ASSESSMENT TECHNIQUES OF K-12 PHYSICAL EDUCATORS IN THE STATE OF INDIANA

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ABSTRACT

RESEARCH TITLE: Assessment Techniques of K-12 Physical Educators in the State of Indiana

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The National Association for Sport and Physical Education (NASPE) suggests teachers to assess student learning in physical education settings based on the national content standards (Lund & Kirk, 2002). Current studies (Lund, 2000; Lund & Kirk; Welk & Wood, 2000; Wilson & Roof, 1999) report the need and basis for authentic assessment, and how it can be utilized in the physical education classroom. These forms of assessments are performance based and include teacher observation, self-assessment and peer observation when used in conjunction with performance checklists; as well as, rubrics, self-reporting instruments, portfolios and student journals. Authentic assessment requires meaningful and realistic tasks that are similar to the performance in the field. Traditional assessments are used to evaluate a student’s performance in a more objective format. Typically they are implemented in forms of skill, written and fitness tests.

The purpose of this study was to determine (a) what forms of assessment K-12 physical educators in the state of Indiana used to assess student learning, (b) what forms
of assessment physical educators used to assess the psychomotor, cognitive and affective learning domains and (c) what forms of assessment physical educators used to assess NASPE’s physical education standards (2004).

The researcher created a 21 question survey based on the different forms of authentic and traditional assessment. Demographic questions were included to categorize the teachers into different subgroups. The total number of participants receiving the instrument was 647. The final response rate was 34% (n=222). Frequency analysis was used to describe (a) the participants based on demographic factors which were: highest level of education, years of full-time teaching experience, division of school employment and average class size, and (b) what forms of assessment K-12 physical educators in the state of Indiana used to assess student learning, the psychomotor, cognitive and affective learning domains and the six NASPE (2004) physical education standards.

Results showed that traditional assessments, specifically teacher observations, were primarily the foundation for physical educators. Authentic assessment was minimally utilized in the overall teacher population. However, it was most common in elementary physical education teachers’ and veteran teachers’ classrooms.
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CHAPTER ONE

Introduction

Educational reform is currently changing American education. Our nation, once at the top in the world in what our schools and colleges have accomplished and contributed, is now being faced with a level of mediocrity that is permeating our educational process (National Commission on Excellence, 1983). “American education has undergone unprecedented reform in an effort to ensure that graduates will be prepared to take their place in society, compete in a global economy, and live healthy, productive, satisfying lives” (NASPE, 2004, p.1). In March, 1994, the Goals 2000 Educate America Act established a National Council to determine the criteria for content standards for each discipline, resulting in the establishment of education standards in each discipline as federal law, thus, “standards became the cornerstone of the education reform movement” (NASPE, 2004, p.1).

In response to the federal movement, the National Association for Sport and Physical Education (NASPE) developed the first set of national standards for physical education in 1995. In 2004, NASPE revised the national standards for physical education and published them in a second edition (Graber, Locke, Lambdin, & Solmon, 2008). NASPE (2004) lists the national standards as follows:
• Standard 1 states that a physically educated person: “Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities,” (p.15).

• Standard 2 states that a physically educated person: “Demonstrates understanding of movement concepts, principles, strategies and tactics as they apply to the learning and performance of physical activities” (p.21).

• Standard 3 states that a physically educated person: “Participates regularly in physical activity” (p.27).

• Standard 4 states that a physically educated person: “Achieves and maintains a health-enhancing level of physical fitness” (p.33).

• Standard 5 states that a physically educated person: “Exhibits responsible personal and social behavior that respects self and others in physical activity settings” (p.39).

• Standard 6 states that a physically educated person: “Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction” (p.45).

Individual states have developed their own physical education standards which are based on NASPE’s National Standards. The State of Indiana published updated physical education standards in 2008, that are identical to the National Physical Education standards published by NASPE in 2004 (Indiana Department of Education, 2008).

_The Inclusion of All Domains in the Physical Education Standards_

Buck, Jable, and Floyd (2004) state that physical education is “defined as a process that uses physical activity to develop and enrich one’s physical, cognitive, social
and emotional faculties for the purpose of enhancing one’s quest for total well-being” (p.13). The strength of a physical education curriculum is based on the combination of the psychomotor, cognitive, and affective learning domains. The psychomotor domain is based on skill acquisition. The primary focus is on basic motor skills, coordination, and physical movement (Hansen, 2008). The cognitive domain is knowledge based and focuses on intellectual skills by providing learning experiences that foster self-expression, problem solving, and socialization. The affective domain includes student’s habits, attitudes, and feelings towards learning experiences while cultivating self-esteem (Hansen, 2008; Buck et al., 2004).

Hansen (2008) reports that each of the NASPE National standards falls into one of the learning domains. Standards one, three, and four each qualify under the psychomotor domain because of their skill-based properties. Standard two qualifies under the cognitive domain because of its knowledge based properties. And, standards five and six qualify under the affective domain because they have qualities in attitude, motivation, and value.

The national content standards document (NASPE, 2004) describes that two types of standards exist: (a) content standards and (b) performance standards. Content standards provide guidelines to ensure students know what is expected of them, and what they are to expect from their classes (Lund & Kirk, 2002). Content standards are the actual NASPE national standards for physical education. Performance standards are indicators of “how good is good enough” based on NASPE (2004) levels of student performance expectations.
**Assessment: An Essential Component of Curriculum Alignment**

The NASPE national standards have provided physical educators with the knowledge of what their students should know and be able to do as well as achievable expectations for student performance (NASPE, 2004). But, how do physical educators know where to start in their instruction? Lund and Kirk (2002) state, “In standards-based instruction the teacher identifies a unit goal that is often based on state or national standards, then uses this goal to determine progress toward expectations for student learning” (p.6). Standards-based instruction is a form of curriculum or instructional alignment. NASPE (2004) defines instruction alignment as the, “congruence of student outcomes, learning experiences, and assessments” (p.53). Both NASPE (2004) and Lund and Kirk (2002) have pointed out that instruction must be in-line with assessment. This poses the question, why is assessment in physical education important? Physical educators have been given guidelines (national and/or state standards) of what their students should know and be able to do (Graber et al., 2008). NASPE (2004) states, “learning is most effective when learning goals match both assessment and instructional practices” (p.3). The conclusion has been made that physical educators must align their instruction (curriculum) with the assessment they use to measure student learning. NASPE (2004) states, “Assessment is the process of gathering evidence about a student’s level of achievement in a specific task and making inferences based on that evidence for a variety of purposes” (p.3). Performance-based assessment is described as a focus on objectives and outcomes where students know about the objectives for an assignment or
unit prior to an assessment. Also, the assessment is performed in a real-life setting, making it authentic (Lund & Kirk, 2002). How do physical educators assess student learning?

Statement of the Problem

Meeting the NASPE educational standards now requires teachers to assess student learning in the physical education setting (Lund & Kirk, 2002). The current studies (Lund, 2000; Lund & Kirk, 2002; Welk & Wood, 2000; Wilson & Roof, 1999) report the need and basis of authentic assessment, and how it can be utilized in the physical education classroom. On the contrary, there is limited information on what forms of assessment current physical educators use to assess student learning in their classrooms.

How have current physical educators assessed whether or not their students attain the knowledge and skills they have taught them? What activities have physical educators used during the assessment process? The purpose of this study was to determine (a) what forms of assessment K-12 physical educators in the state of Indiana used to assess student learning, (b) what forms of assessment physical educators used to assess the psychomotor, cognitive and affective learning domains and (c) what forms of assessment physical educators used to assess NASPE’s physical education standards (2004).

Significance of the Study

Previous research has not included current assessment practices by physical educators. This study revealed the practices that current physical educators use regarding
assessment of student learning in their classrooms. The results of the study will be beneficial to inform physical educators, teacher educators, administrators and legislators how assessment has been implemented in Indiana physical education programs.

Research Questions

The following questions were asked in this study:

1. What forms of assessment do K-12 physical educators use to assess student learning?

2. What forms of assessment do K-12 physical educators use to assess psychomotor, cognitive and affective domains?

3. What assessment forms do K-12 physical educators use to assess the physical education content standards as based on NASPE (2004)?

Definition of Terms

The following terms were important to this study:

Affective Domain

The affective learning domain includes student’s habits, attitudes, and feelings towards learning experiences while cultivating self-esteem (Hansen, 2008; Buck et al., 2003).

Assessment

An assessment is defined as “the process of gathering evidence about a student’s level of achievement in a specified task and making inferences based on that evidence for a variety of purposes” (NASPE, 2004, p. 3).
**Authentic Assessment**

Authentic assessment is an assessment of a demonstrated skill or knowledge in a realistic way (NASPE, 2004).

**Checklists**

Checklists are a form of a rubric presented as a list of criteria that are checked as students meet them (Lund & Tannehill, 2005).

**Cognitive Domain**

The cognitive learning domain is knowledge based and focuses on intellectual skills by providing learning experiences that foster self-expression, problem solving, and socialization (Hansen, 2008; Buck et al., 2003).

**Content Standards**

Content standards are guidelines in a discipline to ensure students know what is expected of them, and what they should expect to learn in the discipline (Lund & Kirk, 2002).

**Curriculum (Instructional) Alignment**

Curriculum (Instructional) alignment is a curricular planning technique where assessment is based on the goals of student learning and instruction (Lund & Kirk, 2002).

**Fitness Test**

Fitness tests are testing batteries which measure individuals’ levels of any or all of the five components of fitness (cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition) (Lund & Tannehill, 2005).
**Peer Observation**

Peer observation is an informal assessment of skill and knowledge performed by another student, usually with the aid of a checklist, to provide feedback to the performer (Lund & Tannehill, 2005).

**Performance Standards**

Performance standards are indicators of “how good is good enough” based on NASPE (2004) levels of students performance expectations (NASPE).

**Portfolios**

Portfolios are collections of students’ work assembled over time that shows individual progress toward educational goals (Wilson & Roof, 1999).

**Psychomotor Domain**

The psychomotor learning domain is based on skill acquisition. The primary focus is on basic motor skills, coordination and physical movement (Hansen, 2008).

**Rubrics**

Rubrics are scales that describe all levels of performance in detail for an assignment or performance task (Lund, 2000; Smith, 1997).

**Self-Assessment (Self Observation)**

Self-assessment is an informal assessment of one’s skill performance by themselves, usually with the aid of a checklist (Lund & Tannehill, 2005).

**Self-Reporting Instruments**

Self-reporting instruments are logs that students use to report their physical activity over a given time frame (Lund & Tannehill, 2005; Welk & Wood, 2000).
**Skills Tests**

Skills tests are an assessment of a student’s ability to demonstrate a skill, usually performed in a closed environment (Lund & Tannehill, 2005).

**Student Journals**

Student journals are collections of entries that may include the student’s record of participation, results, response to, feelings, perceptions, or reflections about actual happenings or results (Lund & Kirk, 2002).

**Teacher Observation**

Teacher observation is an assessment, often informal, of skill and knowledge performed by the physical educator which sometimes results in feedback to the performer (Lund & Tannehill, 2005).

**Traditional Assessment**

Traditional assessment measures student learning in an objective format; incorporating specific measuring techniques and instruction (Metzler, 2005).

**Written Tests**

Written tests are assessments that examine student comprehension and application of basic skills taught in class. They are used to assess knowledge on a large scale by tracking responses to key points for all students, and are often presented in the form of multiple choice, true/false, matching, fill in the blank, and short answer essay type questions (Lund & Tannehill, 2005).
Assumptions

The following assumptions were made for this study:

1. Physical educators measure student learning in a variety of assessment forms.
2. Current K-12 physical education teachers completed the questionnaire.
3. The physical education teachers’ responses on the questionnaire reflected their current way of assessing student learning.

Limitations

The following limitations were applicable to this study:

1. The questionnaire that was used to collect data.
2. The researcher had no control over the return rate of the questionnaires.

Delimitations

The study was delimited to:

1. Physical education teachers who teach K-12 level physical education classes in the State of Indiana.
2. The questionnaire was administered to 647 participants.
3. The questionnaire was administered via e-mail.
CHAPTER TWO

The purpose of this chapter is to review literature on assessment. Specifically, this chapter will address definitions and different forms of assessment that have been designed for use in physical education classes, such as informal and formal assessments, formative and summative assessments, traditional and standard-based assessments, authentic assessment, rubrics, observations, self-reporting instruments, student journals and portfolios.

Assessment in Physical Education

Assessment in physical education has been implemented in many forms. Metzler (2005) presented information on informal and formal assessment. Informal assessment takes place during the regular flow of a class, requiring little class time. Students are not forewarned and generally do not know that assessment is occurring. Little planning is required by physical educators for execution. Informal assessment provides physical educators with data during class enabling them to gauge what the students’ needs are to continue learning effectively. Examples of informal assessment are teacher observations and verbal interactions (Metzler, 2005; Lund & Kirk, 2002).

Metzler (2005) stated that formal assessments are more time consuming in both planning the assessment and implementing it during class. Students are made aware of
the formal assessment ahead of time allowing them time to prepare. Physical educators use this form of assessment in grading. Examples of formal assessments are fitness tests, skills tests, written quizzes and group projects (Metzler, 2005).

Formative assessments are implemented during each unit whereas summative assessments are implemented at the closing of each unit (Metzler, 2005). Lund and Tannehill (2005) and Lund and Kirk (2002) stated that physical educators use formative assessment to increase student learning. These assessments help physical educators gauge what learning has occurred and provide them with important data for planning future lessons (Lund & Kirk, 2002; Lund & Tannehill, 2005; Metzler, 2005). Teacher expectations are easily conveyed to students allowing them to assess their own progress (Lund & Tannehill, 2005). Most importantly, formative assessments provide students with multiple opportunities to show skill acquisition (Lund & Kirk, 2002). Examples of formative assessment are short weekly quizzes, partner-checked tasks for each skill component, and weekly logs of fitness activity (Metzler, 2005).

Summative assessments provide physical educators with an assessment of what learning has occurred (Metzler, 2005). This form of assessment does not allow the student a chance to receive or learn from feedback to improve their performance (Lund & Tannehill, 2005; Lund & Kirk, 2002). Summative assessments are usually graded and measure student learning on all of the learning goals in the unit (Lund & Tannehill, 2005; Metzler, 2005). Examples of summative assessment are a written final exam, skills test at the end of a unit, and fitness tests at the end of the unit (Metzler, 2005).
Forms of Assessment

Traditional assessments are the assessments that physical educators have been using for years (Lund & Tannehill, 2005). Lambert (1999) defined standards-based assessment as “the process of determining if and to what degree a student can demonstrate in context his/her understanding and ability relative to identified standards of learning” (p.6). Types of traditional assessment are informal teacher observations, skills tests, written tests and fitness tests (Lund & Tannehill, 2005; Metzler, 2005). These assessments only measure student learning in an objective form. They have been developed by experts and have strong consistency due to specific measuring techniques and instruction. On the other hand traditional assessments require a lot of one-on-one time between physical educator and student which makes them difficult to implement in a large class. Also, these assessments do not generate feedback to students, therefore not giving them information on how to improve their performance (Metzler, 2005).

Standards-based assessments require students to demonstrate learning by using predetermined criteria to see if students can meet the criteria during performance tasks. This form of assessment requires students to do more than select a correct answer (Lund & Kirk, 2002). Standards-based assessments are usually designed by the physical educator to specifically assess the unit goals. They allow students to demonstrate learning in many ways and incorporate feedback into the assessment process. The major disadvantage is that standards-based assessment is time consuming in both planning and implementation. Types of standards-based assessments are rubrics, observations with performance checklists, self-reporting instruments, student journals, and portfolios (Metzler, 2005).
Authentic Assessment

Authentic assessment has become the trend in the era of educational reform. In physical education the emphasis has shifted from increasing fitness to promoting lifelong physical activity patterns (Welk & Wood, 2000). “Authentic assessment involves measuring students’ performances in more natural, real world settings, rather than in artificial contrived settings typically found in standardized testing protocols” (Block, Lieberman, & Connor-Kuntz, 1998, p. 49). Realistic situations intend to show students that physical activity can be applied in different settings (Kitts, 2003). The characteristics of assessment and how assessment is integrated into the curriculum are reviewed.

Characteristics

Physical educators are responsible for teaching effectively. Teaching and assessment are integrated in the curriculum through authentic assessment (Wilson & Roof, 1999; Kulinna, et al., 1999). Finished assignments hold an elevated meaning for physical educators and students because they are able to work towards what they feel are the important areas of the curriculum (Block et al., 1998). Wiggins (1997) stated that “the purpose of assessment is to find out what each student is able to do, with knowledge, in context” (p. 19).

Authentic assessment is student-centered (Kitts, 2003) and in certain instances, students are asked to evaluate their own work (Kulinna et al., 1999). It is based on different methods of evaluation of student learning instead of traditional multiple choice or closed-response tests.

Block et al. (1998) listed six characteristics of authentic assessment. First, as already mentioned, the assignments have a basis in the real world. Second, students can
easily transfer skills learned in one situation to a different situation, which is a result of higher-level thinking. Third, students have a goal from the moment the task was assigned; the physical educator has given them an expectation list. Fourth, the assessment, curriculum, and instructions are integrated, not allowing changes to be made by the student and teacher. Fifth, the assignments are presented publicly. Sixth, performances during different situations and across a predetermined timeline make up the final assessment instead of a one-time or a one-situation assessment.

In addition, Kitts (2003) reported that authentic assessment incorporates different levels of student readiness in a classroom by focusing on developmentally appropriate tasks. Also the psychological make-up of a student is protected by authentic assessment because it is emotionally safe.

**Rubrics**

Lund (2000) stated that “rubrics are the criteria and standards used to evaluate student work” (p. 1). Smith (1997) defined a rubric as “a scale (continuum) that explains in detail the possible levels of performance” (p.48). Components, development, checklists, other forms and advantages of rubrics are reviewed.

**Components**

Block et al. (1998) listed three components that rubrics should possess. The first step is to establish scoring criteria – a broad expectation the teacher has for the assignment. Second, at least two different levels of achievement need to be created. These are the levels where student performance on a particular assignment could fall. Third, in each level of achievement there are clear and easily understandable descriptions of the expectation to attain that level.
Development

Lund (2000) explained the process of developing a well-designed rubric. The physical educator should decide what they think the student should be able to perform. The decisions regarding student performance should be transferred into words. Finally, from the words regarding student performance certain standards or levels of performance need to be developed. There are different types of rubrics that can be used; the teacher should decide which type of rubric to use when developing the rubric. When a first-draft of the rubric is completed colleagues and possibly students should critique the rubric and offer feedback to refine the rubric into a well-designed structure. Using this feedback the physical educator makes changes to the rubric. Then the physical educator should use the rubric in an assessment. If problems are noted or areas of improvement are found in the rubric while the physical educator is using the rubric in an assessment, the physical educator should finish assessing the assignment so all students are assessed in the same way. When the physical educator is finished assessing the entire class’ assignments the rubric should be revised taking into consideration the problems and areas of improvement found during the use of the rubric.

Checklists

Checklists are a type of rubric predominately used during observations. These criteria sheets evaluate the critical elements of motor skill, not quality (Lund & Kirk, 2002). The general format recommendation for the checklist is that it should be a single page that includes the main phases of motor skills, age specific cues and descriptions, and a place for notating errors (Pinheiro, 2000).
Pinheiro (2000) listed six reasons for checklist use. The first is to ensure that critical elements of the skill are focused on during learning. Second, students can concentrate on problem areas. Third, the checklist acts as a control guide. Fourth, it is a convenient tool for observation. Fifth, it helps teachers decipher which student(s) need more instruction and at which part of the skill they need the instruction. Sixth, it motivates students.

Other Forms

Block et al. (1998) suggested that each form of a rubric should have at least two achievement levels. These levels should define the progress from beginner to expert in a given task. Adams, Raciborski, and Ladda (1999) suggested using a 16 box rubric made up of four characteristics of movement and four dimensions of movement. There are four rows and four columns allowing each characteristic of movement and dimension of movement to have a relationship. Each box is assigned a number starting with one in the top left corner, counting from left to right for each row, ending with 16 in the bottom right corner. Each box, or category, has a list of specific parameters that the student being evaluated must meet to attain that level in the rubric.

Advantages

There are many advantages to using rubrics. Both Block et al. (1998) and Lund (2000) reported that rubrics give students the chance to self-monitor their work which enhances their own performance and progress during instruction. It can also help students to better judge their own work and that of their peers. The assignment must be defined prior to giving it to a class which makes the teacher set in stone his or her expectations of the assignment. It defines guidelines so any person can evaluate the work. Consistency is
also achieved when grading an entire class of assignments because there are clear, specific terms at the grader’s disposal. It is easy to explain to students and their parents why a student received a particular grade. Also, rubrics are designed to include a wide spectrum of learners (Lund, 2000).

**Observations**

Lund and Kirk (2002) reported that, “because so much of physical education learning involves overt skill performance, observation is one of the best assessment tools available” (p. 67). Teacher observation, peer observation, and self-assessment (self-observation) are presented.

**Teacher Observation**

Lund and Kirk (2002) reported that, “teacher observation is probably one of the most widely used assessment practices in physical education” (p. 68). Teachers use this assessment each time they provide oral feedback about a motor skill to a student. It is made authentic when the teacher writes down the criteria they want the student to develop for a motor skill. This helps the teacher by ensuring them that the students are learning and giving the teacher a basis on which to build future lessons. Both Jacobsen and Jenkins (2001) and Lund and Kirk (2002) reported that teacher observation for grading should be done several times during a unit.

**Peer Observation**

Peer observation is a way to teach higher-order thinking skills (Arem, 2006). Through assessing a partner, students learn exactly what they should and should not do during a motor skill and how to relay their observations to their peer (Lund & Kirk, 2002).
This form of observation can be used throughout a unit as a learning task or formative assessment. It is a very useful for the teacher during initial skill development because the teacher does not have enough time to observe an entire class before errors become habitual (Johnson, 2004). But, in order for the physical educator to use peer assessment during initial skill development, the students must be taught to recognize, through observation, correct and incorrect skill demonstration (Arem, 2006).

Peer observation is a great way to encourage correct practice, enhance student learning, provide real scenarios to practice for skills tests, and for teachers to see results of learning (Johnson, 2004). Also, this form of observation should never be factored into student grades (Lund & Kirk, 2002).

Self-Assessment

Self-assessment requires students to evaluate themselves while performing an activity. In order for students to accomplish self-assessment satisfactorily, physical educators must teach students how to assess or observe themselves. The skill of self-assessment helps a student to become a self-sufficient learner (Lund & Kirk, 2002).

Lund and Kirk (2002) indicated four different methods of self-assessment. The first form of self-assessment is through mirrors. As dancers or gymnasts watch themselves as they perform exercises or routines they observe their performance and can critique themselves. The second form of self-assessment is through videotape. While watching the videotape of their skill performance they can observe their skill demonstration and critique themselves. The third form of self-assessment is through product cues. The physical educator teaches the students the desired outcome of the skill and sets them up in an area that will provide feedback. An example is the pickle ball.
serve; the student starts just far enough away from the wall that when he or she uses the correct form he or she will not make contact with the wall but, if he or she used incorrect form he or she will hit the wall thus providing the student with feedback on their pickle ball serve technique. The forth form is related to kinesthetic sense. Once a student knows what the correct movement during the skill “feels” like they can kinesthetically sense when they perform the skill incorrectly. This form of observation should never be factored into student’s grades.

**Self-Reporting Instruments**

These are instruments designed especially for students to be able to report their physical activities. Welk and Wood (2000) reported “that each of these instruments [have] demonstrated adequate reliability and validity for measuring activity levels in children” (p. 33). The different forms, advantages and disadvantages of using the self-reporting instruments will be reviewed.

Welk and Wood (2000) reported two types of self-reporting instruments. One type of self-reporting instrument measures a person’s typical physical activity behavior and the other type of self-reporting instrument measures a person’s physical activity performed on the previous day. Three questionnaires have been developed to measure a person’s typical physical activity behavior and four have been developed to measure their previous day physical activity.

The Seven-Day Physical Activity Recall (PAR), the Physical Activity Questionnaire for Children (PAQ-C), and the Leisure Time Exercise Questionnaire (LETQ) are all instruments used in reporting a person’s typical physical activity behavior. These questionnaires “provide a general assessment of a child’s normal level of
physical activity” (Welk & Wood, 2000, p. 33). They are usually assigned on a set basis of around one week requiring the children to recall the amount of their activity and what type of activity they engaged in for the week prior to the report. This can be classified as a limitation because children may forget what took place and the detail that is needed to accurately assess their typical physical activity behavior (Welk & Wood, 2000).

To complete the PAR a child needs to remember all of their physical activity as well as the intensity and duration in a detailed manner. It has been noted that recent studies have shown this particular questionnaire to be reasonable among adolescents but unreasonable for elementary age students because of the demanding cognitive component (Welk & Wood, 2000).

Both the PAQ-C and the LTEQ assess a child’s typical level of physical activity. Questions are posed to find answers about the child’s choice of physical activity and at what intensity the child participated. These self-reporting instruments are not as in depth as the PAR, which is a better fit for elementary school aged children. The LTEQ has also been recommended for use by adolescents (Welk & Wood, 2000).

The Previous Day Physical Activity Recall (PDPAR), the Self-Administered Physical Activity Checklist (SAPAC), the Child/Adolescent Activity Log (CAAL), and the ACTIVITYGRAM Physical Activity Assessment are all measurements of previous day physical activity. An advantage of this type of self-reporting instrument is the easiness for a child to report on their previous day’s physical activity instead of the previous week’s physical activity. On the other hand, a disadvantage of this type of self-reporting instrument is not being able to accurately view a child’s typical activity level,
because one day of data does not provide enough for a good assessment. To overcome this disadvantage it is recommended to obtain at least three days of recall (Welk & Wood, 2000).

Each instrument has different strengths. The PDPAR focuses on the after school hours. The child must list what their physical activity levels were in half hour increments from three o’clock in the afternoon until they go to sleep at night. This self-reporting instrument also provides codes to list what physical activity the child engaged in. This helps when trying to change behaviors, as the child’s physical activity preference becomes apparent and their weakness or weaknesses are exposed as well. This information is valuable to physical educators as they work to design and implement a plan to modify the child’s weakness or weaknesses (Welk & Wood, 2000).

The SAPAC focuses on the type of physical activity performed, how long the child participated in the physical activity, and the intensity of the physical activity. The CAAL only focuses on the type of physical activity and its duration (Welk & Wood, 2000).

The ACTIVITYGRAM Physical Activity Assessment is a more recent version of the FITNESSGRAM software. A child can easily fill out his/her type of physical activity, duration, and intensity with the prompts that the computer gives. This self-reporting instrument requires minimal assistance by teachers. Also a report can easily be printed, showing the child’s physical activity level. The printed physical activity report lists information on areas of improvement and how the child can attain these improvements. This report can be sent home to a child’s parents as a progress report (Welk & Wood, 2000).
Welk and Wood (2000) reported on the advantages and disadvantages of the use of self-reporting instruments. The main advantage is the ease in assessing physical activity. Other advantages are that they can be given to a large group or number of people at the same time, such as in a physical education class. Also, they can either be detailed or general, depending on which self-reporting instrument is used, and the instructions the teacher includes with each instrument. The main disadvantage is bias in reporting. A child may desire to be considered popular by certain children within the physical education class. To attain this popularity the child may alter their answers to fit into the desired social group. Also, errors can be common in reporting. But, because of the self-reporting instruments’ subjective nature, errors may be unavoidable.

**Student Journals**

Lund and Kirk (2002) reported that, “student journals provide an excellent way for teachers to measure student knowledge and understanding of physical education concepts” (p. 79). The success of student journals is directly related to the questions the teacher requests the students to answer. Questions must probe the students’ understanding of physical education content, be phrased according to what the teacher wants to measure, be aligned with instruction, and be developmentally and ability level appropriate (James, 2005).

Both Lund and Kirk (2002) and James (2005) reported that the use of a rubric is a great way to grade student journals; making sure the student is aware of the rubric’s parameters when the journal entry is assigned. It is also noted that student journals should
not be graded based on content, but on sentence structure, spelling, and competition. If student journals are graded based on content students may write what they think teachers want to hear.

There are many advantages to student journals. James (2005) reported that student journals “provide a nonthreatening venue for students to communicate their knowledge and feelings about physical education” (p. 42). Student journals also force students to process what they have learned in class. They promote cross-curricular abilities such as writing and critical thinking skills. Students use higher-order thinking skills as they become self-evaluators of the learning process. Student journals benefit the physical educator as well; they are a great way to assess the affective domain and reveal confusion about cognitive concepts among students (Lund & Kirk, 2002; James, 2005).

Although the literature suggests that student journaling is an effective way to assess student learning, it is important to highlight that it can be time consuming for both planning and grading. To overcome this, Lund and Kirk (2002) suggested that physical educators stagger journal due dates by class to lessen the load.

**Portfolios**

Wilson and Roof (1999) defined portfolio as a “representative collection of a student’s work (knowledge, skills, and attitudes) that shows individual progress towards physical education grade level standards” (p. 10). This is an overall process that can embody all aspects of any given class.

Portfolios assess students’ work over a predetermined time period rather than over one test. They encompass different assignments given by the physical educator and handpicked by the student that represent the student’s increase in knowledge. They create
a sense of ownership by the student because it is something that they designed. Different assessment tools can make up the assignments in the portfolios. They may include fitness tests, self-reporting instruments, rubrics, and/or any other assessment tool. The focus is not only on knowledge that the student has acquired but also on his or her performance and attitude. Self-assessments, assessments by peers, teachers, and parents are included to provide extensive feedback for the student (Wilson & Roof, 1999).

**Portfolio Development**

Kulinna et al. (1999) and Wilson and Roof (1999) both identified steps in the portfolio development process. To start, the physical educator must decide the portfolio’s purpose, a record of progress, a presentation of the result of the class, a student’s best work, or whatever the physical educator wants it to be (Wilson & Roof, 1999). Once the purpose is established the assignments that will form the portfolio either need to be created or found. The assignments should be appropriate for the grade level and serve the purpose of the portfolio. Next, assessment criteria, either rubrics or another form, should be developed for each assignment included in the portfolio as well as for the overall portfolio. The assessment criteria are properly created by supplying enough levels to encompass all students in the class (Kulinna et al., 1999; Wilson & Roof, 1999). Then the physical educator needs to decide where the students will store their portfolios. If the portfolios will be stored with the physical educator the type of access students will be permitted to have to their portfolios must also be decided (Wilson & Roof, 1999). Colleagues in the content area should look at the portfolio assignments and assessment criteria to determine appropriateness and provide feedback to the physical educator of
record. From this feedback the physical educator should make the proper revisions to the portfolio assignments and assessment criteria. After the portfolio has been completed the physical educator should assess student learning (Kulinna et al., 1999).

Advantages

Wilson and Roof (1999) provided the following advantages for portfolios. They allow for a complete learning experience that involves students and physical educators’ growth regarding knowledge about content area, the learning process, themselves, and each other. The evaluation process focuses on the entire student and his or her works instead of comparing his or her works to other students’ work. The portfolio incorporates the whole student and does not predispose students to a lower grade who may not perform well in one aspect of the class.

Students become more responsible because the portfolios require them to gain control over goal setting, choosing what work they want to include, and assessing their own work (Kulinna et al., 1999; Wilson & Roof, 1999). Portfolios also allow physical educators to evaluate their program in light of their own expectations for themselves and in comparison to the national and state standards (Kulinna et al., 1999).

Disadvantages

Wilson and Roof (1999) stated that there is “no concrete evidence to demonstrate that [portfolios] actually produce the results or advantages they claim” (p. 12). They require more individualized instruction instead of whole-class instruction which may make a physical educator change their teaching style (Kitts, 2003; Wilson & Roof, 1999).
changing a physical educator’s teaching style may be something that a physical educator does not want to do or may make them ineffective when using a different teaching method instead of their normal teaching method (Wilson & Roof, 1999).

Physical education classes tend to be larger in occupancy and the physical educator may see more students per week than a regular classroom teacher. Portfolios require a considerable amount of planning and organization for classroom teachers and implementing them in a physical education class may be considerably difficult (Kitts, 2003; Wilson & Roof, 1999).

Another disadvantage associated with class size is finding a place to store each student’s portfolio (Kitts, 2003; Smith, 1997; Wilson & Roof, 1999). Smith suggested using a portfolio card. Wilson and Roof (1999) stated that a portfolio card “provides logical physical education documentation, yet also creates a manageable system of charting student growth from K-12” (p. 12).

*Portfolio card*

Smith (1997) described a portfolio card as an 11” x 8” heavy-bond card that can be altered for easy recognition for each grade level for which it is used. It is divided into five sections that meet the needs of all the staff and students across the district. One section, grade level benchmarks, lists the benchmarks according to which grade the portfolio card is being used for. Self-concepts assessment is another section that provides an area for the student to assess himself or herself on predetermined competencies and activities. Incorporated into the section is an area for the teacher to evaluate the student in the same terms, on the same competencies and activities on which the student has evaluated him or herself on. A third section is fitness norms/assessments, an area
designed to record a student’s score on different fitness components. The student’s raw scores can be compared to the national norms for his or her age and gender in this section. There is also an area designated in this section for the student to set a personal goal. The final two sections are extracurricular activities and teacher comments. They are blank sections to be completed by students and teachers respectfully.

Guidelines for Implementation

Kirk (1997) suggested four guidelines when implementing portfolios in a physical education class. The first is for the physical educator to have class flexibility. The learning and assessment process when dealing with portfolios may require extended time so a physical educator must add extra time into his or her daily schedule of activities for organization and instruction. The physical educator also needs to be aware that at times he or she will also play the role of facilitator as well as teacher. Another aspect of class flexibility is to provide the students with what they need to complete portfolio tasks (assignments) such as time, equipment, space, and opportunity. A way to accomplish portfolio tasks during physical education class time is to set up learning centers or stations. This will allow for integration between assessment tasks, daily living, and practice activities. At these stations, students can use technology, self-assessment, peer assessment, or teacher feedback to accomplish portfolio tasks.

The second guideline suggested by Kirk (1997) is to have the physical educator decide if he or she will require students to create a time table for portfolio tasks to be accomplished. The physical educator may also want to encourage students to make early decisions. The physical educator may set different deadlines to encourage students to make a plan of attack. Wilson and Roof’s (1999) plan on how teachers introduce the
portfolio to students is incorporated into this guideline. Wilson and Roof stated that the teacher should only implement the portfolio in one or two classes at first, as a pilot program.

The third guideline Kirk (1997) suggested is progress evaluations. Throughout the portfolio process the physical educator should include regular checks to assess student progress and adherence to the timeline. This also incorporates valuable physical educator feedback on the portfolio. Kirk suggested that a single class time can be devoted to physical educator follow-up, providing that a rotation is set up to circulate the students through different stations, one being physical educator follow-up.

The fourth and final guideline suggested by Kirk (1997) is evaluation criteria. The physical educator needs to provide the assessment criteria to the student when the portfolio assignment is introduced to them.

Summary

The era of educational reform has arrived and with it authentic assessment has come to prevail. Assessment increases the capacity for learning and the ability for growth of the student by looking at the overall class experience (Block et al., 1998). It also makes realistic the possibility of integrated curriculum across content as well as the integration of teaching and assessment in a classroom (Kulinna et al., 1999; Wilson & Roof, 1999).

Different forms of authentic assessment consist of rubrics, observations in conjunction with performance checklists or rubrics, self-reporting instruments, student
journals, and portfolios. The literature on authentic assessment includes types, uses, and advantages/disadvantages but there has been a lack of research comparing them against each other.

Throughout this review of literature the researcher did not discover an assessment technique that signified an overall superior form of assessment for use in K-12 physical education classrooms. It was noted that Block et al. (1999) and Lund (2000) listed many advantages that rubrics possess but disadvantages were not mentioned. Lund and Kirk (2002) reported that, “because so much of physical education learning involves overt skill performance, observation is one of the best assessment tools available” (p.67). Welk and Wood (2000) stated that self-reporting instruments have demonstrated reliability and validity. They also noted that self-reporting instructions are subjective in nature, which may create bias. James (2005) and Lund and Kirk (2002) reported that student journals force students to process what they have learned in class and promote cross-curricular abilities. But, Lund and Kirk (2002) stated that planning and grading can be very time consuming for the physical educator. Kulinna et al. (1999) and Wilson and Roof (1999) both listed many advantages to portfolios. However, Wilson and Roof (1999) indicated the need of evidence showing that the use of portfolios can result in student learning.
CHAPTER THREE

Methodology

The purpose of this study was to reveal the types of assessment and activities that are utilized by K-12 physical educators. This chapter is organized into the following sections: (1) participants, (2) IRB approval, (3) instrumentation, (4) procedures, (5) research design, and (6) statistical analysis.

Participants

Ball State University’s Physical Education Department compiled a database of public and private school physical educators within a 75-mile radius of Ball State University; this database served as the source of contact information for the researcher. The database was updated in May of 2008. All participants were physical educators in the database with valid email addresses. Initially the total pool of subjects was 763 physical educators. However, 94 of these emails were undeliverable, 21 physical educators responded saying they do not teach physical education anymore, and 1 physical educator responded saying he retired; thus making the total pool of subjects 647. The researcher contacted the participants five times. After the first contact the researcher received 97 responses. After the second contact the researcher received 48 more responses. After the third contact the researcher received 36 more responses. After the fourth contact the researcher received 20 more responses. After the fifth and final contact the researcher
received 28 more responses. The researcher received a total of 229 responses. Of those 229 responses seven were submitted with no answers. Therefore the total number of responses used to compile data was 222, making the response rate 34%.

IRB Approval

Prior to data collection, the Institutional Review Board (IRB) granted permission (Appendix A). The IRBNet ID number is 99130-2. In accordance with IRB, the procedure of this study was appropriate for exemption under federal regulation. It was the participant’s decision to participate in the study. All data collected have been and will remain anonymous.

Instrumentation

A questionnaire entitled “Physical Education Assessment Survey” was used to gather information about the different assessment techniques utilized by K-12 physical educators (see Appendix B). The questionnaire consisted of 21 questions in total. Four questions were asked to gain information about the physical educator’s degrees and professional experience. Five questions asked for information concerning the demographic make-up of the school at which the physical educator teaches. Two questions focused on the physical educator’s general assessment techniques. Four questions asked for information on the learning domains and how they are assessed in the physical educator’s classroom. Six questions focused on how the physical educator assessed NASPE’s/Indiana’s physical education standards in their classroom. The questionnaire had 19 closed-ended questions, one open-ended question, and one rank-order question.
The researcher developed this questionnaire for the purposes of this study. An attempt was made to establish content validity by having a panel of experts review the questionnaire and provide feedback. Based on the panel’s feedback, the researcher revised the questionnaire.

Procedures

The researcher constructed the cover letter, follow-up cover letter, and instrument for the purposes of this study. To establish content validity the researcher asked a panel of experts to provide feedback on the cover letter and instrument. The experts consisted of three teacher educators with more than nine years of experience as professors in PETE programs and K-12 teaching experience. The cover letter (see Appendix C) the follow-up cover letter (see Appendix D) and instrument were revised based on the feedback from the panel of experts.

The researcher emailed the cover letter to all physical educators with valid emails in Ball State University’s Physical Education Department’s database on December 8, 2008. The link to the questionnaire was embedded in the cover letter. The participants were given a deadline of December 29, 2008, three weeks after the email was distributed. On January 5, 2009 a second email was sent with the follow-up cover letter reminding the physical educators of the study and asking them to participate if they had not already participated; the link to the questionnaire was embedded in the follow-up cover letter. The participants were given a new deadline of January 19, 2009, two weeks after the second email was distributed. On January 19, 2009 a third email was sent with the follow-up cover letter reminding the physical educators of the study and asking them to
participate if they had not already participated; the link to the questionnaire was embedded in the follow-up cover letter. The participants were given a new deadline of February 2, 2009, two weeks after the third email was distributed. On February 1, 2009, a fourth email was sent with the follow-up cover letter reminding physical educators of the study and asking them to participate if they had not already participated; the link to the questionnaire was embedded in the follow-up cover letter. The participants were given a new deadline of February 16, 2009, two weeks after the fourth email was distributed. On March 2, 2009, a fifth email was sent with the follow-up cover letter reminding physical educators of the study and asking them to participate if they had not already participated; the link to the questionnaire was embedded in the follow-up cover letter. The participants were given a new deadline of March 16, 2009, two weeks after the fifth email was distributed.

Research Design

This study was a descriptive study using the survey research design with a convenience sample, investigating assessment techniques utilized by K-12 physical education teachers. The survey design was a suitable method to examine how physical education teachers assess their students and what kinds of skills and domains they assess during their lessons.

Statistical Analysis

The data was retrieved from InQsit (i.e., a Ball State University survey system), entered into Microsoft Excel and analyzed using the variables the researcher specified. Frequency analysis was used to describe the participants based on demographic factors
which were: highest level of education, years of full-time teaching experience, division of school employment and average class size. In order to investigate what forms of assessment K-12 physical educators in the state of Indiana used to assess student learning, the psychomotor, cognitive and affective learning domains and the six NASPE (2004) physical education standards, frequency analysis was also used.
CHAPTER FOUR

The purpose of this chapter is to present the findings regarding the use of assessment by physical educators in the state of Indiana. Specifically, this chapter will present the participants' demographic information and the results of the study.

Demographic Information

The participants in this study were current public and private school physical education teachers in the state of Indiana. Of the participants, 32.9% taught in elementary schools (K-5), 32% taught in middle schools (6-8) and 31.1% taught in high schools (9-12). Additionally, 4% of the participants taught physical education across school divisions.

The most common average class size was 20 to 29 students with 55.7% reporting in this subcategory. The average class size of 30 to 39 students was reported second most often with 29.4%. Average class sizes of 40 and more students and less than 20 students were far less common, 11.3% and 3.6% respectively. One participant did not respond to this question.

The respondents were asked to report how many years of full-time physical education teaching experience they had acquired. Physical educators with one to five years of full-time physical education teaching experience accounted for 16% of the total participants, physical educators with six to 14 years of full-time physical education
teaching experience accounted for 29.4%, physical educators with 15 to 20 years of full-time physical education teaching experience accounted for 13.8%, physical educators with 21 to 29 years of full-time physical education teaching experience accounted for 22% and physical educators with 30 and more years of physical education teaching experience accounted for 18.8%. Four participants did not respond to this question.

The highest level of education completed by the responding physical educators was a combined Bachelor’s and Master’s Degrees with 48.9% reporting. Forty-three percent of participants reported earning only a Bachelor’s Degree. Physical Education teachers with only a Master’s Degree (4.5%) or only a Teaching Certificate (3.6%) were far less prevalent. One participant did not respond to this question.

Results

The purpose of this study was to reveal the forms of assessment utilized by public and private school K-12 physical educators in the State of Indiana. This section will report the results of the study. If a subcategory sample was less than 20% of the total sample size (n=44 respondents), the responses were not tabulated. These subcategories were: physical educators with one to five years of full-time teaching experience, physical educators with 15 to 20 years of full-time teaching experience, physical educators with 30 and more years of physical education teaching experience, physical educators who teach across school divisions, physical educators whose average class size was less than 20 students, physical educators whose average class size was 40 and more students, physical educators who only posses a physical education Teaching Certificate and physical educators who only received a Master’s Degree in physical education.
Research Questions

1. What forms of assessment have K-12 physical educators used to assess student learning?

Of those who responded, the most common assessment form was teacher observation, the second most common assessment form was fitness testing. Skills testing and written testing tied for the third most common form of assessment used. See Table 1 for percentages of assessment usage for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (95.3%) as the most common form of assessment used; fitness testing (87.5%) was the second most common form of assessment and rubrics (67.2%) were the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment was teacher observation (95.8%); the second most common form of assessment was fitness testing (89.6%) and the third most common form of assessment was skills testing (66.7%).

Findings based on the division of school in which physical educators taught revealed elementary school physical educators using teacher observation (93.2%) most often. Fitness testing (82.2%) and self-assessment (63%) were the second and third most common forms of assessment used for this subcategory, respectively. Middle school physical educators reported teacher observation (97.2%) as the most common form of assessment, fitness testing (85.9%) as the second most common form of assessment and written testing (76.1%) as the third most common form of assessment. High school physical educators reported the most common form of assessment used was fitness
Table 1

*Percentage of Assessment Form Usage*

<table>
<thead>
<tr>
<th>Assessment Form</th>
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</tr>
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<tbody>
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<td>Checklist</td>
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<td>Portfolio</td>
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<td>Rubric</td>
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<td>Self-Reporting Instrument</td>
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<td>Skills Test</td>
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<td>Student Journal</td>
<td>17.2</td>
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<tr>
<td>Teacher Observation</td>
<td>93.2</td>
</tr>
<tr>
<td>Written Test</td>
<td>68.8</td>
</tr>
</tbody>
</table>

*Note. n=221*

testing (92.8%). The second most common form of assessment used was written testing (88.4%) and the third most common form of assessment was teacher observation (87%) for this subcategory.
Based on the average size of a physical education class, physical educators with 20 to 29 students reported teacher observation (93.5%) as the most common form of assessment used, fitness testing (83.7%) as the second most common form of assessment and skills testing (68.3%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using fitness testing (90.8%) and teacher observation (90.8%) as the most common forms of assessment. The third most common form of assessment used in this subcategory was written testing (78.5%).

Forms of assessment used based on the highest level of the teacher’s education revealed the following results: teachers with a Bachelor’s Degree reported teacher observation (92.6%) as the most common form of assessment used, fitness testing (83.2%) as the second most common form of assessment and written testing (68.4%) as the third most common form of assessment. Teachers holding both a Bachelor’s and a Master’s Degree reported using teacher observation (93.5%) as the most common form of assessment. The second and third most common forms of assessment used for this subcategory were fitness testing (91.7%) and skills testing (75.9%) respectively.

2. What forms of assessment have K-12 physical educators used to assess psychomotor, cognitive and affective domains?

Of those who participated, the most common assessment form used to assess the psychomotor learning domain was teacher observation, the second most common assessment form used was fitness testing and the third most common form of assessment used was skills testing. See Table 2 for percentages used to assess the psychomotor domain for each assessment form.
Table 2

*Percentage of Assessment Form Usage to Assess the Psychomotor Learning Domain*

<table>
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<th>Assessment Form</th>
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<td>Skills Test</td>
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</tr>
<tr>
<td>Written Test</td>
<td>12.8</td>
</tr>
</tbody>
</table>

*Note. n=221*

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (85.9%) as the most common form of assessment used to assess the psychomotor learning.
domain; fitness testing (70.3%) was the second most common form of assessment and skills testing (57.8%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess the psychomotor domain was teacher observation (89.6%); the second most common form of assessment was fitness testing (68.8%) and the third most common form of assessment was checklists (60.4%).

Results based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (87.7%) as the most common form of assessment to assess the psychomotor domain. Fitness testing (60.3%) and checklists (54.8%) were the second and third most common forms of assessment used for this subcategory, respectively. Middle school physical educators reported teacher observation (78.9%) as the most common form of assessment used, fitness testing (77.5%) as the second most common form of assessment and skills testing (49.3%) as the third most common form of assessment. High school physical educators reported the most common form of assessment was skills testing (73.9%). The second most common form of assessment used was teacher observation (72.5%) and the third most common form of assessment used was fitness testing for this subcategory.

Based on the average class size of a physical education class, physical educators with 20 to 29 students reported teacher observation (83.7%) as the most common form of assessment used to assess the psychomotor domain, fitness testing (66.7%) as the second most common form of assessment and skills testing (56.9%) as the third most common form of assessment. Physical educators with 30 to 39 students as their average class size
reported using teacher observation (78.5%) as the most common form of assessment to assess the psychomotor domain. Fitness testing (75.4%) and skills testing (52.3%) were the second and third most common forms of assessment for this subcategory.

Responses based on the highest level of completed education showed respondents with a Bachelor’s Degree used teacher observation (76.8%) as the most common form of assessment, fitness testing (70.5%) was the second most common form of assessment and skills testing (52.6%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (84.3%) as the most common form of assessment to assess the psychomotor domain. The second and third most common forms of assessment used for this subcategory were fitness testing (70.4%) and skills testing (62%) respectively.

Research question number two also focused on what forms of assessment physical educators used to assess the cognitive domain. Overall, the participants reported written testing as the most common form of assessment. The second most common form of assessment used was teacher observation and the third most common form of assessment was rubrics. See Table 3 for percentages used to assess the cognitive domain for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported written testing (67.2%) as the most common form of assessment used to assess the cognitive learning domain; teacher observation (54.7%) was the second most common form of assessment and rubrics (31.3%) were the third most common form of assessment used. Physical educators in the 21 to 29 year subcategory reported the most common form of assessment
Table 3

*Percentage of Assessment Form Usage to Assess the Cognitive Learning Domain*

<table>
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<td>Peer Observation</td>
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<td>Portfolio</td>
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<td>Rubric</td>
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<td>Skills Test</td>
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<td>Student Journal</td>
<td>12.3</td>
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<td>Teacher Observation</td>
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</tr>
<tr>
<td>Written Test</td>
<td>68.6</td>
</tr>
</tbody>
</table>

*Note. n=220*

used to assess the cognitive domain was written testing (56.3%); the second most commonly used form of assessment was teacher observation (52.1%) and the third most commonly used form of assessment was checklists (25%).
Results based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (63%) most often in assessing the cognitive domain. Written testing (41.1%) was the second most common form of assessment used for this subcategory. Checklists (27.4%) and self-assessment (27.4%) tied for the third most common forms of assessment. Middle school physical educators reported written testing (70.4%) as the most common form of assessment used, teacher observation (40.8%) as the second most common form of assessment and rubrics (31%) as the third most common form of assessment. High school physical educators reported written testing (89.9%) as the most common tool used for assessment. The second most common form was teacher observation (40.6%) and the third most common form of assessment was rubrics (17.4%) for this subcategory.

Based on the physical educator’s average class, physical educators with 20 to 29 students reported written testing (61.8%) as the most common form of assessment used to assess the cognitive domain, teacher observation (56.9%) as the second most common form of assessment and rubrics (22%) as the third most common form of assessment. Physical educators with 30 to 39 students as their average class size reported using written testing (73.8%) as the most common form of assessment to assess the cognitive domain. Teacher observation (27.7%) and rubrics (23.1%) were the second and third most common forms of assessment used to assess the cognitive domain for this subcategory.

Information based on the highest level of education a teacher possessed showed respondents with a Bachelor’s Degree used written testing (67.4%) most often to assess the cognitive domain, teacher observation (44.2%) was the second most common form
and rubrics (27.4%) were the third most common form of assessment used. Participants who acquired both Bachelor’s and Master’s Degrees reported using written testing (67.6%) most often to assess the cognitive domain. The second and third most common forms of assessment used for this subcategory were teacher observation (53.7%) and checklists (22.2%) respectively.

The types of assessment utilized by physical educators to assess the affective domain were also a focus of research question number two. Of those who participated, teacher observation was the most common form of assessment. The second most commonly used type of assessment was self-assessment while the third most commonly used form of assessment was peer observation. See Table 4 for percentages used to assess the affective domain for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (89.1%) as the most common form of assessment used to assess the affective learning domain; peer observation (39.1%) was the second most common form of assessment and self-assessment (37.5%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess the affective domain was teacher observation (95.8%); the second most common form of assessment was self-assessment (31.3%) and the third most common form of assessment was peer observation (27.1%).

Evaluation based on the division of school in which physical educators taught showed elementary school physical educators using teacher observation (94.5%) as the most common form of assessment to assess the affective domain. Self-assessment
Table 4

*Percentage of Assessment Form Usage to Assess the Affective Learning Domain*

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checklist</td>
<td>21.5</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>8.9</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>31.3</td>
</tr>
<tr>
<td>Portfolio</td>
<td>2.8</td>
</tr>
<tr>
<td>Rubric</td>
<td>14.5</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>32.7</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>8.9</td>
</tr>
<tr>
<td>Skills Test</td>
<td>9.3</td>
</tr>
<tr>
<td>Student Journal</td>
<td>9.8</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>92.1</td>
</tr>
<tr>
<td>Written Test</td>
<td>14.0</td>
</tr>
</tbody>
</table>

*Note. n=214*

(52.1%) was the second most common form of assessment and peer observation (41.1%) was the third most common form of assessment for this subcategory. Middle school physical educators reported teacher observation (85.9%) most often, peer observation
(28.2%) as the second most common form of assessment and self-assessment (22.5%) as the third most common form of assessment. High school physical educators reported teacher observation (84.1%) most often. The next most common forms of assessment used were peer observation (21.7%) and self-assessment (21.7%) for this subcategory.

Based on the average class size, physical educators with 20 to 29 reported teacher observation (91.9%) as the most common form of assessment used to assess the affective domain, self-assessment (40.7%) as the second most common form of assessment and peer observation (35.8%) as the third most common form of assessment. Physical educators with 30 to 39 students reported teacher observation (81.5%) as the most common form of assessment to assess the affective domain. Peer observation (21.5%) and self-assessment (20%) were the second and third most common forms of assessment used to assess the affective domain for this subcategory.

Findings based on the highest level of a physical educator’s education revealed participants who possessed a Bachelor’s Degree used teacher observation (84.2%) most often to assess the affective domain along with peer observation (26.3%) and self-assessment (26.3%). Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (94.4%) most often to assess the affective domain. The second and third most common forms of assessment used for this subcategory were self-assessment (35.2%) and peer observation (31.5%) respectively.
3. What forms of assessment have K-12 physical educators used to assess the physical education content standards as based on NASPE (2004)?

For standard one, those who participated reported using teacher observation most often, skills testing second most commonly and fitness testing third most commonly. See Table 5 for percentages used to assess physical education standard one for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (86.6%) as the most common form of assessment used to assess physical education standard one; skills testing (54.2%) was the second most common form of assessment and fitness testing (47.2%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported the most common form of assessment used was teacher observation (87.5%); the second most common form of assessment was checklists (58.3%) and the third most common form of assessment was skills testing (50%).

Results based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (91.8%) most often to assess physical education standard one. Checklists (60.3%) were the second most common form of assessment and rubrics (34.2%) were the third most common form of assessment for this subcategory. Middle school physical educators reported teacher observation (84.5%) as the most common form of assessment used to assess physical education standard one, skills testing (56.3%) as the second most common form of assessment and fitness testing (52.1%) as the third most common form of assessment. High school physical educators reported the most common form of assessment was
Table 5

*Percentage of Assessment Form Usage to Assess Physical Education Standard One*

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checklist</td>
<td>44.9</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>47.2</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>13.9</td>
</tr>
<tr>
<td>Portfolio</td>
<td>2.3</td>
</tr>
<tr>
<td>Rubric</td>
<td>30.1</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>21.3</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>4.2</td>
</tr>
<tr>
<td>Skills Test</td>
<td>54.2</td>
</tr>
<tr>
<td>Student Journal</td>
<td>0.9</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>86.6</td>
</tr>
<tr>
<td>Written Test</td>
<td>5.1</td>
</tr>
</tbody>
</table>

*Note. n=216*

teacher observation (75.4%) while the second and third most common forms of assessment used were skills testing (68.1%) and fitness testing (59.4%), respectively.
Based on the average class size of a physical education class, physical educators with 20 to 29 students reported teacher observation (86.2%) as the most common form of assessment used to assess physical education standard one, skills testing (52%) as the second most common form of assessment and checklists (47.2%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using teacher observation (83.1%) as the most common form of assessment to assess physical education standard one. Fitness testing (55.4%) and skills testing (52.3%) were the second and third most common forms of assessment used to assess physical education standard one for this subcategory.

Evaluation based on the highest level of a teacher’s education showed participants who possessed only a Bachelor’s Degree reported teacher observation (81.1%) as the most common form of assessment used to assess physical education standard one, skills testing (48.4%) was the second most common form of assessment and fitness testing (42.1%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (88.9%) most often, skills testing (58.3%) and checklists (50%) as the second and third most used tools, respectively.

Physical education standard two was also a focus of the third research question. Of those who participated, the most common assessment form used to assess this standard was teacher observation. Written testing and checklists were the second and third most common forms of assessment. See Table 6 for percentages used to assess physical education standard two for each assessment form.
Table 6

*Percentage of Assessment Form Usage to Assess Physical Education Standard Two*

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>Checklist</td>
<td>31.8</td>
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<tr>
<td>Fitness Test</td>
<td>22.3</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>16.8</td>
</tr>
<tr>
<td>Portfolio</td>
<td>2.7</td>
</tr>
<tr>
<td>Rubric</td>
<td>21.4</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>28.2</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>7.7</td>
</tr>
<tr>
<td>Skills Test</td>
<td>30.5</td>
</tr>
<tr>
<td>Student Journal</td>
<td>2.7</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>86.4</td>
</tr>
<tr>
<td>Written Test</td>
<td>39.1</td>
</tr>
</tbody>
</table>

*Note.* n=217

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (85.9%) as the most common form of assessment used to assess physical education standard two;
written testing (46.9%) was the second most common form of assessment and self-assessment (32.8%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess standard two was teacher observation (89.6%); the second most common form of assessment was checklists (41.7%) and the third most common form of assessment was skills testing (27.1%).

Information based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (91.8%) most often; checklists (41.1%) and self-assessments (34.2%) were also utilized second and third most common. Middle school physical educators reported teacher observation (88.7%) as the most common form of assessment used to assess physical education standard two, checklists (42.3%) as the second most common form of assessment and self-assessment (31%) as the third most common form of assessment. High school physical educators reported that the most common form of assessment used to assess standard two was teacher observation (73.9%). The second and third most common forms of assessment used were written testing (54.9%) and skills testing (37.7%) respectively for this subcategory.

Based on the average class size physical educators with 20 to 29 students reported teacher observation (87%) as the most common form of assessment used to assess physical education standard two, written testing (34.1%) as the second most common form of assessment and checklists (31.7%) as the third most common form of assessment.
Physical educators with 30 to 39 students reported using teacher observation (87.7%) most often, written testing (43.1%) and skills testing (33.8%) second and third most commonly to assess physical education standard two.

Results based on the highest level of a teacher’s education showed the participants who possessed only a Bachelor’s Degree reported teacher observation (83.2%) as the most common form of assessment used to assess physical education standard two, written testing (40%) was the second most common form of assessment and self-assessment (26.3%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (88%) as the most common form of assessment to assess physical education standard two. The second and third most common forms of assessment used for this subcategory were written testing (40.7%) and checklists (38%) respectively.

Physical education standard three was also a focus of research question number three. The participants reported teacher observation as the most common form of assessment used to assess physical education standard three. Checklists and self-assessment were the second and third most common forms of assessment. See Table 7 for percentages used to assess physical education standard three for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (87.5%) as the most common form of assessment used to assess physical education standard three; self-assessment (32.8%) was the second most common form of assessment and fitness testing (23.4%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to
Table 7

*Percentage of Assessment Form Usage to Assess Physical Education Standard Three*

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>Checklist</td>
<td>32.3</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>23.0</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>10.1</td>
</tr>
<tr>
<td>Portfolio</td>
<td>3.2</td>
</tr>
<tr>
<td>Rubric</td>
<td>8.3</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>30.0</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>17.5</td>
</tr>
<tr>
<td>Skills Test</td>
<td>11.5</td>
</tr>
<tr>
<td>Student Journal</td>
<td>10.1</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>84.3</td>
</tr>
<tr>
<td>Written Test</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Note. n=217*

assess physical education standard three was teacher observation (85.4%); the second most common form of assessment was checklists (47.9%) and the third most common form of assessment was self-assessment (35.4%).
Results based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (75.3%) most often to assess standard three. Self-assessment (41.1%) was the second most common form of assessment and checklists (32.9%) were the third most common form of assessment for this subcategory. Middle school physical educators reported teacher observation (87.3%) as the most common form of assessment used to assess physical education standard three, checklists (28.2%) as the second most common form of assessment and self-assessment (26.8%) as the third most common form of assessment. High school physical educators reported the most common form of assessment used to assess standard three was teacher observation (84.1%). The second and third most common forms of assessment used were fitness testing (34.8%) and checklists (30.4%) respectively for this subcategory.

Based on the average class size, physical educators with 20 to 29 students reported teacher observation (78.9%) as the most common form of assessment used to assess physical education standard three, self-assessment (36.6%) as the second most common form of assessment and checklists (28.5%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using teacher observation (83.1%) as the most common form of assessment to assess physical education standard three. Checklists (36.9%) and fitness testing (21.5%) were the second and third most common forms of assessment used for this subcategory.

Information based on the highest level of education a teacher obtained showed participants who possessed only a Bachelor’s Degree used teacher observation (77.9%) most often to assess physical education standard three, self-assessment (31.6%) was the
second most common form of assessment and checklists (27.4%) were the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (86.1%) as the most common form of assessment to assess physical education standard three. The second and third most common forms of assessment used for this subcategory were checklists (35.2%) and self-assessment (29.6%) respectively.

Physical education standard four was also a focus of the third research question. Of those who participated, the most common assessment form used to assess physical education standard four was teacher observation. Fitness testing and self-assessment were the second and third most common forms of assessment. See Table 8 for percentages used to assess physical education standard four for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (81.3%) as the most common form of assessment used to assess physical education standard four; fitness testing (56.3%) was the second most common form of assessment and self-assessment (28.1%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess physical education standard four was teacher observation (79.2%); the second most common form of assessment was fitness testing (70.8%) and the third most common form of assessment was self-assessment (37.5%).

Results based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (82.2%) most often to assess physical education standard four. Fitness testing (54.8%) was the second
Table 8

Percentage of Assessment Form Usage to Assess Physical Education Standard Four

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>19.9</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>63.4</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>6.5</td>
</tr>
<tr>
<td>Portfolio</td>
<td>4.6</td>
</tr>
<tr>
<td>Rubric</td>
<td>12.0</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>37.0</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>15.3</td>
</tr>
<tr>
<td>Skills Test</td>
<td>19.0</td>
</tr>
<tr>
<td>Student Journal</td>
<td>9.3</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>78.2</td>
</tr>
<tr>
<td>Written Test</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Note. n=216

most common form of assessment and self-assessment (49.3%) was the third most common form of assessment for this subcategory. Middle school physical educators reported teacher observation (69%) as the most common form of assessment used to
assess physical education standard four, fitness testing (60.6%) as the second most common form of assessment and self-assessment (32.4%) as the third most common form of assessment. High school physical educators reported the most common form of assessment used to assess physical education standard four was teacher observation (75.4%). The second and third most common forms of assessment used were fitness testing (72.5%) and self-assessment (29%) respectively for this subcategory.

Based on the average class size, physical educators with 20 to 29 students reported teacher observation (75.6%) as the most common form of assessment used to assess physical education standard four, fitness testing (60.2%) as the second most common form of assessment and self-assessment (43.9%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using teacher observation (73.8%) as the most common form of assessment to assess physical education standard four. Fitness testing (60%) and self-assessment (29.2%) were the second and third most common forms of assessment used for this subcategory.

Results based on the highest level of a teacher’s education showed the participants who possessed only a Bachelor’s Degree reported teacher observation (70.5%) as the most common form of assessment used to assess physical education standard four, fitness testing (55.8%) was the second most common form of assessment and self-assessment (35.8%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (81.5%) as the most common form of assessment to assess physical education standard four. The second and third most common forms of assessment used for this subcategory were fitness testing (67.6%) and self-assessment (36.1%) respectively.
Physical education standard five was also a focus of research question number three. The participants reported teacher observation as the most common form of assessment used to assess physical education standard five. Self-assessment and peer observation were the second and third most common forms of assessment. See Table 9 for percentages used to assess physical education standard five for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (92.2%) as the most common form of assessment used to assess physical education standard five. Peer observation (34.4%) was the second most common form of assessment and self-assessment (31.3%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess physical education standard five was teacher observation (93.8%); the second most common form of assessment was peer observation (25%) and the third most common form of assessment was checklists (22.9%).

Results based on the division of school in which physical educators taught revealed elementary school physical educators used teacher observation (95.9%) as the most common form of assessment to assess physical education standard five. Self-assessment (42.5%) was the second most common form of assessment and peer observation (35.6%) was the third most common form of assessment for this subcategory. Middle school physical educators reported teacher observation (93%) as the most common form of assessment used to assess physical education standard five, peer observation (38%) as the second most common form of assessment and self-assessment (29.6%) as the third most common form of assessment. High school physical educators
Table 9

*Percentage of Assessment Form Usage to Assess Physical Education Standard Five*

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checklist</td>
<td>18.4</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>4.1</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>31.3</td>
</tr>
<tr>
<td>Portfolio</td>
<td>0.9</td>
</tr>
<tr>
<td>Rubric</td>
<td>6.9</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>31.8</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>8.3</td>
</tr>
<tr>
<td>Skills Test</td>
<td>2.8</td>
</tr>
<tr>
<td>Student Journal</td>
<td>6.5</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>94.0</td>
</tr>
<tr>
<td>Written Test</td>
<td>4.6</td>
</tr>
</tbody>
</table>

*Note. n=217*
reported that the most common form of assessment used to assess physical education standard five was teacher observation (88.4%). The second and third most common forms of assessment used were self-assessment (21.7%) and peer observation (17.4%) respectively for this subcategory.

Based on the average class size, physical educators with 20 to 29 students reported teacher observation (93.5%) as the most common form of assessment used to assess physical education standard five, self-assessment (37.4%) as the second most common form of assessment and peer observation (34.1%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using teacher observation (89.2%) as the most common form of assessment to assess physical education standard five. Peer observation (24.6%) and self-assessment (18.5%) were the second and third most common forms of assessment used to assess physical education standard five for this subcategory.

Information based on the highest level of a teacher’s completed education showed the participants who possessed only a Bachelor’s Degree used teacher observation (91.6%) most often to assess physical education standard five, peer observation (32.6%) was the second most common form of assessment and self-assessment (29.5%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (92.6%) as the most common form of assessment to assess physical education standard five. The second and third most common forms of assessment used for this subcategory were self-assessment (33.3%) and peer observation (30.6%) respectively.
Physical education standard six was also a focus of the third research question. Of those who participated, the most common assessment form used to assess physical education standard six was teacher observation. Self-assessment and peer observation were the second and third most common forms of assessment. See Table 10 for percentages used to assess physical education standard two for each assessment form.

Based on the number of years of full-time physical education teaching experience, physical educators in the six to 14 year subcategory reported teacher observation (81.3%) as the most common form of assessment used to assess physical education standard six; self-assessment (43.8%) was the second most common form of assessment and peer observation (25%) was the third most common form of assessment. Physical educators in the 21 to 29 year subcategory reported that the most common form of assessment used to assess physical education standard six was teacher observation (79.2%); the second most common form of assessment was self-assessment (31.3%) and the third most common form of assessment was self-reporting instruments (27.1%).

Evaluation based on the division of school in which physical educators taught showed elementary school physical educators used teacher observation (80.3%) as the most common form of assessment to assess physical education standard six. Self-assessment (38%) was the second most common form of assessment and checklists (22.5%) were the third most common forms of assessment for this subcategory. Middle school physical educators reported teacher observation (89%) as the most common form of assessment used to assess physical education standard six, self-assessment (43.8%) as the second most common form of assessment and peer observation (24.7%) as the third most common form of assessment. High school physical educators reported that the most
Table 10

Percentage of Assessment Form Usage to Assess Physical Education Standard Six

<table>
<thead>
<tr>
<th>Assessment Form</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>Checklist</td>
<td>16.4</td>
</tr>
<tr>
<td>Fitness Test</td>
<td>12.7</td>
</tr>
<tr>
<td>Peer Observation</td>
<td>17.7</td>
</tr>
<tr>
<td>Portfolio</td>
<td>3.6</td>
</tr>
<tr>
<td>Rubric</td>
<td>5.0</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>39.1</td>
</tr>
<tr>
<td>Self-Reporting Instrument</td>
<td>14.5</td>
</tr>
<tr>
<td>Skills Test</td>
<td>7.3</td>
</tr>
<tr>
<td>Student Journal</td>
<td>14.5</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>84.5</td>
</tr>
<tr>
<td>Written Test</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Note. n=215

The common form of assessment used to assess physical education standard six was teacher observation (84.1%). The second and third most common forms of assessment used were self-assessment (36.2%) and fitness testing (18.8%) respectively for this subcategory.
Based on the average class size, physical educators with 20 to 29 students reported teacher observation (87%) as the most common form of assessment used to assess physical education standard six, self-assessment (43.1%) as the second most common form of assessment and peer observation (19.5%) as the third most common form of assessment. Physical educators with 30 to 39 students reported using teacher observation (76.9%) as the most common form of assessment to assess physical education standard six. Self-assessment (30.8%) and checklists (18.5%) were the second and third most common forms of assessment used for this subcategory, respectively.

Information based on the highest level of education a teacher had completed showed participants who possessed only a Bachelor’s Degree reported teacher observation (80%) as the most common form of assessment used to assess physical education standard six, self-assessment (36.8%) was the second most common form of assessment and peer observation (14.7%) was the third most common form of assessment. Participants who acquired both Bachelor’s and Master’s Degrees reported using teacher observation (87%) as the most common form of assessment to assess physical education standard six. The second and third most common forms of assessment used for this subcategory were self-assessment (38.9%) and peer observation (22.2%) respectively.
CHAPTER FIVE

The purpose of this study was to determine (a) what forms of assessment K-12 physical educators in the state of Indiana used to assess student learning, (b) what forms of assessment physical educators used to assess the psychomotor, cognitive and affective learning domains and (c) what forms of assessment physical educators used to assess NASPE’s physical education standards (2004). This chapter contains a discussion of the findings, limitations, conclusions, and suggestions for future research.

Findings of the Current Study

This study sought to determine the types of authentic and/or traditional assessments that physical educators were using in their classrooms. The forms of authentic assessment included in this study were teacher observations, self-assessments, peer observations, rubrics, checklists, self-reporting instruments, portfolios and student journals. The traditional forms of assessment included in this study were teacher observations, self-assessments, peer observations, written tests, fitness tests and skills tests.

Question 1

The first research question intended to identify all forms of assessments physical educators used in their classrooms and determine the most common type of assessment. Teacher observation was the primary form of assessment used with fitness testing being
the second most popular assessment form. Two additional forms of assessment tied for the third most common assessment utilized and they were written tests and skills tests.

When looking at the variety of subcategories presented in the data, teacher observation was the most common form of assessment across the entire teacher population, except for high school physical educators and educators with an average class size of 30-39 students. Both of these subgroups used fitness testing as their primary form of assessment. However, teacher observation was still utilized quite often, ranking in the top three forms used. Physical educators with six to 14 years of full-time physical education teaching experience and elementary school physical educators were the only subgroups using authentic assessment. Rubrics were used by the six to 14 year veteran teachers and self-assessments were used by the elementary school physical educators. Thus, it can be concluded that physical educators are primarily using traditional forms of assessment, rather than authentic assessments.

**Question 2**

The second research question intended to determine the forms of assessment specifically used to measure each of the three learning domains: psychomotor, cognitive and affective. The psychomotor domain focuses on skill acquisition. Hence, basic motor skills, coordination and physical movement are assessed (Hansen, 2008). Again, teacher observation was the most common form of assessment while fitness testing and skills testing were the second and third most common forms of assessment, respectively.

The subcategories showed a slight variance. High School level teachers’ most popular form of assessment was skills testing, but the difference between teacher observation and fitness testing was not statistically significant in their ranking. However,
physical educators with 21 to 29 years of full-time physical education teaching experience and elementary school physical educators reported using checklists as their third most common form of assessment to assess the psychomotor domain. Thus, it can be concluded that high school and a large proportion of middle school physical educators are more likely to use traditional forms of assessment when evaluating the psychomotor domain. However, over half of the elementary school educators and middle school teachers use student’s checklists, which show a progression towards the use of authentic assessments in the classroom.

The cognitive domain is the domain that is knowledge based and focuses on intellectual skills. It is strengthened by learning experiences that foster self-expression, problem solving, and socialization (Hansen, 2008; Buck et al., 2004). Physical educators reported the traditional written test as the most common form of assessment used to assess the cognitive domain. Teacher observation and rubrics were the second and third most common forms of assessment, which indicates a possible authentic form of assessment being utilized as long as the educator uses the assessments in conjunction with another. Checklists were reportedly used by at least a quarter of elementary level teachers, veterans with 21-29 years of experience and highly educated (Bachelor and Master Degree) teachers. Thus, this domain’s results did reveal a combination of traditional and authentic assessments being utilized in many physical education classrooms.

The affective domain, the area that focuses on the student’s habits, attitudes and feelings towards learning experiences while cultivating his/her own self-esteem (Hansen, 2008; Buck et al., 2004) was overwhelmingly assessed by teacher observation. Self-
assessment and peer observation were a distant second and third choice by the entire teacher population. Since checklists and rubrics were not reported, it can be concluded that the primary type of assessment used to evaluate the affective domain was not authentic.

**Question 3**

The third research question intended to determine the forms of assessment used to measure NASPE’s six physical education standards. Standard one states that a physically educated person “demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities” (NASPE, 2004, p.15). Hansen (2008) reported that physical education standard one falls under the psychomotor domain. Physical educators overwhelmingly reported teacher observation as the most common form of assessment with skills testing as the second most common form of assessment and fitness testing as the third most common form of assessment.

Elementary physical educators reported using checklists and rubrics to assess standard one. Checklists were also popular with three other subgroups (teachers with 20-29 students, the highest educated and the veteran teachers). Thus, it can be concluded that a large percentage of teachers use authentic assessment to assess standard one. When the teacher’s observations are used in conjunction with the checklists and rubrics as reported for this standard, the assessment moves from a traditional form to a more authentic form. As would be expected, this conclusion coincides with the results presented for the specific psychomotor domain findings.

NASPE’s standard two states that a physically educated person “demonstrates understanding of movement concepts, principles, strategies and tactics as they apply to
the learning and performance of physical activities” (NASPE, 2004, p.21). Hansen (2008) reported that physical education standard two falls under the cognitive domain. The most common form of assessment used to assess physical education standard two was teacher observation. The second and third most common forms of assessment used were written tests and checklists, just the same as the results for the cognitive learning domain. As with that specific domain, self-assessments and skills testing were often reported to be utilized by a variety of the subcategories. Thus, it can be concluded that most physical educators used a combination of assessments to comprise an authentic evaluation of the students, with the exception of high school teachers and teachers with very large classes.

Physical education standard three states that a physically educated person “participates regularly in physical activity” (NASPE, 2004, p.27). Hansen (2008) reported that standard three falls under the psychomotor domain. Physical educators overall reported using teacher observation as the most common form of assessment with checklists and self assessments were a distant second and third choice. Fitness testing was utilized by some subgroups of teachers, but was much less common. However, in comparison, fitness testing is more traditional in terms of assessing than the combined usage of teacher observation with checklists and rubrics. Thus, standard three was primarily assessed authentically, but traditional assessment was still utilized.

Surprisingly, these results do not correlate with the results for the psychomotor domain where authentic assessments were rarely used.

Standard four states that a physically educated person “achieves and maintains a health-enhancing level of physical fitness” (NASPE, 2004, p.33). Hansen (2008) reported that standard four also falls under the psychomotor domain. Teacher observation was the
most common form of assessment reported. Fitness testing and self-assessment were the second and third most common forms of assessment reported. There was absolutely no variance in the top three assessment forms for this standard. Hence, it can be concluded that physical educators do not use authentic assessment as a primary means to assess this standard. This does not correlate with the psychomotor domain findings which showed elementary school teachers to use some authentic assessments to measure that specific domain.

Physical education standard five states that a physically educated person “exhibits responsible personal and social behavior that respects self and others in physical activity settings” (NASPE, 2004, p.39). Hansen (2008) reported that physical education standard five falls under the affective domain. Physical educators overwhelmingly reported teacher observation as the most common form of assessment used to assess physical education standard five. Self-assessment and peer observation were used infrequently, in comparison to teacher observation. Checklists were utilized by a quarter of the veteran teachers, instead of self assessments, but the others followed the overall findings. Therefore, it is concluded that traditional assessments were utilized to assess this standard as was the case for the affective learning domain.

Standard six states that a physically educated person “values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction” (NASPE, 2004, p.45). Hansen (2008) reported that physical education standard six also falls under the affective domain. Teacher observation was the most common form of assessment, self-assessment was the second most common form of assessment and peer observation was the third most common form of assessment, just as in the previous standard. However,
self reporting instruments, fitness testing and checklists were also reported to be used by some subgroups. Thus, it can be concluded that authentic assessments and traditional assessments were used to measure this standard, which was not the case for the affective learning domain.

Limitations

The findings associated with this study are limited due to a variety of reasons. First and foremost, this was the first attempt to gather such data by the researcher. Thus, the instrument that was developed was too broad and had too many variables associated with the assessment questions. The instrument that was utilized also included some faulty questions that were unable to be used in the data analysis.

The findings were also limited by the study’s sample size and response rate. The researcher was residing out of state and the contact information for Indiana’s physical educators was not public domain. Thus, the potential respondents were sent an email questionnaire from a database compiled by Ball State’s Physical Education Department. Unfortunately, not all of the addresses were current, which reduced the total number of potential respondents. This reduction in potential respondents, along with a 34% response rate caused some critical subgroups to become statistically invalid.

Conclusion

The research findings presented in this paper reveal that teacher observation is the most popular form of assessment utilized by public and private school K-12 physical educators in the state of Indiana. In all but one instance (cognitive domain where it was
ranked second), teacher observation was the preferred form of assessment. Teacher observation by itself represents a more traditional form of assessment. However, when it is combined with checklists and rubrics, it becomes a more authentic assessment.

This research paper revealed that certain learning domains and certain standards were assessed primarily by teacher observation and other traditional forms of assessments, such as fitness tests, skills tests and written tests. Other domains and standards combined teacher observation with rubrics and checklists to provide a more authentic assessment environment. Teacher observation is presumed to be the most common form of assessment because of its easiness to implement.

Lund and Kirk (2002) reported that, “because so much of physical education learning involves overt skill performance, observation is one of the best assessment tools available” (p. 67). This belief also lends itself to the utilization of self-assessment and peer observation, especially in middle schools and high schools. The usage of fitness tests, written tests and skills tests may have been implemented because of the simple and objective nature of the assessments and the fact that they are viewed as a common form of assessment.

Self-reporting instruments, along with portfolios and journals were rarely used as assessment tools. This may be due to the time needed to develop, time constraints to implement, and the lack of storage in a physical education classroom (Kitts, 2003; Smith, 1997; Lund and Kirk, 2002). The usage of assessments in physical education is critical in providing feedback both to the student and to the teacher.

The purpose of the assessment often dictates the type of assessment utilized. Authentic assessment, in any number of forms (rubrics, observations with performance
checklists, self-reporting instruments, student journals and portfolios) is important because it focuses on the whole students in a real world environment. While authentic assessment has been identified to be more time consuming, it is quite different than the traditional assessments that are often easier to administer (Metzler, 2005).

Previous research is lacking in the area of physical education assessment. This study adds to the literature several findings: (a) traditional assessment, specifically teacher observations, were primarily the foundation for physical educators, (b) fitness tests and skills tests, also traditional assessments, were two of the most common used assessment techniques, (c) written tests, a form of traditional assessment, were mainly used to assess the cognitive domain and NASPE (2004) physical education standard two, (d) teacher observation in conjunction with rubrics and/or checklists was the most common authentic assessment form used, (e) self-assessment and peer observation, also authentic assessment when used with rubrics and/or checklists, were used as well, (f) authentic observation was the most popular form of assessment used by elementary physical education teachers and veteran teachers, (g) self-reporting instruments, portfolios and student journals were rarely used as common forms of assessment and (h) the majority of the physical education standards were assess with the same assessment forms as their related learning domain.

The moderate percentages of authentic assessment used by current physical educators leads to the conclusion that implementing authentic assessment into a physical education program is a slow process; it takes valuable time and can be difficult depending on the physical educator’s situation.
Suggestions for Future Research

The following recommendations for future research are:

1. Personal interviews with physical educators could be combined with a questionnaire to allow elaboration on assessment tools. Teachers would be able to specifically give examples of when and what they use to assess each standard and learning domain.

2. Researchers could observe physical educators’ assessment methods to confirm when and how often teacher observations are combined with authentic assessment tools.

3. Physical education teachers from other states could be surveyed to see if differences occur regionally.

4. Professors in collegiate physical education teacher programs could be surveyed to see what types of assessments they are introducing to potential physical education teachers.
References


Indiana Department of Education. (2008). Indiana Standards for Physical Education. Indianapolis, IN.


Appendix A

IRB Approval Letter
Institutional Review Board

DATE: December 3, 2008

TO: Christina Reinhardt

FROM: Ball State University IRB

RE: IRB protocol #99130-2

TITLE: Current Assessment Practices of Secondary Physical Education Teachers in the State of Indiana

SUBMISSION TYPE: Revision

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: December 3, 2008

The Institutional Review Board reviewed your protocol on December 3, 2008 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project. Please contact Amy Boos at (765) 285-5034 or akboos@bsu.edu if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.
Appendix B

Physical Education Assessment Survey
Physical Education Assessment Survey

PHYSICAL EDUCATION ASSESSMENT SURVEY

Thank you for taking the time to fill out this survey.

For the purposes of this survey please use the following definitions:
Checklist – a list of criteria that are checked as students meet them
Fitness Test – test batteries measuring student fitness
Peer Observation – an assessment of skill, knowledge, or dispositions completed by another student; could be in the form of a checklist.
Portfolio - a collection of a student's work assembled over time that shows individual progress toward educational goals
Rubric – a scale that describes all levels of performance in detail for any given assignment or task; could be in the form of a checklist.
Self Assessment – an assessment of skill, knowledge, or dispositions completed by the student for themselves; could be in the form of a checklist
Self-Reporting Instrument – a form that a student can fill out describing their activity level for the previous day or days
Skills Test – a test that evaluates the student's skill in a given activity
Student Journals – a collection of student's entries that may include their own record of participation, results, response to, feelings, perceptions, or reflections about actual happenings or results.
Teacher Observation – an assessment of skill, knowledge, or dispositions completed by the teacher; could be in the form of a checklist
Written Test – a paper test used to examine knowledge, comprehension, application, analysis, synthesis, and evaluation of the knowledge base of physical education in the form of multiple choice, true/false, matching, essay, short answer, and/or fill-in-the-blank.

1a. What is the name of the school of your "primary" PE teaching and school district?<p>
School:

1b. District

2. What is the student population in your school?
   a. Less than 100 students
   b. 100-199 students
   c. 200-299 students
   d. 300-399 students
   e. 400-499 students
   f. 500-599 students
   g. 600-699 students
   h. 700-799 students
i. 800-899 students
j. 900-999 students
k. 1000-1099 students
l. 1100-1199 students
m. 1200-1299 students
n. 1300-1399 students
o. 1400-1499 students
p. 1500-1599 students
q. 1600-1699 students
r. 1700-1799 students
s. 1800-1899 students
t. 1900-1999 students
u. 2000-2099 students
v. 2100-2199 students
w. 2200-2299 students
x. 2300-2399 students
y. 2400-2499 students
z. 2500 and more students

3. What year did you graduate from your physical education teacher education program?
   a. 2007 or 2008
   b. 2005 or 2006
   c. 2003 or 2004
   d. 2001 or 2002
   e. 1999 or 2000
   f. 1997 or 1998
   g. 1995 or 1996
   h. 1993 or 1994
   i. 1991 or 1992
   j. 1989 or 1990
   k. 1987 or 1989
   l. 1985 or 1986
   m. 1983 or 1984
   n. 1981 or 1982
   o. 1979 or 1980
   u. Before 1979

4. How many years have you taught physical education full time? (include the current year)
   a. 1-2 years
   b. 3-5 years
   c. 6-8 years
   d. 9-11 years
   e. 12-14 years
   f. 15-17 years
5. How many years have you taught physical education part time? (include the current year)
   a. 1-2 years
   b. 3-5 years
   c. 6-8 years
   d. 9-11 years
   e. 12-14 years
   f. 15-17 years
   g. 18-20 years
   h. 21-23 years
   i. 24-26 years
   j. 27-29 years
   k. 30 or more years

6. What grades does your school have? Check all that apply.
   a. Kindergarten (K)
   b. First (1)
   c. Second (2)
   d. Third (3)
   e. Fourth (4)
   f. Fifth (5)
   g. Sixth (6)
   h. Seventh(7)
   i. Eighth (8)
   j. Ninth (9)
   k. Tenth (10)
   l. Eleventh (11)
   m. Twelfth (12)

7. What grades do you teach? Check all that apply.
   a. Kindergarten (K)
   b. First (1)
   c. Second (2)
   d. Third (3)
   e. Fourth (4)
   f. Fifth (5)
   g. Sixth (6)
   h. Seventh(7)
   i. Eighth (8)
j. Ninth (9)  
k. Tenth (10)  
l. Eleventh (11)  
m. Twelfth (12)  

8. What form(s) of assessment do you use in your classroom? Check all that apply.  
   a. Checklist  
   b. Fitness Test  
   c. Peer Observation  
   d. Portfolio  
   e. Rubric  
   f. Self Assessment  
   g. Self-Reporting Instrument  
   h. Skills Test  
   i. Student Journal  
   j. Teacher Observation  
   k. Written Test  
   l. None of the above  

9. Who does the assessing in your class? Check all that apply.  
   a. Parents  
   b. Peers  
   c. Teacher  
   d. Student or Self  

10. What is your average physical education class size?  
    a. Less than 10 students  
    b. 10-14 students  
    c. 15-19 students  
    d. 20-24 students  
    e. 25-29 students  
    f. 30-34 students  
    g. 35-39 students  
    h. 40-44 students  
    i. 45 and more students  

11. At what level do you have a degree or certificate that is specifically in physical education?  
    a. Teaching certificate only  
    b. Bachelor's degree only  
    c. Master's degree only  
    d. Bachelor's and master's degrees
Please rank the domains of learning in order of importance in your physical education class?

12a. Psychomotor (skill performance)
   1. least important
   2. important
   3. most important

12b. Cognitive (written or oral evaluation)
   1. least important
   2. important
   3. most important

12c. Affective (sportship, cooperation, acceptance of differences)
   1. least important
   2. important
   3. most important

13a. What assessment technique(s) do you use when evaluating the psychomotor domain of learning? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
   j. Teacher Observation
   k. Written Test
   l. None of the above

13b. Other (please fill in the space with your assessment technique)

14a. What assessment technique(s) do you use when evaluating the cognitive domain of learning? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
14b. Other (please fill in the space with your assessment technique)

15a. What assessment technique(s) do you use when evaluating the affective domain of learning? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
   j. Teacher Observation
   k. Written Test
   l. None of the above

15b. Other (please fill in the space with your assessment technique)

Standard 1 states: Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities. 

16a. Which assessment technique(s) do you use when evaluating Standard 1? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
   j. Teacher Observation
   k. Written Test
   l. None of the above

16b. Other (please fill in the space with your assessment technique)
**Standard 2 states:** Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

17a. Which assessment technique(s) do you use when evaluating Standard 2? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
   j. Teacher Observation
   k. Written Test
   l. None of the above

17b. Other (please fill in the space with your assessment technique)

**Standard 3 states: Participates regularly in physical activity.**

18a. Which assessment technique(s) do you use when evaluating Standard 3? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
   d. Portfolio
   e. Rubric
   f. Self Assessment
   g. Self-Reporting Instrument
   h. Skills Test
   i. Student Journal
   j. Teacher Observation
   k. Written Test
   l. None of the above

18b. Other (please fill in the space with your assessment technique)

**Standard 4 states: Achieves and maintains a health-enhancing level of physical fitness.**

19a. Which assessment technique(s) do you use when evaluating Standard 4? Check all that apply.
   a. Checklist
   b. Fitness Test
   c. Peer Observation
d. Portfolio
e. Rubric
f. Self Assessment
g. Self-Reporting Instrument
h. Skills Test
i. Student Journal
j. Teacher Observation
k. Written Test
l. None of the above

19b. Other (please fill in the space with your assessment technique)

**Standard 5 states:** Exhibits responsible personal and social behavior that reflects self and others in physical activity settings.

20a. Which assessment technique(s) do you use when evaluating Standard 5? Check all that apply.
   a. Checklist
   b. Fitness Test
c. Peer Observation
d. Portfolio
e. Rubric
f. Self Assessment
g. Self-Reporting Instrument
h. Skills Test
i. Student Journal
j. Teacher Observation
k. Written Test
l. None of the above

20b. Other (please fill in the space with your assessment technique)

**Standard 6 states:** Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

21a. Which assessment technique(s) do you use when evaluating Standard 6? Check all that apply.
   a. Checklist
   b. Fitness Test
c. Peer Observation
d. Portfolio
e. Rubric
f. Self Assessment
g. Self-Reporting Instrument
h. Skills Test
i. Student Journal
j. Teacher Observation
k. Written Test
l. None of the above

21b. Other (please fill in the space with your assessment technique)
Appendix C

Cover Letter
Email/Informed Consent Document to K-12 Physical Education Teachers

Insert Date

Insert Email Address

Dear Physical Educator,

I am seeking your assistance in completing my research project. I am a graduate student working toward a Master’s Degree in physical education teacher education at Ball State University. I work under the direction of Dr. Carla Vidoni, assistant professor at Ball State University.

You have been selected to share some of the techniques you use in your classroom to measure student learning. The purpose of this study, “Assessment Techniques of K-12 Physical Educators in the State of Indiana”, is to reveal different ways that physical educators in the state of Indiana use assessment in the physical education setting. Your expertise and input is vital to this study as they will contribute to the knowledge base on assessment practices in physical education. They will also provide needed information for teacher educators preparing future teachers.

If you decide to participate, you will complete a survey requiring approximately 10 minutes. I cannot and do not promise that you will receive any direct benefits from this study.

Please follow this link: insert link to the survey, “Physical Education Assessment Survey”, I have constructed to gather my data. I would greatly appreciate it if you would complete the survey by insert desired date.

This study is voluntary and if you decide to participate in this study, you are free to withdraw your consent at any time with no penalty to you. There are no foreseeable risks from participating in this project. One benefit you may gain from your participation in this study may be providing data that can improve the quality of physical education programs in the state of Indiana.

You are making a decision on whether or not to participate in this study. Your completion of the online survey will serve as your informed consent indicating that you have decided to participate having read the information in this letter. This is an anonymous study; there are no identifying questions on the survey. All schools listed in our database will be used as contact information for follow-up phone calls to remind teachers about the study. Once your survey is submitted all data will be stored on database and spreadsheet programs on the researchers personal and/or work computers, which are password protected. The researchers and the supporting faculty will be the only individuals with access to collected data.
If you have any questions regarding this research or your rights as a subject, I want you to contact me, Christina A. Reinhardt, at 765-285-2275 or via email at careinhardt@bsu.edu, or my faculty advisor, Dr. Carla Vidoni at 765-285-5135 or via email at cvidoni@bsu.edu. Additionally, for information regarding the rights of a research subject, the following person may be contacted: Coordination of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, 765-285-5070.

I thank you for the time and energy that you are willing to contribute to this project. If you have any questions please use the information below to contact either my advisor or me.

**Advisor:**
Dr. Carla Vidoni  
Office HP 223M  
Ball State University  
Muncie, IN 47304  
Phone number: (765)285-5135  
E-mail: cvidoni@bsu.edu

**Project Director:**
Christina A. Reinhardt  
HP 202  
Ball State University  
Muncie, IN 47304  
Phone number: (765)285-2275  
E-mail: careinhardt@bsu.edu

Sincerely,

*Insert signature*

Christina A. Reinhardt
Appendix D

Follow-up Cover Letter
Follow Up E-mail/Informed Consent Document to K-12 Physical Education Teachers

Insert Date

Insert Email Address

Dear Physical Educator,

I am seeking your assistance in completing my research project. I am a graduate student working toward a Master’s Degree in physical education teacher education at Ball State University. I work under the direction of Dr. Carla Vidoni, assistant professor at Ball State University.

You have been selected to share some of the techniques you use in your classroom to measure student learning. The purpose of this study, “Assessment Techniques of K-12 Physical Educators in the State of Indiana,” is to reveal different ways that physical educators in the state of Indiana use assessment in the physical education setting. Your expertise and input is vital to this study as they will contribute to the knowledge base on assessment practices in physical education. They will also provide needed information for teacher education preparing future teachers.

On insert date I sent out a request for your assistance in completing a 10-minute survey designed to gather data on the techniques physical educators use for assessment in their classrooms. If you have already completed this survey, thank you! If you have not had a chance to do so, please take a few minutes to complete it at your convenience. I cannot and do not promise that you will receive any direct benefits from this study.

Please follow this link: insert link to the survey, “Physical Education Assessment Survey”, I have constructed to gather my data. I would greatly appreciate it if you would complete the survey by insert desired date.

This study is voluntary and if you decide to participate in this study, you are free to withdraw your consent at any time with no penalty to you. There are no foreseeable risks from participating in this project. One benefit you may gain from your participation in this study may be providing data that can improve the quality of physical education programs in the state of Indiana.

You are making a decision on whether or not to participate in this study. Your completion of the online survey will serve as your informed consent indicating that you have decided to participate having read the information in this letter. This is an anonymous study; there are no identifying questions on the survey. All schools listed in our database will be used as contact information for follow-up phone calls to remind teachers about the study. Once your survey is submitted all data will be stored on data base and spreadsheet programs on
the researchers personal and/or work computers, which are password protected. The researchers and the supporting faculty will be the only individuals with access to collected data.

If you have any questions regarding this research or your rights as a subject, I want you to contact me, Christina A. Reinhardt, at 765-285-2275 or via email at careinhardt@bsu.edu, or my faculty advisor, Dr. Carla Vidoni at 765-285-5135 or via email at cvidoni@bsu.edu. Additionally, for information regarding the rights of a research subject, the following person may be contacted: Coordination of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, 765-285-5070.

I thank you for the time and energy that you are willing to contribute to this project. If you have any questions please use the information below to contact either my advisor or me.

**Advisor:**
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**Project Director:**
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Phone number: (765)285-2275  
E-mail: careinhardt@bsu.edu

Sincerely,

*Insert signature*

Christina A. Reinhardt