

SUMMARY

easyCBM[®] K-5 Math Alignment to the Common Core State Standards

Interim and formative assessment are essential components of school improvement efforts (Black & William, 1998), including the Response to Intervention (RTI) approach to meeting student learning needs (Fuchs & Fuchs, 2001). In an RTI approach, students are classified as "at-risk" of not meeting grade-level expectations through screening assessments, typically administered seasonally over the academic year. Students performing below a district- or school-designated level on a benchmark screener are given instructional intervention designed to improve achievement and are also administered frequent progress-monitoring probes to track the effect of intervention and ensure adequate gains (Fuchs, Mock, Morgan, & Young, 2003). The RTI approach is intended to be dynamic, with students receiving individualized intervention based on their performance and learning needs. The RTI process, that of student classification and subsequent intervention and progress-monitoring, ideally results in students meeting grade-level expectations based on exceeding the designated performance level. Results of benchmark and formative assessments are then a key basis for the validity of score interpretation and instructional decision-making within the context of RTI (Fuchs, et al., 2003).

Importance of Standards Alignment: A critical assumption underlying valid instructional decisions is strong alignment between instruction, assessments, and academic content standards. In 2010, the Common Core State Standards (CCSS) for Mathematics were released to provide a unified set of expectations for developing mathematics skills across grade levels (NGA & CCSSO, 2010). Currently, 45 states have formally adopted the CCSS, most also joining one of two state-led consortia developing summative and formative assessments aligned to the CCSS. Consequently, researchers and educators are designing curricula, instruction and assessments that are aligned with the CCSS, putting pressure on existing assessment systems outside of the two consortia to evaluate the degree to which their products align with CCSS and modify them as needed.

easyCBM[®] is an online benchmark and progress monitoring assessment system designed for use within an RTI approach. As of spring 2012, over 2 million students had been administered easyCBM[®] assessments in reading and mathematics by over 200,000 teachers. Existing easyCBM[®] math assessments were designed for use in grades K-8 and were written to align with the National Council of Teachers of Mathematics *Curriculum Focal Points* (Nese et al., 2010). For each grade level, there are 13 alternate forms available: 3 designated for seasonal benchmark screenings (45 items on each) and the remaining 10 designated for progress

monitoring (16 items on each). Framed within the context of instruction and decision-making increasingly couched within both an RTI approach and the CCSS, this poster presents the results of an alignment study between existing easyCBM[®] elementary grades K-5 benchmark mathematics assessment items and the CCSS.

Project Design: Five raters in each of grades K-5 participated in the alignment study. We selected raters based on: (a) content and pedagogical expertise, (b) general and special education experience, and (c) familiarity with the CCSS. Based in part on Webb's alignment model (Webb, 2002), raters at each grade level examined 135 benchmark items that were counterbalanced to reduce ordering effects. A total of 810 items across K-5 were thus examined for alignment. When raters identified an item as being aligned to an on- or prior-grade CCSS, the strength of such alignment (on a scale of 0 to 2) was also ranked. When raters indicated that no standard was aligned to a given item, they were asked to indicate whether or not the item aligned to an essential skill addressed within the grade-level CCSS.

Results: We have currently completed preliminary analyses for grade 1. Preliminary findings suggest that approximately 87% of the benchmark items are aligned to on- or prior-grade CCSS. Among these items, approximately 64% are aligned to grade 1 CCSS, with the remaining items aligned to kindergarten CCSS.

On average, 19 items out of 45 items on each benchmark were ranked as *strongly aligned* (2 on the scale of 0 to 2), while 18 additional items were ranked above 1 on the scale. Three additional analyses will be presented at the conference. First, alignment data for all items will be aggregated and analyzed by specific CCSS standard, domain strand, grade and essential skill. Second, rater reliability will be examined by computing intraclass correlation coefficients through a two-level hierarchical cross-classified model. Last, the proportion of standards/domains addressed by items will be calculated to evaluate the categorical concurrence and balance of representation of each seasonal easyCBM[®] benchmark assessment. Complete results for grades K-5 will be presented at the conference.

Objectives/Learning Outcomes: Conference participants will learn of CCSS alignment results for a nationally- and broadly-used mathematics benchmark and formative assessment system. Such information can help enhance the validity of data score interpretations and decision-making (e.g., student classification and instructional decisions made in response to student performance) within an RTI approach to teaching and learning couched in the current context of standards-based instruction and accountability.

References

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