

Updated February 2008

SECTION IV – EVIDENCE FOR MEETING STANDARDS

ASSESSMENT 1 – CONTENT KNOWLEDGE EXAM

Note: A copy of the Content Knowledge Exam can be found in the initial program review report submitted in September 2006.

Brief Description of the assessment and its use in the program

The state of New Hampshire does not require PRAXIS II as part of its certification requirements for K-12 physical education. Nor does the Keene State College Teacher Education program require PRAXIS II as a program completion requirement. Until such time as one of the above two things happen, the Physical Education/Teacher Certification program has chosen to develop a comprehensive content knowledge exam to use as one measure of a candidate's content knowledge.

To develop the exam questions were solicited from faculty teaching courses in the Physical Education Core and the Physical Education/Teacher Certification option. Each question was asked in multiple choice format and then grouped by category. Alignment with AAHPERD/NASPE standards was shown, and the courses from which the questions came were indicated.

The exam was piloted with a small group of candidates during the Spring 2006 semester. It has since been administered during the student teaching experience. Beginning in Fall 2008 the exam will be administered just prior to candidates beginning their student teaching experience.

Alignment of the assessment with the AAHPERD/NASPE standards for which it is cited

The Physical Education Content Knowledge Exam is divided into six categories and aligns with the following AAHPERD/NASPE standards:

NASPE Standard	Outcome
Standard 1: Content Knowledge	<p>1.1: To answer questions in the Skill Movement and Physical Activity category and the Fundamental Movement category, candidates need to be able to identify critical elements of motor skill performance and effective learning progressions.</p> <p>1.3: To answer questions in the Skill Movement and Physical Activity category and the Fundamental Movement category, candidates need to be able to describe performance concepts and strategies.</p> <p>1.4: To answer questions in the Science and Fitness category, candidates need to be able to describe biophysical concepts to skillful movement, physical activity, and fitness.</p> <p>1.5: To answer questions in the Foundations and Assessment category, candidates need to be able to understand current physical education/activity issues and laws based on historical, philosophical, and sociological perspectives</p>
Standard 6: Planning and Instruction	<p>6.3: To answer questions in the Safety category, candidates need to be able to select instructional strategies based on content, student needs, and safety issues.</p> <p>6.4: To answer questions in the Safety category, candidates need to be able to design learning experiences that are safe.</p> <p>6.5: To answer questions in the Pedagogy category, candidates need to be able to apply disciplinary and pedagogical knowledge in developing and implementing effective learning environments and experiences.</p>
Standard 7: Student Assessment	<p>7.1: To answer questions in the Foundations and Assessment category, candidates need to be able to identify key components of various types of assessment, describe their appropriate and inappropriate use, and address issues of validity, reliability, and bias.</p>

Brief analysis of the data findings

Of the 32 candidates who have completed the Content Knowledge Exam to date (19 in 2006-2007 and 13 in 2007-2008), 27 have met or exceeded the passing score (84%). All of the 5 candidates who did not meet the passing score were within 5 points of it. A review of the scoring guides indicates that candidates scored the highest in the Pedagogy and Safety categories with 87.5% meeting or exceeding the acceptable levels. 81% of the 32 candidates met or exceeded the acceptable level for Fundamental Movement, while 78% met or exceeded the acceptable level for Skillful Movement and Physical Activity. Candidates did poorly on questions related to Science and Fitness (only 28% met or exceeded the acceptable level) and questions related to Foundations and Assessment (only 19% met or exceeded the acceptable level).

Interpretation of how the data provides evidence for meeting standards

Content Knowledge:

1.1: Questions in the Skillful Movement and Physical Activity category and the Fundamental Movement category require that candidates be able to identify critical elements of motor skill performance and effective learning progressions. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 24 have met the standard, and 1 has exceeded the standard in the Skillful Movement and Physical Activity category. In the Fundamental Movement category 17 teacher candidates have met the standard, and 9 have exceeded the standard. This documents that 78%-87.5% of the teacher candidates have answered correctly

questions related to identifying critical elements and learning progressions depending on the category in which questions were asked, thus meeting this standard/outcome.

1.3: Questions in the Skillful Movement and Physical Activity category and the Fundamental Movement category require that candidates be able to describe performance concepts and strategies. The interpretation of how the data provides evidence for meeting this standard/outcome parallels the discussion for standard/outcome 1.1. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 24 have met the standard, and 1 has exceeded the standard in the Skillful Movement and Physical Activity category. In the Fundamental Movement category 17 teacher candidates have met the standard, and 9 have exceeded the standard. This documents that 78%-87.5% of the teacher candidates have correctly answered questions related to describing performance concepts and strategies depending on the category in which questions were asked, thus meeting this standard/outcome.

1.4: Questions in the Science and Fitness category require that candidates be able to describe and apply biophysical concepts to skillful movement, physical activity, and fitness. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 8 have met the standard, and 1 has exceeded the standard in the Science and Fitness category. This documents that only 28% of the teacher candidates have correctly answered questions related to describing and applying biophysical concepts to skillful movement, physical activity, and fitness, thus meeting this standard/outcome. This is an area of concern that is being addressed by a greater emphasis on application of theoretical knowledge in Applied Kinesiology and Physiology of Exercise and in the revision of the content exam.

1.5: Questions in the Foundations and Assessment category require that candidates be able to understand current physical education/activity issues and laws based on historical, philosophical, and sociological perspectives. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 6 have met the standard in the Foundations and Assessment category. This documents that only 19% of the teacher candidates were able to correctly answer questions in the Foundations and Assessment category. However, if one separates the Foundations questions from the Assessment questions in this category, then more of the teacher candidates completing the exam have correctly answered questions related to understanding current physical education/activity issues and laws based on historical, philosophical, and sociological perspectives (the Foundations questions). Even so, knowledge of Foundations is an area of concern. It is being addressed by having only Physical Education Teacher Certification candidates taking PE 100 – Foundations of Physical Education. Until Fall 2007 Foundations was required for both Athletic Training and Teacher Certification majors. With only PETC students in the course, it can now serve their needs better.

Planning and Instruction:

6.3: Questions in the Safety category require that candidates be able to select instructional strategies based on content, student needs, and safety issues. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 9 have met the standard, and 19 have exceeded the standard in the Safety category. This documents that 87.5% of the teacher candidates have answered correctly questions related to selecting instructional strategies based on content, student needs, and safety issues, thus meeting this standard/outcome.

6.4: Questions in the Safety category require that candidates be able to design learning experiences that are safe. The interpretation of how the data provides evidence for meeting this standard/outcome parallels the discussion for standard/outcome 6.3. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 9 have met the standard, and 19 have exceeded the standard in the Safety category. This documents that 87.5% of the teacher candidates have answered correctly questions related to designing learning experiences that are safe, thus meeting this standard/outcome.

6.5: Questions in the Pedagogy category require that candidates be able to apply disciplinary knowledge in developing and implementing effective learning environments and experiences. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 20 have met the standard, and 8 have exceeded the standard in the Pedagogy category. This documents that 87.5% of the teacher candidates have answered correctly questions related to applying disciplinary knowledge in developing and implementing effective learning environments and experiences, thus meeting this standard/outcome.

Student Assessment:

7.1: Questions in the Foundations and Assessment category require that candidates be able to identify key components of various types of assessment, describe their appropriate and inappropriate use, and address issues of validity, reliability, and bias. Of the 32 teacher candidates who have completed the Content Knowledge Exam, 6 have met the standard in the Foundations and Assessment category. This documents that only 19% of the teacher candidates have correctly answered questions in the Foundations and Assessment category. When one separates the Assessment questions from the Foundations questions in this category, it is apparent that teacher candidates completing the exam are having difficulty with assessment. This is a critical area of concern. It has been addressed by having teacher candidates now take PE 363 – Assessment of K-12 Learners rather than a more traditional Measurement and Evaluation course. This new course, taken in the spring semester of the junior year, was taught for the first time in Spring 2008. Some of those students will student teach in Fall 2008, and the rest will student teach in Spring 2009. Hopefully, the results for 2008-2009 and beyond will show an improvement in the candidates' knowledge of assessment.

Changes being implemented as a result of the data

As stated in the original program report, the PETC faculty will continue to use the data each year to find ways to improve candidate and program performance and to consider revisions to the exam itself.

The PETC faculty has discussed a number of reasons why the data from the Content Knowledge Exam does not provide evidence that candidates meet all of the standards for which it was designed. These include:

1. Some candidates have difficulty taking an exam with the multiple-choice format. Those candidates often are able to demonstrate their knowledge through projects and direct application.
2. Currently the exam is “low-stakes.” Candidates have been taking the exam during the middle of student teaching. Performance on the exam has not been considered as part of a course or grade. Most candidates do not study for it.

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3. It is evident that candidates do well on questions where they have had to use/apply their knowledge over a period of time. They have difficulty remembering information they have not had to use recently.
4. The exam needs to be revised to eliminate ambiguous wording in questions and possible answers.
5. The exam needs to be updated to reflect program changes in the last two years.

As a result, the following changes in the Content Knowledge Exam are being implemented in Fall 2008:

1. A new version of the content knowledge exam will be administered. This version has been designed based on an item analysis (using data from Fall 2006, Spring 2007, and Fall 2007) where a decision was made whether to keep, revise, or replace each question.
2. The exam will be given when the candidates return to campus prior to the beginning of student teaching.
3. The exam will now be a component in PE 477 – Student Teaching Seminar and used as part of the evaluation for the course.
4. A study guide and a list of materials to save/review have been developed to help candidates better prepare for the exam.

Program changes have been discussed in the section on interpreting how the data provides evidence for meeting standards.

Finally, it should be noted that there are discussions taking place on campus to require the taking of PRAXIS II as a program completion requirement.

PETC Content Knowledge Exam Scores

In the original initial program review report, it stated that a score of 75 would be considered passing, and the scoring guides were designed with 75 as the passing score. However, after reviewing scores from the pilot (N=2) and the scores and statistical analysis from Fall 2006 (N=11), it became apparent that the passing score needed to be changed. This exam is a comprehensive exam that measures program content knowledge over a three to three and one-half time period rather than a course exam that measures very specific content knowledge over a semester or quarter. Therefore, a 1 to 1 scoring correspondence (question to answer) did not work. Therefore, the passing score was changed to 60, and the scoring guides have been revised to reflect 60 as the new passing score.

Semester	Number of teacher candidates completing exam	Number of teacher candidates meeting or exceeding passing score
Spring 2008	6	4
Fall 2007	7	6
Spring 2007	8	8
Fall 2006	11	9

Assessment 1 – PETC Content Knowledge Exam Scoring Guide

Acceptable Level: Candidates need to answer a minimum of 60% of the questions correctly.

	Does not meet standard (0-59% of questions)	Meets standard (60-80% of questions)	Exceeds standard (81-100% of questions)
<i>Skillful Movement and Physical Activity</i> (44 questions) NASPE 1.1, 1.3	The number of correct responses is between 0-26	The number of correct responses is between 27-35	. The number of correct responses is between 36-44
<i>Pedagogy</i> (17 questions) NASPE 6.5	The number of correct responses is between 0-10	The number of correct responses is between 11-13	The number of correct responses is between 14-17
<i>Science and Fitness</i> (14 questions) NASPE 1.4	The number of correct responses is between 0-8	The number of correct responses is between 9-11	The number of correct responses is between 12-14
<i>Safety</i> (3 questions) NASPE 6.3, 6.4	The number of correct responses is between 0-1	The number of correct responses is 2	The number of correct responses is 3
<i>Foundations and Assessment</i> 14 questions) NASPE 1.5, 7.1	The number of correct responses is between 0-8	The number of correct responses is between 9-11	The number of correct responses is between 12-14
<i>Fundamental Movement</i> (8 questions) NASPE 1.1, 1.3	The number of correct responses is between 0-4	The number of correct responses is between 5-6	The number of correct responses is between 7-8

Data Table for Physical Education Content Knowledge Exam (Assessment 1)

Data from Spring 2008: Number of candidates = 6

Acceptable Level: Candidates need to answer a minimum of 60% of the questions correctly.

	Does not meet standard (0-59% of questions)	Meets standard (60-80% of questions)	Exceeds standard (81-100% of questions)
<i>Skillful Movement and Physical Activity</i> (44 questions) NASPE 1.1, 1.3	1 (16.7%)	5 (83.3%)	0 (0%)
<i>Pedagogy</i> (17 questions) NASPE 6.5	1 (16.7%)	3 (50%)	2 (33.3%)
<i>Science and Fitness</i> (14 questions) NASPE 1.4	5 (83.3%)	1 (16.7%)	0 (0%)
<i>Safety</i> (3 questions) NASPE 6.3, 6.4	1 (16.7%)	0 (0%)	5 (83.3%)
<i>Foundations and Assessment</i> (14 questions) NASPE 1.5, 7.1	5 (83.3%)	1 (16.7%)	0 (0%)
<i>Fundamental Movement</i> (8 questions) NASPE 1.1, 1.3	1 (16.7%)	5 (83.3%)	0 (0%)

Data from Fall 2007: Number of candidates = 7

Acceptable Level: Candidates need to answer a minimum of 60% of the questions correctly.

	Does not meet standard (0-59% of questions)	Meets standard (60-80% of questions)	Exceeds standard (81-100% of questions)
<i>Skillful Movement and Physical Activity</i> (44 questions) NASPE 1.1, 1.3	1 (14.3%)	6 (85.7%)	0 (0%)
<i>Pedagogy</i> (17 questions) NASPE 6.5	2 (28.6%)	5 (71.4%)	0 (0%)
<i>Science and Fitness</i> (14 questions) NASPE 1.4	2 (28.6%)	4 (57.1%)	1 (14.3%)
<i>Safety</i> (3 questions) NASPE 6.3, 6.4	3 (42.9%)	3 (42.9%)	1 (14.3%)
<i>Foundations and Assessment</i> (14 questions) NASPE 1.5, 7.1	3 (42.9%)	4 (57.1%)	0 (0%)
<i>Fundamental Movement</i> (8 questions) NASPE 1.1, 1.3	1 (14.3%)	4 (57.1%)	2 (28.6%)

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Data from Spring 2007: Number of candidates = 8

Acceptable Level: Candidates need to answer a minimum of 60% of the questions correctly.

	Does not meet standard (0-59% of questions)	Meets standard (60-80% of questions)	Exceeds standard (81-100% of questions)
<i>Skillful Movement and Physical Activity</i> (44 questions) NASPE 1.1, 1.3	3 (37.5%)	4 (50%)	1 (12.5%)
<i>Pedagogy</i> (17 questions) NASPE 6.5	0 (0%)	5 (62.5%)	3 (37.5%)
<i>Science and Fitness</i> (14 questions) NASPE 1.4	5 (62.5%)	3 (37.5%)	0 (0%)
<i>Safety</i> (3 questions) NASPE 6.3, 6.4	0 (0%)	3 (37.5%)	5 (62.5%)
<i>Foundations and Assessment</i> (14 questions) NASPE 1.5, 7.1	7 (87.5%)	1 (12.5%)	0 (0%)
<i>Fundamental Movement</i> (8 questions) NASPE 1.1, 1.3	2 (25%)	2 (25%)	4 (50%)

Data from Fall 2006: Number of candidates = 11

Acceptable Level: Candidates need to answer a minimum of 60% of the questions correctly.

	Does not meet standard (0-59% of questions)	Meets standard (60-80% of questions)	Exceeds standard (81-100% of questions)
<i>Skillful Movement and Physical Activity</i> (44 questions) NASPE 1.1, 1.3	2 (18.2%)	9 (81.8%)	0 (0%)
<i>Pedagogy</i> (17 questions) NASPE 6.5	1 (9.1%)	7 (63.6%)	3 (27.3%)
<i>Science and Fitness</i> (14 questions) NASPE 1.4	11 (100%)	0 (0%)	0 (0%)
<i>Safety</i> (3 questions) NASPE 6.3, 6.4	0 (0%)	3 (27.3%)	8 (72.7%)
<i>Foundations and Assessment</i> (14 questions) NASPE 1.5, 7.1	11 (100%)	0 (0%)	0 (0%)
<i>Fundamental Movement</i> (8 questions) NASPE 1.1, 1.3	2 (18.2%)	6 (54.5%)	3 (27.3%)