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Issue Date: August 17, 2023

## Fact Sheet: VTCAP Student Assessment Results

### Background

This year, Vermont implemented for the first time the Vermont Comprehensive Assessment Program (VTCAP) General Assessment provided by Cognia in replacement of the Smarter Balanced Assessment and Vermont Science Assessment (VTSA). This new vendor relationship resulted from a required competitive bid process. The new modality is computer-based and all three subjects are adaptive (new for science) and assess our state standards for ELA, math, and science.

Now that students have completed testing, Individual Student Reports will be sent to families. These reports will provide information on how your student(s) test results compare to the statewide academic standards. When reviewing test scores, it is important to consider that these tests provide a broad overview of demonstrated learning and that results are most useful when viewed in the context of other information gathered by the teacher and the school. The primary purpose of our testing program is to provide families and school leaders with an increased understanding of how teaching and learning is taking place and how students' needs are being met.

We hope the following considerations will be supportive to you as you review student results and plan to share Individual Student Reports (ISRs) with parents and caregivers (beginning August 17, 2023). Thank you for all your hard work and dedication this year. Please feel encouraged to reach out to the Assessment Team with any questions.

### Technical Questions

#### What do we mean when we say a test is reliable and valid?

- 1) Reliability is a measure of how repeatable students' test scores are. If we could give the test again, to the same student, would that student achieve the same test score? What is the expected range of scores that might come from repeated testing and retesting? This question can be answered statistically using various measures of reliability and the standard error of measurement. We focus on reliability, because reliability is an important piece of evidence that a test score is valid. Although no test can be completely reliable, there are accepted thresholds that indicate a test is reliable enough to be interpretable.
- 2) Validity is an attempt to provide evidence that test scores are interpretable and useful for an intended purpose.



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- a) We look at the content standards we are trying to measure. Do they define the content we hope students to learn for a given content area and grade, for example Mathematics Grade 5?
  - b) We look at all the test questions we've created. Do these test questions apply to these standards? Does a correct answer require that students know and can do what is required by these standards?
  - c) We look at each test form we administer each year. Is each test form a reasonable assembly of questions to produce a comparable score between students on different forms and between students from different years? We use powerful statistical models, making sure the final score for each test form accounts for slight differences in the difficulty of the questions, to make sure that all scores are comparable (year over year and student to student).
- 3) The technical report for each administration provides evidence that each student's test score is a valid and reliable measure of what they know and can do.

### **Is a test score from a fixed-form test valid? Fixed vs Adaptive Forms**

- 1) A fixed test form gives students a range of questions (in terms of difficulty) to allow a variety of students to demonstrate what they know and can do.
  - a) This test form is built to meet accepted thresholds of test reliability. It is built using items (questions) that reflect what we intend to measure in terms of what students know and can do.
  - b) Fixed forms are useful for building testing programs that have yet to develop enough items to support an adaptive test.
  - c) Fixed forms can have some advantages for students that need accommodations. We can build technology into fixed forms that allows students to get the supports they need, such as audio descriptions of images or graphs as one example, that can't easily be provided to students taking an individualized adaptive form.
  - d) Allowing a student these accommodations results in test scores that are more comparable to scores of students on other forms who don't require these supports and are therefore more interpretable, useful and valid for accommodated students.
  - e) This improved interpretability is useful for an individual student score interpretation and use as well as aggregated score interpretations (school, district and state level).
- 2) An adaptive form gives students questions targeted to what they know and can do based on their performance on earlier questions in the test.
  - a) An adaptive form can exceed fixed forms in terms of reliability (all other things, such as the need for accommodation, remaining equal). This can result in a smaller standard error of measurement and more precise calculation of a student's individual score. For all tests, adaptive or fixed (traditional), we describe

this precision with an error bar that we include with individual student reports. Regardless of the type of test, it is important to note this error bar when considering a student's test score. On a different day, a student may have achieved a slightly different score. The error bar reflects our level of certainty.

- b) This improved certainty is useful for an individual student score interpretation and use. It is less important for aggregations, as the error is expected to be balanced. One student might do slightly better on a given day, and another student may do slightly worse. However, on average, when aggregating at the school, district or state level, these differences balance out, and the aggregation is likely to represent the true average performance of a group.

### **What about student scores that result from an incomplete test?**

- 1) Students who take an incomplete test can still get a test score. Because we use a model that isn't dependent on the number of questions (unlike the familiar number correct from classroom exams), an incomplete test can still generate a score that reflects student achievement, just as a complete test would.
- 2) As with a complete test, the error bar around a student's individual score should be considered carefully to ensure a reasonable interpretation of the score. For example, the error bar for a student who answers 20 questions is likely to be much wider than that for a student who answers 40 questions. The fewer items a student answers, the less confidence we have that the student score reflects what they could demonstrate on another given day. This is true of interpreting an individual student score.
- 3) With an aggregation, as described above, the uncertainty regarding an individual score is balanced. The aggregation of the scores washes away this uncertainty and results in a school, district or state aggregation that can be interpreted with much more certainty than a single student's score.

## **Preliminary Statewide Results for SY23 VTCAP General Assessment**

Please note that these results are preliminary and represent the population of tested students. The assessment results have not been reconciled with the end-of-year student enrollment census. After those data sources are reconciled the results will be updated. The results are not expected to change plus or minus 1%.

Please note that the VTCAP General Assessment is a new assessment with a unique scale score range. The lowest possible score on the VTCAP General Assessment is 1500 and the highest possible score is 2000. We ask that you refrain from making direct comparisons between the VTCAP General Assessment and the Smarter Balanced Assessments at this time. A linking study is currently being conducted that will statistically link the VTCAP General Assessment to the Smarter Balanced Assessments. The linking study will result in a concordance table, which can be used to

compare the VTCAP General Assessment to the Smarter Balanced Assessments. AOE will share the concordance table with LEAs by December 2023.

Please note that the results below do not include grade 9 students. The results for grade 9 students will be available starting September 19, 2023. Further, these results do not include students who took the VTCAP Alternate Assessment (MSAA). AOE is currently working to merge the results from VTCAP General and Alternate Assessments.

The official results, which will be shared via the State report card, and the associated accountability determinations, are currently expected December 2023.