RIT Stability Through the Transition to Common Core-aligned MAP® Tests

How Using MAP to Measure Student Learning Growth is Reliable Now and in 2014

While many educators expect the Common Core State Standards (CCSS) to be more rigorous than previous state standards[i], some wonder if the transition to CCSS and to a Common Core-aligned MAP test will have an impact on their students' RIT scores or the NWEA norms.

MAP assessments use a proprietary scale known as the RIT (**R**asch un**it**) scale to measure student achievement and growth. The RIT scale, based on item response theory (IRT), has been used since the late 1970s by NWEA and is a proven, stable scale for educational assessment.

The principle behind the RIT scale is simple: Test questions vary in difficulty and can be given a score on the RIT scale. A student's achievement level can then be measured on the same scale by referencing the questions they were able to answer correctly.

RIT Scale –

Since the RIT scales are independent of standards alignment, transitioning between two tests is not anticipated to have a significant impact on students' RIT scores, so long as a suitably rigorous CCSS-aligned curriculum has been fully implemented.

Every item in MAP tests is calibrated against one of the stable RIT scales: Reading, Language, Math or Science. Student responses on these items are used to generate a final RIT score for each student.

An individual item with its associated RIT value may appear in tests aligned to various learning standards, such as state standards and the Common Core State Standards. Regardless of the standards alignment of a particular test, a given item has a single RIT value associated with it. This RIT value is obtained using a rigorous calibration process in which each item is field tested with thousands of students across the nation.

The purpose of MAP tests is to measure growth by examining RIT scores over time. If two different MAP tests are on the same scale (e.g. Math) and measure similar constructs[ii], then scores for these two tests can be compared directly. MAP tests aligned to CCSS, as well as other state standards (state-aligned) on a given scale, measure similar constructs due to the high degree of content overlap among learning standards. **This underlying design of MAP tests is critical to ensuring that RIT scores carry the same meaning, in terms of student ability, regardless of which test was used to obtain them.** Because the RIT scales are

independent of standards alignment, transitioning between two tests is not anticipated to have a significant impact.

What is Different about the CCSS?

States that are transitioning (or who have already transitioned) to teaching the CCSS, and are working to understand the gap between their state standards and what's required by the CCSS, are seeing some key shifts.

- In Mathematics, these key shifts are around focus, coherence, and rigor. Mathematics teachers are seeing a narrowing of the scope of content and a deepening of how time and energy are spent in key foundational areas. They are seeing learning connections across the grades and a deep focus on conceptual understanding, procedural skill and fluency, and application of skills in problem solving situations.
- ELA teachers are seeing a shift to more content-rich non-fiction, a focus on evidence from text and regular practice with complex text and its academic language.

The CCSS gets at content in a deeper and more conceptual way, which has not always been typical across state standards.

How are Common Core MAP tests aligned to the Common Core State Standards?

Given that MAP tests are intended to be used as growth measures, NWEA uses a **cross-grade goal structure** to represent the content and skills that are included in a set of academic standards. The creation of the NWEA goal structure is a critical step of the test development process, during which NWEA Content Specialists follow a rigorous process to meaningfully organize the standards, including grade level specific content/skills, into cross-grade goals and develop an item pool that is aligned to the goal structure.

Items are the foundational units of a test. At NWEA, items are developed to measure specific concepts/skills. When NWEA creates CCSS-aligned MAP tests, we review the entire NWEA item bank and applicable items are aligned to the individual CCSS standards.[iii] These aligned items form the item pool of a CCSS test and they are then organized according to the goal structure for the test. Today, most of these items are also used in state-aligned tests; in fact, current CCSS-aligned MAP tests share about 80-90% items with other state-aligned tests.[iv] In addition, since our CCSS-aligned MAP tests comprise a broad sampling of NWEA test items, they can appropriately reference the NWEA norms.

Will we see a drop in our students' RIT scores?

Partners Who Have Fully Transitioned to the CCSS:

For partners who have fully transitioned to the CCSS – in terms of both instruction and MAP testing – NWEA does not anticipate your transition to the CCSS will result in any significant impact to RIT scores or percentile ranks.

Partners Who Have <u>Not</u> Fully Transitioned to the CCSS:

It is important to note that, in order for the scores to be meaningfully used, test content and instructional content must be aligned. The greater the discrepancy between the instructional content and test content, the more likely that a drop in scores will be observed. As a result of a

drop in scores, the percentile ranks in relation to the current norms may be lower, but the relative rankings among students should not be affected.

For example, if you migrate to the CCSS-aligned tests when your students are still receiving instruction aligned to your previous state standards, you may see a drop in RIT and percentile ranks for all students in that particular grade level, due to item pools that are aligned to a different instructional framework.

In other words, *if you have not fully transitioned to the CCSS, you are likely to see a drop in test scores*. This drop may be indicative of a difference between the current curriculum and the CCSS, if all other factors are constant.

We know that different states have different CCSS implementation plans; when a state's CCSS instructional implementation and their test implementation are not aligned, we would expect some drop in the RIT scores due to an alignment mismatch between test content and instructional content.

Could the NWEA Norms be impacted?

The NWEA norm studies are based on grade level (K-11) samples of students from school districts across all 50 states. As these performance data are used to develop the NWEA norms, we anticipate an atypical shift in our normative data in the next few years. We cannot predict the pattern of the shift caused by CCSS migration and the pattern may vary with the scale (subject area) and the grade level.

Once all CCSS-adopting states fully implement the CCSS, we expect the normative data to stabilize. NWEA is closely monitoring this shift and may adjust the timing of our next norming study to allow for the accumulation of more stable data. NWEA conducts a norming study every 3 years; the next norming study is due in 2014.

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[i] Year Two of Implementing the Common Core State Standards: States' Progress and Challenges. Nancy Kober and Diane Stark Rentner, Center on Education Policy. http://www.cep-dc.org/displayDocument.cfm?DocumentID=391

[ii] The construct of a test is a theoretical representation of the underlying traits, concepts, attributes, processes, or structures the test is designed to measure and directly relates to test validity (Cronbach, 1971; Messick, 1989).

[iii] Includes CCSS adoption with up to an additional 15% of the standards determined by the state.

[iv] NWEA continuously develops and releases new items to improve the depth and breadth, and the number of CCSS-specific items will increase over time. When there is a significant difference between the item bank of a CCSS-aligned test and a state-already [is "state-already" correct?] test in the future, the difficulty level of the tests may diverge then.