair play and good sportsmanship.
- Apply critical thinking skills.

Historically, therefore, physical education has included standards from the various complex psychomotor, physical, cognitive, social and affective standards of physical education. Even though there appears to be a comprehensive set of standards, assessment however, has always been limited to measuring attributes such as physical fitness and sport and fundamental movement competency. The cognitive, social and affective characteristics of student learning are seldom assessed. In reality, assessment of standards and learning outcomes from all domains has proven to be particularly problematic for physical education teachers. The next section of the paper will address

some concerns for the assessment and assessment techniques used in the different domains (i.e., psychomotor, physical, cognitive, and affective) within physical education for years.

Assessing Psychomotor-Skill Learning

Fundamental motor skills (e.g., running, skipping, throwing, kicking, etc.) are considered the most critical component in the primary school physical education curriculum. Besides providing the opportunities for children in their early years to learn and be competent in a set of physical skills for purposeful and enjoyable daily activities, basic movement patterns also provide the necessarily wide base for more advanced sport skills to be developed. Since one cannot assume that children will simply acquire and master these skills, assessment is critical to ensure that children progress through the developmental process effectively (Colvin, Markos, & Walker, 2000).

The traditional testing format for the assessment of skills is the standardized skill tests (with the use of either simple checklists or rating scales). The skill tests assess discrete skills in isolation or contrived settings that do not link learning or predict performance to actual environmental conditions or game situations. For example, testing a child on the overhand throw would require more than simply having the child stand and throw at a target. The child could demonstrate the throwing pattern in a variety of real-world situations, such as in throwing games using different size balls across these games. However, most skill tests are not contextualized and seldom provide important and relevant information to the teacher about the teaching strategies needed to help students improve.

Another problem with assessment of fundamental motor skills in primary school physical education is that it is usually not performed regularly and systematically. Rather, day-to-day assessment of motor skills progress with quick, visual assessments achieved without any reliable skill test, or is used normally as summative testing at the end of a movement or games unit (Hensley, 1990).

Assessing Physical Fitness

Two problems exist for the use of fitness tests with norm-reference standards in the assessment of children and youth physical fitness. First, is the primary emphasis on assessment of physical fitness components, rather than on students demonstrating the knowledge and desirable attitudes towards participating in healthy and physically active lifestyles. Assessment of individual components without considering understanding of a comprehensive fitness programme is inadequate in helping

student acquire and understand fitness concepts and principles involved with the achievement of fitness (Wood, 1996). Therefore, assessment must also include the process of working together with the teacher to set goals, design, and implement a programme of exercise and activities to address areas of weakness.

Second, there exists variance in growth and experience among children and young adolescents in the primary schools. Differences in size and muscular strength are two major concerns. Generally, most physical fitness testing protocol neglects this great variability and diversity among these students. Since traditional fitness testing does not consider individual differences among children, some students have difficulty keeping pace with fitness activities designed to help improve physical fitness. For these children, their motivation to practice and improve diminishes despite the need to try and achieve mastery of expected test scores.

Assessing Cognitive Skills

Knowledge in the cognitive domain in physical education is of significant importance to the successful performance of different skills. The cognitive knowledge bases in physical education include movement concepts and principles, fitness principles, games and sports rules and strategies, and standards governing ethical and moral behaviours. Therefore, one of the goals of physical education is to provide individuals with the knowledge, understanding and motivation so that they can utilize skills and work habits appropriately. Students, within and outside of the classroom, must be able to use their knowledge in real life to allow them to make movement choices in a wide range of capacities and environments. Therefore, it is essential that teachers be able to assess those cognitive knowledge bases (Worrell, Evans-Fletcher, & Kovar, 2002).

Presently, mastery of knowledge is assessed predominantly through the use of written tests. The variety of written test formats includes multiple-choice, fill-in-the-blank, short-answer, true/false and essay. Such tests can provide a link between cognition and performance. However, most tests that are used seldom assess students beyond the memorization of a set of facts. Often, physical education teachers explain *why* things are done in a particular skill or activity, but only require the students to demonstrate their knowledge of *what* to do in written tests. For instance, knowing and identifying specific rules and strategies (as determined from a multiple-choice test) does not mean that a student will be able to make appropriate applications of these rules and strategies in particular game situations. Therefore, assessment of cognitive skills needs to involve students' higher levels of thinking and their

ability to apply information in different settings (Ayers, 2001; Lund, 1997).

Assessing Affective Characteristics

Controversy over assessment in the affective domain has plagued physical education for years. Generally, the affective domain includes elements of participation, effort, attitude, personal and social responsibility, sportsmanship, fair play, cooperation, compassion, positive interaction with other students, respect for differences and teamwork. The major problem with measuring such characteristics has to do with the lack of valid, reliable and objective assessment tools. Furthermore, measurement of the affective skill or attribute is also equally complex as the development of the assessment tools, and at best, these behaviours can only be assessed through proxy measures. Therefore, physical education professionals tend to de-emphasize the assessing of these characteristics, even though the affective domain is considered more important in physical education than in most subject areas (Worrell, et al., 2002).

In situations where affective assessments are carried out, they are primarily focused on the measurement of either participation and/or effort. A concern with assessing participation and effort is the use of this behavioural assessment for grading purposes. For instance, active participation does not mean that the performance outcomes of students are up to acceptable expectations. Students might be active and busy just to avoid the irk of teachers, without much thought put into the learning process. Similarly, the effort expended by students may not necessarily equate to their final performances. On many occasions, the 'extra' effort put in by a less-skilled student may not translate into more success as compared to a highly skilled student who needs to only display a minimum of effort to achieve the same level of success (Worrell, et al., 2002).

Alternatives Modes and Challenges of Authentic Assessment

Traditionally, standardized tests have been used for assessing sport skills, physical fitness, knowledge and psychosocial characteristics. Traditional assessments are regarded as not good representations of content area problems and challenges or the students' actual and useable knowledge and skills. Riding the current wave of educational reform, educators have realized the limitations of traditional and/or artificial assessment modes and championed for more authentic assessment of student performance, i.e., assessment that has contextual significance. Authentic assessment tasks are designed to provide a genuine

and meaningful connection between students' learning experiences and solving real world problems (Lund, 1997). Lund (1997) and Wiggins (1989) identified several common characteristics of authentic assessment:

1. Authentic assessment truly represents worthwhile challenges and performance in real-life and meaningful contexts.
2. Authentic assessment necessitates the use of 'higher-order' thinking that goes beyond mere knowledge acquisition.
3. Authentic assessment is judged on criteria that compare performance with well-defined performance standards (called rubrics) articulated in advance of the assessment.
4. Authentic assessment assists students with self-evaluation of their work and provides opportunity to practice for improvement and mastery.
5. Authentic assessment is integrated with the curriculum and exists as part of the continual instructional process, where the teacher assumes the role of a tutor to help students reach established standards.
6. Authentic assessment allows students to present and share their works publicly and verbally with others.

There are a variety of authentic assessment options available to physical education teachers. Written (learning logs, essays, portfolios, report cards), oral (choral or individual response, peer teaching, interviews, discussions and debates), and outcome-based (skill tests, demonstrations, exhibitions, event tasks, and role-playing) assessment strategies are appropriate for physical education. It is not the purpose of this paper to discuss all authentic assessment strategies that are currently available, however, the authentic assessment tasks compatible for the different learning domains, emphasizing integrated learning conducted in real-to-life contexts, and some concerns and suggestions for their implementation are presented next. These alternative assessments include (a) event tasks, (b) portfolios, (c) written tests and essays, (d) role-playing, and (e) oral discourse or interviews.

Event Task

An event task is basically a performance or exhibition for students to complete within a reasonable time period (e.g., 35 to 50 minutes). However, students may need to prepare in advance for this performance and assessment. The task performance requirements are expressed in broad terms and expectations so that there are multiple solutions or numerous possible appropriate responses. Tasks should allow students to utilize and apply knowledge, skills and understanding to replicate real world experiences and solve problems (Lund, 1997). For assessing students' understanding of movement concepts and principles, and application of their movement

abilities, the following scenario can be presented to the students from grades 1 to 3.

“Disney-On-Ice is in town and students are invited to design a movement sequence of different locomotor skills and to go for an audition to demonstrate the sequence to a selection panel.”

Similarly, for students in grades 4 through 6, the following event task could be used:

“The International Olympic Committee (IOC) is interested in starting an Olympic Games for Children” and they are looking for ideas of new games. Working with a partner, students are to design a game of striking using an implement and running for 2 opposing teams of 3 players each to play. The game must include the underhand throwing skill, batting using an implement, catching and quick running. The submission to the IOC includes (a) a description of how the game is to be played, (b) equipment and rules for the game, (c) strategies to be employed, and (d) critical elements of the different skills used under different playing conditions and without different types of equipment.

Unlike traditional assessment where simple checklists or rating scales are used for skill tests, authentic assessments like event tasks and portfolios require the extensive use of rubrics. Rubrics are detailed (and carefully worded) guidelines for scoring criteria or standards, against which students’ performances and progress are evaluated. It defines quality criteria and/or standards by which performance will be developed and assessed, that contains essential qualities necessary for acceptable performance. The levels of performance are expressed along a continuum (or a numerical scale) for the specific performance task(s) and portfolio requirements (Block, Lieberman, & Connor-Kuntz, 1998).

What is important to note in authentic assessment is that the rubric is written and shared with all students before instructions and when the event task is given. Since students have the criteria before the start of the assignment, standards are clearly established for them to judge their own performance and progress during instruction and practice (Block, et al., 1998). It is beyond the scope of this paper to discuss the different components of a rubric, or how teachers can develop good rubrics for use with different assessment forms.

Portfolios

Portfolios are evidences of students’ performance-based works completed over the designated period that demonstrate ability, development, progress and level of achievement (Feuer & Fulton, 1993). Portfolios can range from an extensive collection of materials, or just a selection of an individual’s best works. To be useful, portfolios should cover the full extent of the student’s learning experiences, therefore emphasizing the learning process, rather than just the final outcome. The types of data to be included in portfolios are quite extensive, and are limited by students’ time, ability and creativity. Depending on the stated goal, age of student, the time allotted for portfolio development, and the different types of works presented, teachers can assess the quality of portfolios concisely (NASPE, 1995). For example, a portfolio is an excellent tool for documenting students’ knowledge and understanding of fitness concepts and the application of those concepts in the development of physical fitness and maintenance of a healthy lifestyle. Examples of a health and fitness portfolio component for grade 6 students could contain the following projects or assignments:

- Summary of types of different activities related to fitness components.
- Exercise programme to achieve specific fitness goals.
- Regular fitness component test scores.
- Workout or training logs for different exercises and activities.
- Pre- and posttestings to document fitness improvements.
- Journal entries or diary to document experiences after each training episode.
- Graphs of improvement for the different fitness components.
- Record chart of resting heart rate over time.
- Record of recreational events and/or competitions involved.
- Summary essay or report of the whole fitness development experience.

For a more extensive discussion and review of implementing the portfolio process in physical education, please refer to Kirk’s (1997) article.

Written Test and Essays

Carefully designed written tests can be used to examine the different levels of thinking (i.e., knowledge, comprehension, application, analysis, synthesis and evaluation) identified by Bloom, Engelhart, Furst, Hill, & Krathwohl (1956). Multiple-choice tests, if appropriately constructed to assess the level of understanding that student possess, can provide information about students’ higher level of thinking and application of knowledge.

Ayers (2001) suggests the use of 'interpretive scenarios' in the development of multiple-choice tests to better frame the questions, and avoid any confusion for students. Interpretive scenarios use a combination of texts, diagrams, charts, and questions to elicit student responses. Depending on students' cognitive levels, different combinations can be used. For example, a teacher develops a pictorial display of children engaged in throwing objects of different shapes and sizes for distance. Students are asked to identify the most appropriate movement patterns and the critical elements that contribute to successful performance of the action. Such test items place more emphasis on students understanding, and their ability to interpret and evaluate the information and data provided. There are presently several resources (Ayers, 2001; Baumgartner & Jackson, 1995; Safrit & Wood, 1995) that are useful in providing guidelines and rules to help teachers develop meaningful test questions.

Essays are useful for students to demonstrate their ability to identify appropriate information and/or data in context, and to organize and present the information coherently and meaningfully. Good essays require students to demonstrate components of Bloom et al.'s (1956) taxonomy of cognitive thinking skills. For example, in a written essay, students are asked to describe the difference in striking a fly ball and a ground ball. In both actions, students should describe (a) the critical elements that are similar, (b) the critical elements that are different, and (c) what information is gathered from the environment to inform the performer as to the type of ball to hit.

In another example of an essay, students are asked to write a newspaper article (or critique) on an issue relating to the import of foreign talents for the promotion and development of sport in Singapore. In their essay, students should demonstrate awareness and implications of the shortage of good sportpersons in Singapore, identify the criteria for the selection of foreign sport talents, and provide a balanced perspective on this issue from the government and a Singapore sportsperson.

Role-Playing

In role-playing, students are provided with a real-world scenario and/or actual situation (either written or verbal) and to simulate the characters they portray or the situation that has been described. During role-playing, students will get the opportunity to use their understanding and reasoning in problem solving and dealing with the reality of experiences as it unfolds. This is important and crucial, as students have

to deal with issues containing ethical and moral dilemmas. Depending on the grade level, students could either write down the dialogues that will take place during role playing or simply verbalized them. The teacher needs to help set the stage so that students know exactly what is expected (NASPE, 1995).

For example, students are asked to act out a situation where a conflict has occurred during physical activity. In such an instance, students need to display (a) inappropriate action(s) leading to the conflict, (b) negative outcomes of the conflict, and (c) alternatives of socially acceptable behaviours and strategies for resolving the conflict.

Oral Discourse or Interviews

Oral discourse or interviews as an authentic assessment strategy give students the opportunity to draw information from different sources into a coherent whole, and arrive at some conclusions from the earlier synthesis to make informed decisions. During this one-to-one discussion, questions can be planned and sequenced to obtain specific information. This information include the students' knowledge and understanding of facts, concepts, strategies, and insights into their personal feelings, perceptions of strengths and weaknesses, as well as beliefs and opinions about moral and ethical issues (NASPE, 1995).

In assessing student comprehension, for example, students might discuss the advantages of a zone versus a person-to-person defense during an oral discourse. Or, following a game of basketball, students are asked to illustrate or verbalize examples of teamwork and positive social interactions that occurred during the activity. In this scenario, students can be assessed on their ability to (a) identify correctly behaviours that involve sharing and cooperation, (b) offer suggestions to make the team more cooperative, and (c) demonstrate awareness of personal responsibility towards teamwork and positive social behaviours.

Concerns Connected with Authentic Assessment

Although physical education teachers realise the need to assess and document students' learning using authentic assessment, it is not without some concerns or challenges. Implementing authentic assessment effectively requires overcoming real and practical considerations, of which the lack of time is the most severe.

The major concern regarding the use of authentic assessment, regardless of type, is that it is very labour intensive. It requires a substantial amount of time for students to complete assessment tasks and for the teacher to finish evaluations. Furthermore, when students are seen 30 to 35 minutes twice a week, physical educators face extreme time pressures to teach content while using authentic assessment. On a positive note, authentic assessment allows for less disruptions than traditional assessment, as all students (including those being assessed or not) are engaged in 'normal' activities.

Another concern for physical educators is the expertise and writing competency required for the (a) development of rubrics for assessing event tasks and portfolios, (b) construction of test items and questions for multiple-choice and essays, and (c) setting of realistic scenarios and situations for role-playing. Furthermore, teachers are also expected to be competent to manage and critically analyse student work, of which, many teachers are untrained, uncomfortable, and do not have the time.

For instance, if the physical educator does not have access to ready-made rubrics for immediate use, they have to be constructed. For the uninitiated, rubrics are difficult to write and construct, especially when teachers do not have the experience to gauge levels of student performance. Most primary school teachers are untrained in physical education and they definitely do not have the understanding of the stages of motor development for them to accurately design the proper movement proficiency rubrics.

Along a similar argument, the construction of meaningful test questions that reflect appropriate content and elicit appropriate level of cognition requires both knowledge and practice. Furthermore, written tests must also be developed for the reading and comprehension level of diverse students. For some students who are in the lower grades or might have reading difficulty, the task of setting and using a comprehensive sample of required test questions could be a challenge for both teachers and students.

With the use of portfolios, the breadth and scope of student's curricular experiences assessed will be quite extensive. Therefore, managing the amount of assignments and tasks submitted for each student will be an enormous and challenging task for the teacher. Allowing a portfolio to be unlimited in magnitude to accurately reflect student's work will create managerial problems. Therefore, from a practical perspective, there is a need to limit the number of submissions that match identified outcome objectives.

Despite the difficulties involved in the creation and use of authentic assessment in physical education, it does have distinct advantages. For the teachers, authentic assessment helps them meet the demands of accountability placed on the physical education programmes and increases the teachers' options for student evaluation. At the same time, it provides direct evidence of student achievement that traditional methods of assessment are unable to do. For the students, they seem to enjoy the challenges that authentic assessments place on them, and they are motivated and willing to expend more effort completing them (Lund, 1997).

Motivating Students Through Assessment

A key concept in authentic assessment is the link between assessment, instruction, accountability and student learning. Where traditional assessment focuses on evaluation and grading, authentic assessment's main focus is on the processes and quality of work. Students are more actively involved in the learning process, therefore, helping them develop a sense of responsibility and ownership in their work (Haywood, 1997). This important aspect of authentic assessment has great potential to influence student motivation.

By providing authentic tasks that place students in meaningful context and relevant testing experience, students will be able to see and appreciate the link between what they are learning, the instructions and feedback provided by the teacher, and the assessment format. Such a relationship challenges and motivates students to be accountable for their efforts and practices. Authentic assessment permits students to monitor their own improvement in relation to the amount of volition and persistence, rather than to any norm-referenced standards. Feedback should therefore be provided against previous performances, and teachers can help students self-monitor their progress on a regular basis, thus motivating the students (Papaioannou & Goudas, 1999).

The use of authentic assessment helps teachers develop in students various self-regulation skills so that they can become independent thinkers and active, life-long learners. Individuals who are self-regulated in their learning tend to be intrinsically motivated, more accountable for their learning, and possess the necessary discipline and commitment to achieve set expectations. Different authentic assessment activities provide students diverse opportunities to test themselves, evaluate performances, determine improvement strategies, and achieve personal, mastery goals. By emphasizing self-referenced assessment goals, teachers can further enhance optimism and

confidence amongst students. For example, portfolios allow students to determine their choice of assessment assignments for inclusion, taking into consideration their willingness to work and their skill abilities. This provision of choices and the conscious decisions by students will enhance their sense of control, interest, responsibility and perseverance. The goal is to emphasize that improvement and success are a result of informed choices, hard work and realistic goals (Martin, Kulinna, & Cothran, 2002).

Conclusion

Student assessment must be an integral part of the teaching/learning process for any subject, including physical education. However, many teachers believe that systematic student assessment practices are simply not essential and critical and argue that physical education is meant to be fun and enjoyable. As long as students are generally compliant and demonstrate high activity in their classes, there is really no obligation to set explicit learning outcomes and benchmarks and assess what they should know and be able to do (Tan & Tan, 2001). Assessment will only disrupt from the busy, relaxing atmosphere that teachers want to maintain in their classes.

If this is the thinking of many physical education teachers, it is therefore a necessity for them to re-examine the meaning of assessment in their teaching if teachers are sincere in making outcomes-based learning a genuine part of their school's physical education programme. Physical education professionals may need to develop a new understanding of assessment and its practical benefits for both students and teachers (Doolittle, 1996). To change the teaching of physical education in schools, current authentic assessment practices of physical education must be adopted.

The purpose of this paper is to provide an argument against traditional assessment practices and modes and to highlight the potential use and benefits of authentic assessment in physical education. Current education reform movements, with their emphasis on authentic assessment can provide opportunities for teachers to engage students more deeply in the learning process. More importantly, authentic assessment allows for assessment of a combination of cognitive, psychomotor, and affective behaviours in what students know and what they can do in real-life contexts.

With the standards, assessment and accountability movement in physical education gaining momentum worldwide, the physical education scene in Singapore will inevitably be impacted. Despite

the challenges and practical considerations in implementing authentic assessment, it is important that physical educator teachers be aware of authentic assessments, and implementing them in their teaching.

Footnotes

- ¹ To be consistent with the NASPE (1995) document, the original aims of physical education as expressed in the CPDD's revised physical education syllabus (1999) has been adapted as standards without changing the essence of the stated aims. The revised syllabus also included sample expected learning outcomes akin to the NASPE document's performance benchmarks, but only for selected standards and representative grade levels.

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