

# Mastery Examination Committee Final Report

January 2017



Connecticut State Department of Education

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## INTRODUCTION

Section 1 of [Public Act 15-238](#), that was passed by the Connecticut General Assembly on June 30, 2015, established a Mastery Examination Committee within the Connecticut State Department of Education (CSDE). This committee's diverse [membership](#), as prescribed in statute, was charged with studying the following:

- the impact of the statewide mastery examination on teaching, students and student learning time;
- the administration of the statewide mastery examination on computers and other devices;
- whether the statewide mastery examination is an appropriate student assessment;
- whether the statewide mastery examination
  - (1) responds to student needs,
  - (2) offers accommodations for students with disabilities and students who are ELs,
  - (3) informs teachers of student progress,
  - (4) aligns with current standards adopted by the State Board of Education (SBE), and
  - (5) complies with federal requirements;
- the feasibility of decreasing the amount of time required to complete the statewide mastery examination by using alternative formats or methods of delivery; and
- ways to facilitate timely communication between the SBE and local and regional boards of education regarding the statewide mastery examination.

As required by the public act, an [interim report](#) was submitted on February 15, 2016. This final report is being submitted as required on January 15, 2017. It outlines the key findings and recommendations from this committee. With the submission of this final report, the committee has terminated.

## COMMITTEE STRUCTURE AND PROCESS

The Public Act prescribes Committee membership as follows:

- The Commissioner of Education;
- The president of the Board of Regents for Higher Education or his designee;
- One representative from the State Board of Education;
- One representative and one practitioner from each of the following associations, designated by the association:

- The Connecticut Association of Boards of Education
- The Connecticut Association of Schools
- The Connecticut Association of Public School Superintendents
- The Connecticut Education Association
- The Connecticut Parent Teacher Association; and
- The American Federation of Teachers-Connecticut
- Four persons selected by the Commissioner of Education who shall include, but shall not be limited to, teachers, persons with expertise in performance evaluation processes and systems and;
- Any other person the commissioner deems appropriate.

The [Committee membership](#) that aligns with this requirement is included in the Appendix A. The Committee was chaired by the Commissioner of Education and staffed by the CSDE.

Starting in September 2015, the Committee met almost every month until January 2017 for a total of 15 meetings. The [agenda, minutes, and materials](#) from these meetings are linked in the Appendix B and available on the [Committee's website](#).

## THE STATEWIDE MASTERY EXAMINATION

Pursuant to C.G.S. Section 10-14n, “mastery examination” means (1) for students in grades three to eight, an examination that measures essential and grade-appropriate skills in reading, writing or mathematics, (2) for students enrolled in grades five, eight and ten, an examination that measures essential and grade-appropriate skills in science, and (3) for students enrolled in grade eleven, a nationally recognized college readiness assessment that measures essential and grade-appropriate skills in reading, writing and mathematics. This state statute affirms the requirements in section 1111(b)(2)(B)(v) of the federal Every Student Succeeds Act (ESSA). In addition, ESSA allows states to provide students with the most significant cognitive disabilities with alternate assessments aligned with the state’s academic standards and alternate academic achievement standards.

Connecticut’s statewide mastery examinations that are in compliance with federal and state laws and that were studied by this committee are outlined in the table below.

## A Summary of Connecticut’s Statewide Mastery Examinations

Note: The assessments listed in the table below are the mastery examinations that are required by the CSDE. Local districts may use a variety of other assessments to satisfy local needs.

Assessment	Testing Time	Delivery Mode	Standards	Growth	Accommodations and Supports	Validity and Reliability	
Smarter Balanced ELA and Math (Grades 3-8)	<i>The test is untimed. Average times for combined ELA and Math are presented below.</i>		Computer	<a href="#">Aligned to the Connecticut Core Standards</a>	<a href="#">Growth model</a> (narrated presentation)	Delivered online. Includes universal tools, designated supports, and accommodations. Examples include Text-to-Speech, Print Size and ASL Video. ( <a href="#">Accommodations Guide</a> )	<a href="#">Smarter Balanced Technical Report</a>
	Grade	Average Time					
	3	3:22					
	4	3:20					
	5	3:37					
	6	3:28					
	7	2:58					
8	3:02						
Connecticut SAT School Day ELA and Math (Grade 11)	3 hours	Paper and Pencil	<a href="#">Aligned to the Connecticut Core Standards</a>	No growth measure since it is only one year of testing.	Examples include Text-to-Speech by MP3, Large Print Booklet and Scribe ( <a href="#">Accommodations Guide</a> )	<a href="#">SAT Technical Manual</a>	
CAPT/CMT Science (Grades 5, 8 and 10)	Grade 5 65 Minutes	Computer	<a href="#">Aligned to Connecticut Science Frameworks</a>	No growth measure since these tests are administered in non-adjacent grades.	Delivered online. Examples include Text-to-Speech, and Print Size. ( <a href="#">Accommodations Guide</a> )	<a href="#">United States Department of Education Peer Review Approval Letter</a>	
	Grade 8 70 Minutes						
	Grade 10 100 Minutes						
<b>Alternate Assessments for Students with the Most Significant Cognitive Disabilities</b>							
Connecticut Alternate Assessment ELA and Math (Grades 3-8 and 11)	Untimed	Computer delivered but includes teacher interaction	<a href="#">Aligned to the Connecticut Core Standards</a>	No growth measure.	Teacher Completed ( <a href="#">Accommodations Guide</a> )	<a href="#">Technical Manual</a>	
CMT/CAPT Skills Checklist Science (Grades 5, 8 and 10)	Untimed	Computer delivered and completed entirely by teacher	<a href="#">Aligned to Connecticut Science Frameworks</a>	No growth measure.	Teacher Completed ( <a href="#">Accommodations Guide</a> )	<a href="#">United States Department of Education Peer Review Approval Letter</a>	

## DATA

The findings and recommendations that follow are informed by:

- Evaluations of the technical assessment evidence by technical experts;
- Reviews and discussions of the research;
- Analyses of administrative data about Connecticut students on the assessments; and
- Feedback from the membership of the various stakeholder groups.

All [evaluations, analyses, and documents](#) that informed the findings are referenced in Appendix B and also are posted on the [Mastery Examination Committee web site](#).

## FINDINGS

The findings from this committee are grouped into the following topic areas:

1. Overview
2. Testing Time and Online Testing
3. Meeting the Needs of Students
4. State Standards and Federal Requirements
5. Communication, Timeliness, and the Assessment System

### Overview

1. The primary purpose of the statewide mastery examination is to provide an efficient and reliable estimate of a student's overall performance in a subject area relative to grade-appropriate standards that enable valid interpretations of student achievement (in all tested grades and subjects) and progress (in grades 4 through 8 for ELA and Mathematics) at the individual and aggregate levels. Aggregate results from the statewide mastery examination can inform federal/state reporting, district/school accountability, program evaluation at state/district/school levels, educator evaluation and support, and district/school identification for support and recognition. However, please note the following important considerations:
  - a) The statewide mastery examination is an important indicator of student achievement and progress, but it is not the only one. Subsection (e) of C.G.S. Section 10-14n

appropriately prohibits the use of the “mastery examination” results as the sole criterion for student promotion or graduation.

- b) Aggregate results from the statewide summative assessment are an important indicator of academic achievement and progress, but not the only one. In the Next Generation Accountability System for districts and schools and in the educator evaluation and support system, state mastery examination scores are not the only indicator; other indicators are included to provide a more holistic picture.
2. The state standards and local curriculum should drive instruction. The mastery examinations are designed to be used for broad purposes such as accountability, reporting, and program evaluation; they are not intended to support day-to-day classroom instruction. The examinations would need to be inordinately lengthy in order to produce results that can be useful for every day instructional purposes. Past practices of solely using strand-level CMT/CAPT results to drive instruction were inappropriate.
3. Educators routinely seek professional learning and strategic tools to critically reevaluate their assessments to ensure that the tests are used appropriately or eliminated if redundant. This will help them to greatly reduce time devoted to local assessments while increasing time for classroom instruction. The CSDE has promulgated [Achieve, Inc.'s Student Assessment Inventory](#) to guide district decision-making regarding this matter.
4. Reviews of psychometric information from the statewide mastery examinations by the [members of Connecticut's Technical Advisory Committee](#) affirm that the overall scores from these examinations can validly be used as measures of overall proficiency and that scores based on the Smarter Balanced vertical scales in ELA and Mathematics can be used to measure the matched cohort growth of students in grades 4 through 8.
5. In close consultation with Connecticut educators and members of the Technical Advisory Committee, the CSDE has developed a [sophisticated growth model](#) for district and school accountability purposes. This model measures the growth achieved by the same student on the

Smarter Balanced ELA and Mathematics assessments from one grade to the next. This matched student growth model is considered the gold standard approach for measuring growth.

### Testing Time and Online Testing

6. The CSDE has undertaken two critical steps to reduce testing time for the statewide mastery examination:
  - a) For students in 11<sup>th</sup> grade, the SAT has replaced the Smarter Balanced as the mastery examination. Approximately two-thirds of Connecticut's 11<sup>th</sup> graders were already voluntarily taking the SAT; these students no longer have to sit for the Smarter Balanced assessment which was estimated to take over six hours. The redesigned SAT is better aligned to the Connecticut Core Standards than the old SAT and takes half the time i.e., three hours.
  - b) After [rigorous psychometric analyses of Connecticut data](#), the CSDE discontinued the Performance Task portion of the ELA Assessment in Grades 3-8. This reduction cut the ELA testing time in half.
7. The time devoted to the administration of the statewide mastery examination in ELA and Mathematics is substantially lower now than with the Connecticut Mastery Test (CMT) and the Connecticut Academic Performance Test (CAPT). The Smarter Balanced ELA and Mathematics assessments on average are completed in less than four hours while the CMT and CAPT assessments took six to seven hours.
8. All statewide mastery examinations, with the exception of the Connecticut School Day SAT are administered online.
9. Over the past three years, Connecticut has provided over \$35 million in financial resources to districts to support their technological infrastructure for online testing and other instructional purposes in an attempt to neutralize any impact of the "digital divide." In November 2013, the CSDE awarded over [\\$24 million in technology grants](#); subsequently in January 2016, the CSDE awarded an [additional \\$10.9 million](#) for the same purpose. Over \$15.6 million (~45%) of these technology resources were received by the 30 Alliance Districts.

10. Connecticut school districts are increasingly becoming comfortable with online testing for all students:

- a) For many years prior to Smarter Balanced, districts successfully administered online testing of the modified and alternate assessments, and provided some testing accommodations through an online platform.
- b) They have successfully administered the Smarter Balanced assessment online for three years in a row (i.e., 2013-14, 2014-15, and 2015-16).
- c) They were overwhelmingly in favor of transitioning the Science assessments away from paper-pencil testing to online testing; the 2016-17 CMT/CAPT science assessments will be delivered online for the first time.
- d) Though the ELA and Mathematics tests themselves are completed on average in less than four hours, districts are provided the flexibility of completing their testing of all students over a broad time frame. For 2016-17, districts were supportive of shortening this testing window from 12 to 9 weeks. This is an indication of their confidence that their existing technical infrastructure is adequate for the completion of the testing requirements within the shorter window.

11. Preliminary evidence from Connecticut students who took the Smarter Balanced ELA and Mathematics assessments in 2015-16 indicates that there were no effects on student performance based on the different types of devices (e.g., Windows, Chromebooks, Macintosh) used by students to access the tests. CSDE will continue to examine this in future years for all assessments.

### Meeting the Needs of Students

12. A wide variety of accommodations, designated supports, and universal tools are available to students with disabilities and English learners so that they can demonstrate their fullest potential on the statewide mastery examination. With the transition to online testing, the statewide mastery examination is now able to offer a substantially greater array of accommodations and supports to all students than was possible with paper-pencil testing.

13. Educators are still getting familiar with the plethora of accommodations and supports. They are seeking professional learning opportunities to better match the needs of the students to the available technological supports.
14. The high participation rates on the Connecticut School Day SAT (about 94 percent in 2015-16) as compared to the Smarter Balanced in Grade 11 (about 81 percent in 2014-15) indicate that students find the statewide mastery examination to be relevant to their needs/goals. Additionally, this change now provides all students with access at no-cost to a nationally recognized college readiness examination.

### State Standards and Federal Requirements

15. All statewide mastery examinations align to standards adopted by the State Board of Education. The State Board of Education adopted the Next Generation Science Standards (NGSS) in November 2015. A new assessment that is aligned to the NGSS is expected to be released in spring 2019.
16. The current CMT and CAPT science assessments are not well aligned to the performance expectations of the NGSS.
17. Educators need professional development and technical assistance to modify curriculum and instructional approaches so that students are better able to demonstrate their scientific knowledge and abilities on the performance expectations of the NGSS-aligned assessment.
18. Connecticut has submitted technical information about its assessments as part of the formal peer review process that is conducted by the U.S. Department of Education.

### Communication, Timeliness, and the Assessment System

19. The CSDE works in close consultation with local school districts in the design and implementation of the statewide mastery examination. Policy memoranda, newsletters, and online resources from the CSDE Performance Office keep local educators informed in a timely manner.

20. Educators are seeking support from the CSDE in the following areas:

- a) They would like to receive assessment results prior to the end of the school year.
- b) They are interested in aggregate results that provide more insight into aggregate student performance on specific content standards or assessment targets.
- c) They are seeking training/support on the appropriate use and interpretation of all assessment results in general.
- d) They also want training/support on how to utilize other non-standardized aspects of the assessment system (e.g., interim assessments) for more diagnostic purposes.

## RECOMMENDATIONS

The Connecticut State Board of Education recently adopted a five-year comprehensive plan that promises an excellent public education for every child through high expectations and standards, great teachers and leaders, and great schools. The following recommendations, that are focused on one aspect of the educational process – the statewide mastery examination, are offered in support of fulfilling that promise.

1. The CSDE should continue its current state mastery examinations in ELA and Mathematics. This stability is critical for educators and schools. It will enable them to foster a deeper knowledge of and expertise with implementing the standards. This stability will also ensure that comparable results are available over the longer term so that Connecticut can gauge the effectiveness of its activities.
2. The CSDE should develop, with extensive participation and feedback from Connecticut educators, a new science assessment that is aligned to the NGSS.
3. The CSDE should continue its own periodic reviews and psychometric evaluations of the mastery examinations. Ongoing feedback from stakeholders should continue to inform decisions regarding the content and design options of the mastery examinations.
4. The CSDE should provide ongoing training/support to districts in the appropriate uses of state mastery examination results and in the critical examination of local assessments to reduce testing time and use assessment resources effectively.

5. To ensure that schools continue to serve as a technology equalizer for students from low socio-economic backgrounds:
  - a. Connecticut should plan for ongoing technological investments in schools;
  - b. the CSDE should develop and disseminate technology competencies for both educators and students; and
  - c. educator preparation programs should ensure that teachers graduate with the requisite competencies.
  
6. The CSDE should bolster training/technical assistance that are grounded in best practices so that educators are better able to match the wide array of tools, supports, and accommodations on the state summative assessments to the needs of their students. This learning will further ensure that the alternate assessments are used only when most appropriate for the student and after all efforts to use the standard assessment have been exhausted.
  
7. The CSDE should continue to explore options to modify the testing schedule such that it is least disruptive and most responsive to the needs of students and educators. In particular, it should strive to provide results to districts prior to the end of the school year.

## CONCLUSION

In summary, the current statewide mastery examinations are reliable assessments that enable valid interpretations of student achievement and where appropriate, growth. They are administered efficiently with the least amount of time necessary. They are aligned to state standards, comply with federal requirements, and provide accommodations and supports.

The CSDE should continue its current mastery examinations in ELA and Mathematics while developing a new science assessment aligned to the NGSS. It should increase its offering of professional learning and supports to districts, continue its reviews and psychometric evaluations of the assessments, while striving to make the testing and results schedule more responsive to the needs of students and educators.

## APPENDIX

### A. Membership

1. Connecticut State Department of Education
  - a. Dianna R. Wentzell, Commissioner of Education
2. Board of Regents for Higher Education
  - a. Arthur Poole
  - b. Dr. Stephen Hegedus
3. State Board of Education
  - a. Allan Taylor, SBE Chair
4. Connecticut Association of Boards of Education
  - a. Patrice McCarthy
  - b. Richard Murray
5. Connecticut Association of Schools
  - a. Dr. Karissa Niehoff, Executive Director
  - b. Cathy Hill
6. Connecticut Association of Public School Superintendents
  - a. Dr. Joseph Cirusuolo
  - b. Kathy Greider
7. Connecticut Parent Teacher Association
  - a. Jim Accomando
  - b. Kathleen Kennedy
  - c. Don Romoser
8. Connecticut Education Association
  - a. Donald E. Williams, Jr.
  - b. Ted Goerner (replaced Marcia Ferreira)
9. American Federation of Teachers-Connecticut
  - a. Ed Leavy
  - b. Patti Fusco
10. Commissioner Appointed
  - a. Ajit Gopalakrishnan, Chief Performance Officer
  - b. Abe Krisst, Bureau Chief of Student Assessment
  - c. Dr. Jeffrey A. Villar, CT Council for Education Reform
  - d. Stephen Wright, SBE Member and Chair of SBE committee on Academic Standards and Assessment

## B. Meeting Agenda, Minutes, and Materials

1. October 19, 2016
  - Minutes (draft) [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  - Materials
    - Presentation: Device Effects and Lessons Learned [\[PDF\]](#)
2. September 21, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  - Materials
    - Summative Student Assessments in 2016-17 [\[PDF\]](#)
    - Presentation: Connecticut's Growth Model for the Smarter Balanced Summative Assessments in ELA and Math [\[PDF\]](#)
3. July 20, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
    - Presentation: Technical Aspects of SAT [\[PDF\]](#)
    - Presentation: Technical Aspects of CAPT Science [\[PDF\]](#)
    - Discussion: Types and Purposes of Assessment in Education [\[PDF\]](#)
4. June 8, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
    - Presentation: Accommodations Options for Special Populations [\[PDF\]](#)
    - Presentation: Connecticut's Alternate Assessment System [\[PDF\]](#)
5. May 17, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
    - Presentation: Usability, Accessibility, and Accommodations for Smarter Balanced Assessment [\[PDF\]](#)
    - Connecticut Summative Assessments table [\[PDF\]](#)
6. April 28, 2016
  - Minutes [\[PDF\]](#)
    - Presentation: Evaluating a Large-Scale Assessment System [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
7. March 24, 2016
  - Minutes [\[PDF\]](#)
    - Presentation: Building a Large-Scale Assessment System [\[PDF\]](#)
  - Agenda [\[PDF\]](#)

8. February 8, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  
9. January 11, 2016
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  - [Materials](#)
  
10. December 14, 2015
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  - [Materials](#)
  
11. November 23, 2015
  - Agenda [\[PDF\]](#)
  - Minutes [\[PDF\]](#)
  
12. October 27, 2015
  - Minutes [\[PDF\]](#)
    - Presentation by Scott Norton, Council of Chief State School Officers [\[PDF\]](#)
  - Agenda [\[PDF\]](#)
  
13. September 22, 2015
  - Minutes [\[PDF\]](#)
  - Agenda [\[PDF\]](#)

### C. Connecticut Technical Advisory Committee (TAC) Members

**Dr. Chris Domaleski**

Associate Director

The National Center for the Improvement of Educational Assessment, Inc.

**Dr. Peter J. Pashley**

Principal Research Scientist & Senior Director of Testing and Research

Law School Admission Council

**Dr. Jane H. Rogers**

Associate Professor

University of Connecticut

**Dr. Joseph Ryan**

Professor Emeritus

Arizona State University

**Dr. Hariharan Swaminathan**

Professor

University of Connecticut