

MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM:	June 2015
---	------------------

CONSIDERATION TO APPROVE THE MISSOURI QUALIFYING SCORES FOR THE MISSOURI CONTENT ASSESSMENTS FOR THE 2015-2016 TESTING YEAR

STATUTORY AUTHORITY: Sections 161.092, 168.011, 168.021, 168.071, 168.081, 168.400, 168.405, and 168.409, RSMo	<input type="checkbox"/> Consent Item <input checked="" type="checkbox"/> Action Item <input type="checkbox"/> Report Item
--	--

DEPARTMENT GOAL NO. 3:

Missouri will prepare, develop, and support effective educators.

SUMMARY:

The Missouri Content Assessments are a series of exit examinations that must be passed by perspective teachers, counselors, librarians, principals and superintendents. The new content assessments also address the need to meet the requirements of *No Child Left Behind – Highly Qualified Teachers (HQT)*. Beginning on September 2, 2014, the Missouri Content Assessments replaced the Praxis II Series of content tests. In total 7,118 content assessments have been administered as of April 12, 2015.

Five goals to be addressed during the development of the Missouri Content Assessments are that the test should be:

- based on unique needs and requirements of Missouri PK-12 schools;
- reflective of subject knowledge required for effective teaching in Missouri;
- consistent with Missouri Learning Standards and national standards for content knowledge;
- accurate and valid; and
- free from bias.

Industry standards define the processes used by Pearson to develop the Missouri Content Assessments. Over 800 representatives from Missouri PK-12 schools and/or educator preparation programs participated in the development of these assessments.

The Missouri Content Assessments are aligned to the areas of Missouri Certification. The Missouri Certification areas and the Missouri Content Assessments are listed in the supporting materials. A list of the approved assessments for the 2015-2016 testing year is also included in the supporting materials.

The Department's recommendation for setting the Missouri Qualifying Score for each of the assessments is based upon the results from the impact data gathered from the first year of testing (September 2, 2014 to April 12, 2015) and the recommendations of the Missouri Advisory Council for the Certification of Educators (MACCE) and the Missouri Advisory Committee for Educator Preparation (MABEP). The following Missouri Content Assessments were reviewed:

- Early Childhood Education (064)
- Elementary Education Multi-Content
 - English/Language Arts (007)
 - Mathematics (008)
 - Science (009)
 - Social Science (010)
- Middle School
 - Language Arts (011)
 - **Mathematics (008)*
 - **Science (013)*
 - Social Science (014)
- Secondary School
 - Agriculture (015)
 - **Biology (016)*
 - Business (017)
 - **Chemistry (018)*
 - Earth Science (019)
 - English (020)
 - **General Science (021)*
 - Marketing (022)
 - **Mathematics (023)*
 - **Physics (024)*
 - Social Science Multi-Content
 - Behavioral Science (030)
 - Economics (027)
 - Geography (028)
 - Political Science (029)
 - United States History (025)
 - World History (026)
 - Speech & Theatre (031)
 - Technology & Engineering (046)
 - Unified Science
 - Biology (032)
 - **Chemistry (033)*
 - Earth Science (034)
 - Physics (035)
- K-12 Certification
 - Art (036)
 - Family & Consumer Sciences (038)
 - Health (041)
 - Library Media Services (042)
 - Music – Instrumental & Vocal (043)
 - Physical Education (044)
 - World Languages
 - Chinese – Mandarin (037)
 - **French (039)*

- German (040)
 - **Spanish (045)*
- Special Education
 - Blind & Low Vision (047)
 - Deaf & Hard of Hearing (048)
 - Early Childhood Special Education (049)
 - Severely Developmentally Disabled (051)
 - Mild-Moderate Cross-Categorical Special Education (050)
 - Mild-Moderate Middle Level/Secondary Education Multi-Content
 - English Language Arts (052)
 - **Mathematics (053)*
 - Science (054)
 - Social Science (055)
- Student Services
 - Counselor (056)
- Administration
 - Building Level Administrator (058)
 - Superintendent (059)
- Temporary Authorization
 - Professional Knowledge – Middle School (062)
 - Professional Knowledge – Secondary School (063)

(**Italics indicates a shortage area*)

Upon approval of the Missouri Qualifying Scores, the Department will communicate the changes to candidates, educator preparation programs, and the public. Pearson will begin updating their systems for the new test year beginning on August 31, 2015.

PRESENTER(S):

Stacey Preis, Deputy Commissioner, Division of Learning Services, Paul Katnik, Assistant Commissioner, and Gale "Hap" Hairston, Director, Educator Preparation, Office of Educator Quality will assist with the presentation and discussion of this agenda item.

RECOMMENDATION:

The Department recommends that the State Board of Education maintain the Missouri Qualifying Scores for each of the 55 Missouri Content Assessments for the 2015-2016 testing year. In addition, the Department recommends changes in test time, number of test items, and reconvening of both the bias review committee and content advisory committees for certain assessments. The Department will continually review the impact data and submit a report in June 2016.

Missouri Department of Elementary and Secondary Education
Office of Educator Quality
Missouri Content Assessments
Recommendations for Missouri Qualifying Scores
June 16, 2015

Recommendation #1: The Missouri Qualifying Scores for the following Missouri Content Assessments will remain the same for the 2015-2016 academic year.

Early Childhood Education

Early Childhood Education

Middle School Education

English

Secondary Education

Agriculture

Business

Earth Science

English

General Science

Marketing

Social Science Multi-Content

Social Science

Behavioral Science

Economics

Geography

Speech & Theatre

Technology & Engineering

Unified Sciences

Biology

Earth Science

K-12 Certification

Art

Family & Consumer Sciences

Health

Library Media Specialist

Music – Instrumental & Vocal

Physical Education

World Languages

Chinese (Mandarin)

French

German

Special Education

Blind & Low Vision

Deaf & Hard of Hearing

Early Childhood Special Education

Severely Developmentally Disabled

Mild-Moderate Cross-Categorical

Mild-Moderate Multi-Content

ML/SS English Language Arts

ML/SS Science

Student Services

Counselor

School Administration

Superintendent

Professional Knowledge (TAC)

Middle School

Secondary School

Recommendation #2: Maintain each of the qualifying scores for the 2015-2016 academic year and for the following assessments, 15 minutes will be added to the current time allocation for each assessment and a reduction in the number of items of scorable and field-test questions to 64/16 for a total of 80.

Middle School Education

Mathematics
Science
Social Science

Secondary Education

Biology
Chemistry
Mathematics
Physics

Recommendation #3: Maintain each of the qualifying scores for the 2015-2016 academic year and for the following assessments, reconvene a Content Advisory Committee (CAC).

Middle School Education

Mathematics
Science
Social Science

Social Science Multi-Content

Political Science
United States History
World History

Secondary Education

Biology
Chemistry
Mathematics

Unified Sciences

Chemistry
Physics

Mild-Moderate Multi-Content

ML/SS Mathematics

Recommendation #4: Maintain each of the qualifying scores for the 2015-2016 academic year and for the following assessments, reconvene a Bias Review Committee (BRC).

Elementary Multi-Content

English Language Arts
Mathematics
Science
Social Studies

School Administration

Building Level Administrator



STATE BOARD OF EDUCATION

CONSIDERATION TO APPROVE

THE MISSOURI QUALIFYING

SCORES FOR THE

MISSOURI CONTENT

ASSESSMENTS

2015-2016 TESTING YEAR

June 16, 2015

Missouri Department of Elementary
and Secondary Education



Missouri Educator Gateway Assessments

- Recruit the Right People
- **Assess Content Knowledge**
 - 55 Certification Assessments
 - Increased Emphasis on Content
- Assess Performance



Goals – Missouri Content Assessments

- **The Missouri Content Assessments are:**
 - **Based on unique needs and requirements of Missouri**
 - **Consistent with state and national educator standards and practices**
 - **Reflective of subject knowledge required for effective teaching**
 - **Accurate and valid**
 - **Free from bias**

Involvement – Test Development Process

Missouri Participation – PK-12, Arts & Sciences, EPPs

- **Bias Review Committee (BRC)**
 - Reviews for sensitivity and fairness
 - Checks for bias
 - Reflects the diversity of the population
- **Content Advisory Committee (CAC)**
 - Assesses appropriate content for significance and accuracy
 - Provides assessments free from bias
 - Determines job-relatedness and relevance
- **Marker Response Committee – Constructed Responses**
 - Reviews constructed response items (CRI)
 - Identifies scores based upon quality of responses

Test Development Process

- **Conduct Program Planning**
- **Establish Advisory Committees**
- **Develop Test Framework**
- **Conduct Test Framework Review**
- **Conduct Content Validation Survey**
- **Develop Assessment Items**
- **Conduct Item Review Conference**
- **Marker Response Selection Meeting (CRI)**
- **Conduct Item Validation and Standard Settings**

Total Number of Participants

Missouri Content Assessments Development Activities & Level of Participation June 2, 2015

Activity	PK-12	EPPs	Total
Bias Review Committee	55	25	80
On-Line Framework Review	208	97	305
Item Validation & Standard Setting	248	122	370
Marker Response Selection Committee	9	14	23
Total Participation	520	258	778

Setting Standards on a Criterion-Referenced Test

- **Standard setting process**
 - Each panel defines the expected performance of a new teacher entering a classroom in Missouri
 - Examinees are not compared to other examinees, as in norm-referenced tests
- **Standard setting procedure referred to as the “modified Angoff method”**
- **Industry standard method used for many professions – education, law, medicine, etc.**

Considerations for Standard Setting

- **False Positive**

- Candidates passed that should have failed.
- Candidate enters the classroom who is not prepared.
- Candidate must pass other requirements.

- **False Negative**

- Candidates failed who should have passed.
- Talented candidates are excluded.
- Candidate may take the assessment again.

Operational Results: Overview 2014-2015

- **Data from candidates who tested from September 2, 2014 through April 12, 2015**
- **Candidate/Test Combinations: 7,118**
- **Of the 55 certification assessments, 37 had $N \geq 30$.**
- **Change is relative, difficult, and improvement occurs over time.**

Types & Timing of Assessments

- **Types of Assessments**
 - **49 – Assessments with Multiple Choice Items**
 - **6 – Assessments with Multiple Choice Items and Constructed Response Items**
- **Timing of Assessments & Item Analysis**
 - **Timing by Industry Standards**
 - **Most Assessments = 2 Hours**
 - **Importance of Item/Time Analysis**



Requested Information @ Registration

- **Gender – Male or Female**
- **Race**
 - **American Indian/Alaskan Native**
 - **Asian**
 - **Black/African-American (Not of Hispanic Origin)**
 - **Hispanic or Latino**
 - **Multi-Racial**
 - **Native Hawaiian/Pacific Islander**
 - **Other or Unknown**
 - **White (Not of Hispanic Origin)**

**Reports Generated
@ N > 30**

Working with MABEP & MACCE

- **Meetings: MABEP (6/2) & MACCE (6/5)**
- **Share Background Information**
- **Review & Discuss Results – Test by Test**
- **Recommendations with Rationale**
- **Sharing the Results**

Recommendations – MABEP & MACCE

- **MABEP**

- **Adjust Scores**

- ✓ - 3 SEM = 2%
- ✓ - 2 SEM = 2%
- ✓ - 1 SEM = 20%
- ✓ Panel = 71%
- ✓ + 1 SEM = 4%
- ✓ + 2 SEM = 2%

- **MACCE**

- **Adjust Scores**

- ✓ - 3 SEM = 4%
- ✓ - 2 SEM = 16%
- ✓ - 1 SEM = 36%
- ✓ Panel = 36%
- ✓ + 1 SEM = 4%
- ✓ + 2 SEM = 2%

Both groups recommended a reduction in the number of scorable items, review for bias and/or content and extending testing time.

DESE Recommendations

- **Missouri Qualifying Scores remain the same for 55 of the Missouri Content Assessments**
- **Adjustment in the number of questions and amount of time will be made on 7 Missouri Content Assessments.**
- **Reconvene Content Advisory Committees for 12 Missouri Content Assessments**
- **Reconvene Bias Review Committee for 5 Missouri Content Assessments**

Communication Plans

- **Informational Webinars**
- **Informational Memos**
- **State Board of Education Materials**
- **Preparation Programs**
 - **Candidates**
 - **Faculty Members**
 - **Deans/Unit Leaders & Senior Level Administration**

Contact Us – Office of Educator Quality

573-751-1668

EQPrep@dese.mo.gov



**Missouri Department of Elementary Education
Office of Educator Quality
Data Analysis – Missouri Content Assessments & Praxis II Series
June 2, 2015**

Certification Areas Missouri Qualifying Score = 220	New Missouri Content Assessments September 2, 2014 to April 12, 2015					Previous Praxis Scores 2013-2014	
	N=	Panel Based	Raw Score/Number of Scoreable Items	Attempt		Attempt	
				1st	Best	1st	Best
Early Childhood Education							
Early Childhood Education	306	PBS	56/80	85%	89%	93.9%	95.1%
Elementary Multi-Content							
English Language Arts	716	PBS	20/32	67%	73%	New Test	
Mathematics	706	PBS	19/32	70%	77%	New Test	
Science	704	PBS	19/32	63%	69%	New Test	
Social Studies	706	PBS	19/32	60%	66%	New Test	
Middle School Education							
English	184	PBS	52/80	75%	78%	86.1%	88.2%
Mathematics	215	PBS	49/80	38%	45%	77.0%	100.0%
* <i>Science</i>	145	PBS	46/80	43%	52%	76.8%	NA
Social Science	133	PBS	49/80	48%	56%	81.9%	84.3%
Secondary Education							
Agriculture	28	PBS	44/80	96%	96%	71.8%	NA
* <i>Biology</i>	66	PBS	53/80	45%	55%	76.8%	79.9%
Business	42	PBS	52/80	67%	71%	91.7%	97.6%
* <i>Chemistry</i>	25	PBS	48/80	40%	52%	54.4%	65.1%

<i>*Earth Science</i>	5	PBS	48/80	Low N	Low N	92.6%	89.6%
English	166	PBS	52/80	65%	68%	88.7%	91.9%
Family & Consumer Sciences	40	PBS	53/80	83%	90%	71.1%	77.2%
<i>*General Science</i>	23	PBS	43/80	43%	52%	52.3%	59.1%
Marketing	18	PBS	48/80	83%	89%	71.8%	72.1%
<i>*Mathematics</i>	99	PBS	54/80	14%	19%	71.8%	72.9%
<i>*Physics</i>	12	PBS	57/80	25%	25%	60.0%	66.7%
Social Science Multi-Content							
Behavioral Science	104	PBS	18/32	58%	65%	New Test	
Economics	106	PBS	18/32	58%	62%	New Test	
Geography	107	PBS	20/32	64%	66%	New Test	
Political Science	107	PBS	20/32	43%	47%	New Test	
United States History	112	PBS	20/32	45%	48%	New Test	
World History	109	PBS	20/32	50%	51%	New Test	
Speech & Theatre	23	PBS	51/80	70%	78%	97.7%	96.0%
Technology & Engineering	3	PBS	54/80	Low N	Low N	100.0%	89.3%
Unified Sciences							
<i>*Biology</i>	9	PBS	19/32	56%	67%	New Test	
<i>*Chemistry</i>	11	PBS	19/32	0%	18%	New Test	
<i>*Earth Science</i>	6	PBS	21/32	50%	67%	New Test	
<i>*Physics</i>	5	PBS	21/32	Low N	Low N	New Test	
K-12 Certification							
Art	107	PBS	53/80	66%	70%	61.2%	72.3%
Health	69	PBS	54/80	77%	78%	78.1%	86.0%
Library Media Specialist	92	PBS	59/80	78%	83%	64.9%	70.5%
Music – Instrumental & Vocal	148	PBS	48/80	76%	82%	52.0%	68.5%

Physical Education	176	PBS	52/80	64%	72%	74.2%	81.3%
World Language: Chinese	2	PBS	53/64	Low N	Low N	Low N	Low N
<i>*World Language: French</i>	18	PBS	44/64	50%	56%	54.2%	62.1%
World Language: German	4	PBS	44/64	Low N	Low N	62.5%	62.5%
<i>*World Language: Spanish</i>	57	PBS	36/64	60%	65%	57.6%	56.6%
Special Education							
Blind & Low Vision	4	PBS	54/80	Low N	Low N	62.5%	76.5%
Deaf & Hard of Hearing	15	PBS	53/80	87%	93%	NA	88.5%
Early Childhood Special Education	119	PBS	56/80	78%	82%	74.9%	76.9%
Severely Developmentally Disabled	8	PBS	53/80	75%	75%	88.9%	88.9%
Mild-Moderate Cross Categorical	351	PBS	54/80	77%	80%	88.9%	90.4%
Mild-Moderate Multi-Content							
<i>*ML/SS English Language Arts</i>	53	PBS	20/32	75%	79%	New Test	
<i>*ML/SS Mathematics</i>	52	PBS	18/32	44%	50%	New Test	
<i>*ML/SS Science</i>	49	PBS	19/32	57%	61%	New Test	
<i>*ML/SS Social Science</i>	51	PBS	21/32	71%	73%	New Test	
Student Services							
Counselor	168	PBS	56/80	70%	73%	72.6%	79.6%
School Administration							
Building Level Administrator	303	PBS	42/64	49%	52%	92.4%	93.2%
Superintendent	93	PBS	40/64	67%	70%	91.6%	NA
Professional Knowledge (TAC)							
Middle School	80	PBS	49/80	98%	98%	85.3%	86.1%
Secondary	55	PBS	51/80	76%	80%	81.7%	80.1%

**Shortage Area*