International Online Journal of Educational Sciences, 2013, 5 (2), 274-281

iojes
www.iojes.net

International Online Journal of Educational Sciences

ISSN: 1309-2707

Assessment Practices among Secondary Physical Education Teachers in Ghana

Seidu Sofo[1], Reginald T. Ocansey[2], Michael J. Nabie[3] and Eugene F. Asola[4]

[1] Southeast Missouri State University, USA; [2] ALWAG Education & Research Center, Nungua, Ghana; [3] University of Education, Winneba, Ghana; [4] Georgia Gwinnett College, USA

ARTICLE INFO

Article History:
Received 07.02.2012
Received in revised form 15.07.2013
Accepted 18.06.2012
Available online 05.08.2013

ABSTRACT

Assessment is lacking in many physical education classes. Rather, many teachers base evaluations on student behavior and participation. The primary purpose of the study was to describe Ghanaian secondary physical education teachers' assessment practices. Participants included a purposive sample of 63 secondary physical education teachers (43 males and 20 females). An open-ended questionnaire served as the main data source. Data were analyzed using qualitative content analysis (Patton, 2002), comprising of both inductive and deductive analyses. The inductive analysis indicated that teachers used the following assessments in their practical lessons: teacher observation, skill test, knowledge test, demonstration, peer observation, and oral report. Similarly, they reported utilizing three types of assessment practices in their theory lessons: knowledge test, individual project, and essay. The deductive analysis indicated that the highest percentage of assessment practice utilized by the teachers in practical lessons was teacher observation (70.11%), while that with the lowest percentage was oral report (1.15%). Teachers also reported knowledge test (81.43%) and individual report (7.14%) as the highest and lowest percentage of assessment practices used in their theory lessons respectively. Most of the teachers in this study used assessment for documenting learning, rather than for accountability purposes. In-service professional development programs for physical education teachers should stress the use of wide range of assessment practices.

© 2013 IOJES. All rights reserved

Keywords:
Assessment practices, physical education, Ghana

Introduction

Assessment is lacking in many physical education classes (Lund, 1993). Rather, many teachers base evaluations on student behavior and participation (Matanin & Tannehill, 1994). However, as Doolittle (1996) noted, teachers need to collect factual data on daily basis, rather than relying on subjective information about students' progress. Hay (2006)defines assessment as "the collection of information, contextualized by the use of that information" (p. 312). Thus, for assessment to be meaningful, it has to be conducted in real-life or authentic situations (Hensley, 1997). Historically, however, traditional modes of assessment in physical education have included sport skill tests, knowledge tests, and physical fitness testing.

Assessment has had two main purposes: assessment for accountability and assessment for learning (Stiggins, 2002; Wiggins, 1998). Stiggins (2002) argues that when teachers use assessment for learning, they provide information for students to advance, rather than merely checking on student learning. Research has shown that assessment helps students to focus on learning and better understand teacher expectations (James, 2001). Assessment can also help teachers improve the teaching-learning process by aligning assessment with the national content standards for physical education (Lambert, 1999). High-stake standardized testing in schools is guided by the concept of assessment for accountability. Blackmore (1988) noted that assessment is often used as a political instrument of control. Assessment aligned with the

[1] Corresponding author's address: Southeast Missouri State University, Department of HHPR, Cape Girardeau, MO 63701, USA.
Telephone: 573-651-2843
Fax: 573-651-5150
e-mail: ssofo@semo.edu

© 2013 International Online Journal of Educational Sciences (IOJES) is a publication of Educational Researches and Publications Association (ERPA)

standards measure the degree students can demonstrate, in context, their understanding and performance relative to identified standards of learning (Lambert, 1999). It may help teachers to more clearly see the connections of how assessment fits with curriculum and the instructional process (James, Griffin, & France, 2005).

Increasingly, teacher educators recommend the use of authentic measures for assessing students (Goodman, Arbona, & De Rameriz, 2008). Wiggins (1990) defines authentic assessment as one which requires the students to use knowledge of skills to produce a product or complete a performance.

The over reliance on traditional assessment forms tend to ignore the unique nature of children in physical education classes (Kritt, 1993). Also, authentic assessment provides the most meaningful way of assessing games in physical education (Dyson, Griffin, & Hastie, 2004). Moreover, research shows that physical education teachers perceive authentic assessment to have a positive impact on students' self-concept, motivation, and skill achievement (Mintah, 2003).

Despite the need for teachers to increasingly use authentic assessment, Lund (1993) and Veal (1988) reported that many physical education teachers do not assess due to problems such as: large class sizes, lack of time, and lack of preparation. Even though, some teachers set instructional goals, they do not assess them (Matanin & Tannehill, 1994; Mintah, 2003; Veal, 1992). Furthermore, some teachers often assess students solely on the basis of student behavior and participation (Matanin & Tannehill, 1994).

Limited research shows that the most commonly used authentic assessments include teacher observation, self-observation checklists, demonstration, peer observation, and event tasks. Alternatively, the least commonly used techniques were the essay and the portfolio techniques (Mintah, 2003).

Many former colonial countries have embarked on reforms to make schooling relevant to their cultural contexts, but their modes of assessment remain unchanged (Sutton, 2000). Research, for example, has shown that classroom discourse in sub-Saharan African schools emphasizes recitation and rote memorization without encouraging pupil understanding (Hardman, Abd-Kadir, & Smith, 2008; Kanu, 1996; Pontefract **&** Hardman, 2005). Instructional approaches that focus on rote learning are limited in their ability to assess higher levels of knowledge among students. The problem is exacerbated in physical education—a marginalized subject. For example, Akyeampong, Pryor, and Ampiah (2006) reported that a group of Ghanaian classroom teachers indicated that the use of written work to assess physical education was "inappropriate and therefore they relied on observation." (p. 168). Finally, most of the recommended assessment practices in the physical education syllabi for Ghanaian senior secondary and basic schools are traditional modes of assessment (Ministry of Education, 1990, 2001a, 2001b).

There is little information on the types of assessment practices utilized in Ghanaian physical education classes. Therefore, the primary purpose of the current study was to utilize a qualitative approach to describe Ghanaian secondary physical education teachers' assessment practices. The secondary purpose was to examine the teachers' perceptions about the impact of their assessment practices on student learning. An understanding of the nature of their assessment practices would help to make assessment of student learning in Ghanaian physical education classes more meaningful. Knowledge of teachers' perceptions of the influence of their assessment practices would also help school administrators and policy makers to frame effective supervisory and assessment policies; since teachers' beliefs influence what and how they teach (O'Sullivan, 2003; Pajares, 1992). The following research questions guided the study:

1. What assessment practices do Ghanaian secondary physical education teachers use during practical lessons?
2. What assessment practices do Ghanaian secondary physical education teachers use during theory lessons?
3. What are Ghanaian secondary physical education teachers' perceptions about the impact of their assessment practices on teaching and learning?

Method

Participants and Context

Participants included a purposive sample of 63 secondary physical education teachers (43 males and 20 females) from six of the 10 regions of Ghana: Ashanti, Central, Greater Accra, Northern, Upper East, and Upper West. Fifty-eight of them held bachelor's degrees, while two and three others held a master's degree and teacher's diploma respectively. The participants' teaching experiences ranged from four to 24 years. In addition, they had one to 16 years of experience teaching physical education.

Data Collection

An open-ended questionnaire served as the main data source. Unlike close-ended items, the open-ended questions provided participants the opportunity to freely express their perspectives. The questionnaire asked participants: (a) if they assessed students in their practical and theory physical education lessons (b) to list assessment practices used in their practical and theory physical education lessons, and (c) state reasons for their choices of assessment practices in their practical and theory physical education lessons.

The authors received Institutional Review Board (IRB) approval from the first author's institution prior to data collection. Each participant agreed to take part in the study by signing a consent form in line with the requirements of the university's IRB regulations.

Data were analyzed using qualitative content analysis (Mayring, 2000; Patton, 2002). This technique was deemed appropriate for analyzing the data both qualitatively and quantitatively; qualitative content analysis does not need to exclude deductive reasoning (Patton, 2002). The analysis was done in two phases: the inductive category development followed by a deductive category application. The inductive analysis was suitable for coding the open-ended questions. Furthermore, the deductive analysis allowed the authors to examine the prevalence of use of teachers' assessment practices, by coding the categories derived from the inductive analysis.

Inductive category development. The open-ended questionnaires were analyzed inductively by using an emergent coding technique. The technique allowed the authors to make sense of participants' qualitative responses, in an effort to identify themes and patterns (Patton, 2002). First, each of the authors independently read and re-read all the completed questionnaires to come up with tentative categories. Second, each author shared the tentative categories with the other authors. Next all the authors compared notes and reconciled the differences that showed up on the initial categories. One Physical Education Teacher Education (PETE) colleague did the peer debriefing for this study. At each stage of the analysis, the authors sent the tentative categories to the colleague for comments and to suggest any changes if necessary. The colleague sent back comments without any suggestions for changes in the categories.

Deductive category application. First, the authors provided explicit definitions for each of the categories that emerged under the *Inductive Category Development*. Second, the first and third authors independently coded 11 randomly selected completed questionnaires using frequency counts. The quantitative data allowed the authors to compare teachers' use of the different types of assessment practices. On attaining an inter-rater reliability of 88.60% and 93.67% for the practical and theory lessons respectively, the first author coded all 63 completed questionnaires, using frequency counts and percentages (see Tables 1, 2, and 3).

Findings

Qualitative Data

The primary purpose of the present study was to describe Ghanaian secondary physical education teachers' assessment practices. All names used in this paper are pseudonyms. The third research question examined the teachers' perceptions about the impact of their assessment practices on teaching and learning.

Physical education practical lessons. The inductive analysis indicates that participants identified the following assessment practices for their physical education practical lessons: skills test, knowledge test, teacher observation, demonstration, peer observation, and oral report. Teachers' perceptions about the impact of their assessment practices on teaching and learning in physical education practical lessons were grouped into three categories: large class sizes, assessing multiple learning domains, and effectiveness of teaching methods.

Large class sizes. Participants identified large class size as one reason for the use of teacher observation. John, for example, stated that "I use observation [teacher] because of large class sizes." As Alice explained, "Teacher observation allows me to assess many students in one class period." Others prefer to use game play to assess students' physical abilities due to large class sizes. Kobina explained that "it takes too long to assess a large class using skills tests. I use game play more [than skills tests] because I can see many students at a time." Thus, large class size seemed to be an issue for this group of physical education teachers.

Assessing multiple learning domains. Participants used a variety of assessment techniques during practical lessons in an attempt to assess multiple educational objectives, not just the psychomotor. The teachers also indicated that assessing all domains would help in identifying student strengths and weaknesses. For example, Gado assessed students' physical performance "To encourage students to practice the skills and knowledge acquired from the lesson taught." Many of the teachers in this study believed in the importance of assessing the cognitive and affective or social objectives in a practical lesson. As Akua, explained, "Tests offer me the opportunity to assess students' understanding of the lesson taught both in theory and in practice." Another teacher used practical physical education lessons to help students improve upon their cognitive capabilities, "Where they think and solve a problem, for example in a game" (Adam).

Even though many of the teachers made comments about "assessing all learning domains," only one of them made a comment about assessing affective objectives. This teacher stated that "Competition is used to determine the confidence level of students."

Effectiveness of teaching methods. Teachers in this study used assessment to evaluate their own teaching. Kpodo used student assessment, "To assess the teaching methods used, so that the best method can be adopted in the teaching of the subject." Also, Nii explained that he made adjustments to his teaching based on student assessment results: "It will enable me know areas where the students are proficient and where they need more practice, so that I can make adjustments [in teaching]" (Mensah).

Physical education theory lessons. The inductive analysis also shows that participants identified these assessment practices for their physical education theory lessons: knowledge test, individual project, and essay. Teachers' perceptions about the impact of their assessment practices on teaching and learning in physical education theory lessons were grouped into three categories: comprehension, critical thinking, and continuous assessment.

Comprehension. Data showed that most of the teachers in the present study assessed student knowledge at least at the comprehension level. They worked toward assessing the level of student understanding of concepts taught in physical education theory lessons. Commenting on her assessment techniques, Adisa indicated that "Essays are used to allow students to express their views on issues in physical education." Arhin also used subjective tests to find out if "students have understood the lesson." Some of the teachers explicitly stated the importance of context in their assessment practices. Mary, for example, explained that, "Quizzes are used to determine if and to what degree a student can demonstrate, in context his/her understanding and ability relative to the topics taught." Some of the teachers utilized assessment as a political tool—to address the marginalization of the subject in the school curriculum. Lamptey, for example, assessed students in theory lessons "To make students know that PE is not all about playing games or sports."

Critical thinking skills. Some of the teachers in the current study focused on assessing higher thinking skills among their students. Dakura, for example, indicated that, "The subjective [tests] are to enable students apply and analyze what they learned practically and theoretically." Comfort also commented that her knowledge tests were "To help develop their [students] cognitive domain through critical thinking." Yet still, subjective tests were to "give students the opportunity to think (Batong).

Continuous assessment. Only two of the teachers specifically stated that they used assessments in their theory lessons for grading purposes. Julie indicated that she utilized assessment practices in her theory lessons "For continuous assessment." Musa added that the purposes of the assessment practices in his theory classes were "To assess and grade students at the end of the term."

Quantitative Data

Use of assessment practices. Table 1 presents data on secondary teachers' use of assessment practices in physical education practical and theory lessons. The data indicate that 100.00% of the teachers utilized assessment practices in both their practical and theory lessons.

Table 1. The use of assessment practices in physical education practical and theory lessons (n = 63)

Lesson	Yes		No	
	f	%	f	%
Practical Lessons	63	100.00	0	.00
Theory Lessons	63	100.00	0	.00

Physical education practical lessons. Data on the secondary teachers' assessment practices in physical education practical lessons are presented in Table 2. The data indicated that the highest percentage of assessment practice utilized by the teachers was teacher observation (70.11%), followed by demonstrations (11.49%). Alternatively, the lowest percentage of assessment practice utilized by the teachers was oral report (1.15%) followed by peer observation (3.45%).

Table 2. The use of assessment practices in physical education practical lessons (n = 63)

Assessment	f	%
Skills Test	8	9.20
Knowledge Test	4	4.60
Teacher Observation	61	70.11
Demonstration	10	11.49
Peer Observation	3	3.45
Oral Report	1	1.15
Total	87	100.00

Theory physical education lessons. The secondary physical education teachers in the present study utilized three assessment practices in their physical education theory lessons. Data in Table 3 indicate that the highest percentage of assessment practice utilized by the teachers was knowledge test (81.43%). The lowest percentage of assessment practice utilized by the teachers was individual project (7.14%) followed by essay (6.9%).

Table 3. The use of assessment practices in physical education theory lessons (n = 63)

Assessment	f	%
Knowledge Test	57	81.43
Individual Project	5	7.14
Essay	8	11.43
Total	70	100.00

Discussion and Conclusions

Findings from this study provided initial insight into the assessment practices of physical education teachers in Ghana. Data showed that all the teachers used some form of assessment in both their physical education practical and theory lessons. The teachers utilized a variety of assessments, including alternative and authentic assessment. Dyson, et al. (2004) reported that authentic assessment is the most meaningful way of assessing game play. Also, this finding is consistent with Mintah's (2003) assertion that authentic assessment is becoming common among physical education teachers in the United States. He further noted that the teachers in his study believed authentic assessment had a positive effect on students' self-concept and skill achievement. However, this finding is inconsistent with Lund's (1993) finding that assessment was lacking in physical education classes in the United States. Similarly, it differs from the assertion that many teachers base evaluations on student behavior and participation (Matanin & Tannehill, 1994).

Another important finding of this study is that most of the teachers used assessment for documenting learning, rather than for accountability purposes. The inductive analysis suggested the teachers used assessment to track student progress, diagnose student weaknesses, and to assess their own teaching methods. According to Stiggins (2002), assessment for learning provides information for students to progress. This is consistent with Doolittle's (1996) call for teachers to collect factual data on daily basis rather than relying on subjective information. Only two of the teachers' comments related to using assessment for continuous assessment, an accountability system in Ghanaian schools. This finding may be reflective of the fact that physical education is not an externally examinable subject in Ghanaian secondary schools. Without high-stake testing mandates, teachers would less likely feel the pressure of preparing students for tests for accountability purposes.

Not surprisingly, over 84% of the teachers' comments indicated the use of teacher observation. One reason for the overreliance on teacher observation is that physical education practical lessons involve overt behaviors (Lund, 1997) that require active participation. In such situations, teachers rely on observation to assess students' performances (Mintah, 2003). Another reason might be that participants in the present study believed that only the teacher had the knowledge necessary for learning to take place (Cothran & Kulina, 2008). This reflects the notion that classroom interactions in sub-Saharan Africa are predominantly teacher-oriented **(**Hardman, Abd-Kadir, & Smith, 2008).

Teachers in the current study reported utilizing assessment practices that fostered critical thinking. As Black et al. (2004) noted, assessment as a form of feedback is to challenge students to be critical about the quality of any arguments. A related issue was the teachers' efforts at assessing different levels of student knowledge. Schwager and Labate (1993) asserted that encouraging critical thinking in students can result in improved skills and fitness and greater knowledge. According to McBride and Cleland (1998), indirect modes of instruction and assessment foster higher order thinking skills among students. This finding contradicts Ghanaian classroom teachers' views that written work is an inappropriate form of assessment in physical education Akyeampong et al. (2006).

Assessment is an integral part of the instructional process. Therefore, assessment practices should clearly align with instructional goals (James et al., 2005). Physical education teachers in the present study mentioned the development of critical thinking skills among their students as an important curricular goal. However, the quantitative data showed that the teachers rarely used assessments that provided students the opportunity for peer or self-assessment. Peer assessments have the power to foster higher thinking skills. Moreover, students would more likely accept criticisms of their work from one another than they would from a teacher (Black et al. (2004).

Data from this study have implications for in-service professional development and teacher preparation. First, it is important that physical education teachers use a wide range of assessment practices. Unique student characteristics warrant the use of multiple assessment tools. Students' learning styles, for example, influence how they perform on a particular assessment technique. Also, multiple instructional goals require the use of multiple assessments. Second, assessment should be integrated throughout the instructional process. Thus, the type of assessment used should match or be consistent with the objectives of the lesson in which it is being utilized. While teacher observation, for example, focuses on assessing the psychomotor domain, peer assessment emphasizes the assessment of the cognitive and affective domains.

A major limitation of this study is that, the small sample size was not representative of the Ghanaian secondary physical education population. Also, the questionnaire was limited in its ability to probe for in-depth information and to generate follow up questions. Future research would do well to utilize a large randomly selected sample. The use of the interview technique for in-depth information teachers' assessment practices is also warranted.

References

Akyeampong, K., Pryor, J. & Ampiah J. G. (2006): A vision of successful teaching: Ghanaian teachers' understanding of learning, teaching and assessment. *Comparative education, 42*(2), 155-176.

Black, P., Harrison, C., Lee, C., Marshall, B., & William, D. (2004). Working inside the black box: Assessment for learning in the classroom. *Phi Delta Kappan,* 86(1), 9-21.

Blackmore, J. (1988). *Assessment and accountability.* Geelong: Deakin University Press.

Cothran, D. J. & Kulinna, P. H. (2008). Teachers' knowledge about and use of teaching models. *The Physical Educator, 65*(3), 122-133.

Doolittle, S. (1996). Practical assessment for physical education teachers. *The Journal of Physical Education, Recreation & Dance, 67*, 35-37.

Dyson, B., Griffin, L. L., and Peter Hastie, P. (2004). Sport education, tactical games, and cooperative learning: Theoretical and pedagogical considerations. *Quest, 56,* 226-240.

Goodman, G, Arbona, C., & De Rameriz, R. D. (2008). Authentic assessment and academic achievement. *Journal of Teacher Education, 59*(1), 24-39.

Hay, P. J. (2006). Assessment for learning in physical education. In D. Kirk, D. Macdonald & M. O'Sullivan (Eds.), *The handbook of physical education* (pp. 312-326).

Hardman, F., Abd-Kadir, J., & Smith, F. (2008). Pedagogical renewal: Improving the quality of classroom interaction in Nigerian primary schools. *International Journal of Educational Development, 28(1),* 55-69.

Hensley, L. (1997). Alternative assessment for physical education. *Journal of Physical Education, Recreation, and Dance, 68*(7), 19–24.

James, A. (2001, March). Analysis of high school student physical education accountability systems and the relationship of assessment as an accountability system. *Research Quarterly for Exercise and Sport, 72* (Supplement), 67.

James, A. R., Griffin, L. L., & France, T. (2005). Perceptions of assessment in elementary physical education: A case study. *Physical Educator, 62*(2), 85-95.

Kanu, Y. (1996) Educating teachers for the improvement of the quality of basic education in developing countries. *International Journal of Educational Development,* 16(2), 173–184.

Kritt, D. (1993). Authentic, reflection, and self-evaluation in alternative assessment. *Middle School Journal, 25*(2), 43–45.

Lambert, L. T. (1999). Standards-based assessment of student learning: A comprehensive approach. In D. Tannehill, (Ed.). Assessment series. Reston: National Association for Sport and Physical Education.

Lund, J. L. (1993). The role of accountability and assessment in physical education: A pedagogical view. In J.E. Rink (Ed.), *Critical crossroads: Middle and secondary school physical education* (pp. 102-112). Reston: National Association for Sport and Physical Education.

Lund, J. (1997). Authentic assessment: Its development and applications. Journal of Physical Education, Recreation, and Dance, 68(7), 25–28.

Mayring, P. (2000). Qualitative content analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 1*(2), Art. 20. Retrieved on July 13, 2010 from http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204.

Matanin, M., & Tannehill, D. (1994). Assessment and grading practices in physical education. *Journal of Teaching in Physical Education, 13,* 395-405.

McBride, R. E., & Cleland, F. (1998). Critical thinking in physical education. *Journal of Physical Education, Recreation, and Dance, 69*(7), 42-52.

Ministry of Education (1990). Physical education syllabus for senior secondary schools. Accra: Curriculum Research and Development Division.

Ministry of Education (2001a). Junior secondary school physical education. Accra: Curriculum Research and Development Division.

Ministry of Education (2001b). Teaching syllabus for physical education: Primary

Mintah, J. K. (2003). Authentic assessment in physical education: prevalence of use and perceived impact on students' self-concept, motivation, and skill achievement. *Measurement in Physical Education And Exercise Science, 7*(3), 161–174.

O'Sulivan, M. (2003). Learning to teach physical education. In S. Silverman and C. Ennis (2nd Ed.), *Student learning in physical education: Applying research to enhance instruction* (pp. 275-294). Champaign, IL: Human Kinetics.

Patton, M. Q. (2002). *Qualitative research and evaluation methods.* Thousand Oaks, CA: Sage.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62,* 207-332.

Pontefract, C. & Hardman, F. (2005) The discourse of classroom interaction in Kenyan primary schools, *Comparative Education, 41*(1), 87–106.

Schwager, S., & Labate, C. (1993). Teaching for critical thinking in physical education. *Journal of Physical Education, Recreation and Dance, 64*(5), 24-26.

Stiggins, R. J. (2002). Assessment crisis: The absence of assessment for learning. *Phi Delta Kappan, 83*(10), 758-765.

Sutton, R. (2000) Cultural issues in mass student testing, Management in Education, 14(1), 27.

Veal, M. L. (1988). Pupil assessment issues: A teacher educator's perspective. *Quest, 40,* 141-151.

Veal, M. L. (1992). The role of assessment in secondary physical education- A pedagogical view. *Journal of Physical Education, Recreation, and Dance, 64,* (4), 88-92.

Wiggins, G. (1998). *Educative assessment: Designing assessments to inform and improve student performance.* San Francisco, CA: Jossey-Bass.

Wiggins, G. (1990). The case for authentic assessment. ERIC Digest. (ERIC Document Reproduction Service No. ED 328 611).