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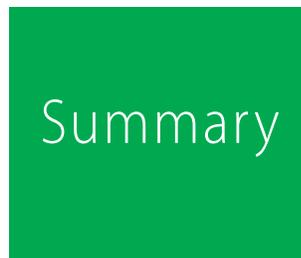At Education Development
Center, Inc.

New measures of English language proficiency and their relationship to performance on large-scale content assessments

Summary

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At Education Development
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New measures of English language proficiency and their relationship to performance on large-scale content assessments

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January 2009

Prepared by

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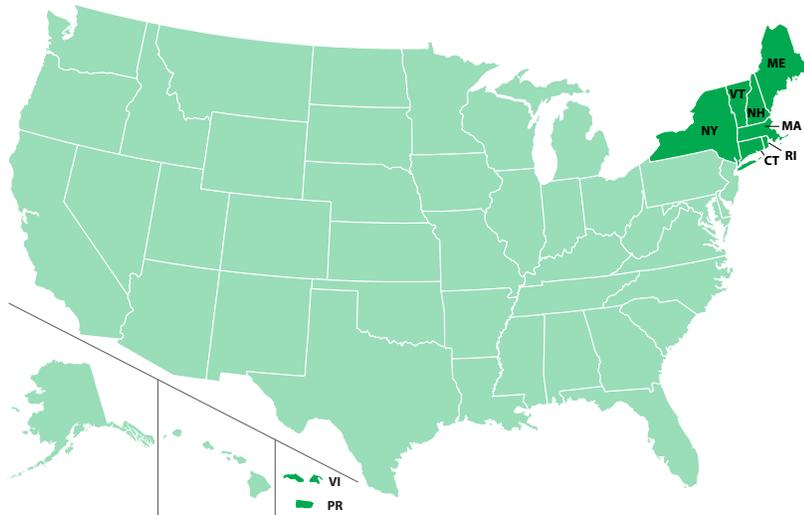**Education Development Center, Inc.**

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Issues & Answers is an ongoing series of reports from short-term Fast Response Projects conducted by the regional educational laboratories on current education issues of importance at local, state, and regional levels. Fast Response Project topics change to reflect new issues, as identified through lab outreach and requests for assistance from policymakers and educators at state and local levels and from communities, businesses, parents, families, and youth. All Issues & Answers reports meet Institute of Education Sciences standards for scientifically valid research.

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This report is available on the regional educational laboratory web site at http://ies.ed.gov/ncee/edlabs.

Summary

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New measures of English language proficiency and their relationship to performance on large-scale content assessments

Using assessment results for 5th and 8th grade English language learner students in three Northeast and Island Region states, the report finds that the English language domains of reading and writing (as measured by a proficiency assessment) are significant predictors of performance on reading, writing, and mathematics assessments and that the domains of reading and writing (literacy skills) are more closely associated with performance than are the English language domains of speaking and listening (oral skills).

As the English language learner population grows throughout the Northeast and Islands Region, state departments of education are seeking assistance in creating comprehensive approaches to meeting English language learner students' academic needs in both instruction and assessment. Driving educator concerns is the fact that English language learner students consistently score lower on state assessments than students for whom English is their first language. In the context of the No Child Left Behind Act of 2001 (NCLB), states are seeking information to inform their efforts to reduce achievement gaps and to bring English language learner students, along with other traditionally underserved student subgroups, to proficiency on statewide assessments.

In response to a request from New Hampshire, Rhode Island, and Vermont to explore how English language proficiency measures may be related to performance outcomes on content assessments, this report uses the results of two new large-scale assessments—the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) English proficiency assessment and the New England Common Assessment Program (NECAP)—to address the following research question:

> *How does performance in four language domains on an English language proficiency assessment predict English language learner students' performance on a state content assessment after accounting for student and school characteristics?*

Based on findings from previous research, this report hypothesized that after controlling for individual student characteristics such as gender, poverty status, disability status, race/ethnicity, age for grade, and years in English language learner programs as well as

for school characteristics such as school size, school poverty, racial composition, English language learner student density, and geography, measures of academic English language proficiency would predict English language learner student outcomes on state content assessments. The report also hypothesized that measures of English language literacy (reading and writing) would be stronger predictors of content assessment outcomes than would measures of English oral proficiency (listening and speaking).[1]

To test these hypotheses, multilevel regression models were fit to assessment score data for 5th and 8th grade English language learner students in New Hampshire, Rhode Island, and Vermont. After controlling for student and school characteristics, English language proficiency scores (as measured by ACCESS) were indeed significant predictors of content assessment outcomes (as measured by the NECAP). The models also showed that after accounting for other covariates, ACCESS measures of English literacy were significantly stronger predictors of NECAP outcomes than were ACCESS measures of oral proficiency. Specifically, this report finds that:

- NECAP reading scores in both 5th and 8th grades were significantly and positively predicted by ACCESS reading, writing, and speaking scores after controlling for other ACCESS scores and student and school characteristics. Among the ACCESS domain scores the strongest predictor of NECAP reading outcomes was ACCESS reading scores, followed by ACCESS writing and speaking scores. ACCESS domain scores explained 30 percent of the variance in NECAP reading scores in 5th grade and

23 percent in 8th grade after controlling for student and school covariates.

- NECAP writing scores in 5th grade were significantly and positively predicted by ACCESS reading and writing scores and in 8th grade by all four ACCESS domain scores after controlling for other ACCESS scores and student and school characteristics. ACCESS reading and writing scores were the strongest predictors of NECAP writing outcomes in 5th and 8th grades. ACCESS domain scores explained 28 percent of the variance in NECAP writing scores in 5th grade and 25 percent in 8th grade after controlling for other covariates.

- Like NECAP reading and writing scores, NECAP mathematics scores in both 5th and 8th grades were positively and significantly predicted by ACCESS reading and writing scores after controlling for other ACCESS scores and student and school characteristics. Among the ACCESS domain scores ACCESS reading scores were the strongest predictor of NECAP mathematics outcomes for both 5th and 8th grade English language learner students, followed by ACCESS writing scores. ACCESS domain scores explained 21 percent of the variance in NECAP mathematics scores in 5th grade and 14 percent in 8th grade.

- ACCESS reading and writing scores were significant predictors of NECAP reading, writing, and mathematics scores in 5th and 8th grades. ACCESS speaking and listening scores were significant predictors of NECAP scores for only four outcomes: 5th and 8th grade reading (speaking), 8th

grade writing (speaking and listening), and 5th grade mathematics (listening).

In sum, ACCESS measures of English literacy skills (reading and writing scores) were significant predictors of NECAP reading and writing outcomes in 5th and 8th grades. Notably, ACCESS reading and writing scores were also positive and significant predictors of NECAP mathematics scores. In addition, except for 8th grade writing, ACCESS reading and writing scores were significantly stronger predictors of NECAP outcomes than were ACCESS listening and speaking scores. This evidence supports the original hypothesis that ACCESS measures of English literacy skills are better predictors of NECAP content outcomes than are ACCESS measures of English oral skills (listening and speaking). Readers are cautioned, however, that the analyses and interpretations presented are correlational and therefore do not allow causal conclusions.

In 5th and 8th grades, ACCESS scores explained 14–30 percent of the variance in scores for all three NECAP content scores (reading, writing, and mathematics) after controlling for background student and school characteristics. The ACCESS scores explained more of the variance in 5th grade (from 21 percent of NECAP mathematics scores to 30 percent of NECAP reading scores) than in 8th grade (from 14 percent of NECAP mathematics scores to 25 percent of NECAP writing scores).

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Note

1. In this report "stronger" predictors are defined as those whose regression coefficients are larger than those of other noted predictors in the study's regression models. A predictor is "significantly stronger" than another predictor when the difference between the regression coefficients is greater than zero at the $p < 0.05$ level.