Review of Literature on ELL Accommodations Allowed for Use with the District of Columbia Comprehensive Assessment System Mathematics, Science, Reading, and Writing assessments

Abstract

This review is an initial step for Office of the State Superintendent (OSSE) to design a study to evaluate empirically the validity of test scores with and without accommodations on the District of Columbia Comprehensive Assessment System (DC CAS). The review examines the extent to which the 16 accommodations allowed to English language learners (ELLs) on the DC CAS mathematics, science, reading, and writing assessments are found in empirical studies, recommended by experts, and/or allowed in other state assessment policies/guidelines. Recommendations include empirically examining student test scores under accommodated and unaccommodated conditions to determine the effectiveness of ELL accommodations offered on the DC CAS, as well as the degree to which ELLs' English language proficiency mediates the effect of each accommodation**.**

Background

Defining Accommodations for ELLs

Guidance from the Department of Education (ED) requires that all students, including ELLs, be assessed with state tests in the areas of mathematics, science, and reading/language arts (U.S. Department of Education, 2006, p. 3)**.** However, assessment scores of ELLs may be distorted by language demands unrelated to the construct being assessed or construct-irrelevant variance. When construct-irrelevant variance occurs, "test results may not reflect accurately the qualities and competencies intended to be measured" (Sireci, Han, & Wells, 2008, p. 91). Due to linguistic and cultural barriers unrelated to the construct being assessed, results of an academic test given in English may not adequately represent what an ELL knows and can do in the content area being assessed.

Acknowledging the potential complications in validly assessing ELLs, ED guidance allows for the provision of accommodations to ELLs, as one tool for leveling the playing field during testing (U.S. Department of Education, 2006, p. 3). Thus, all 51 SEAs have created ELL accommodation policies to provide LEAs and schools with guidance that explains what accommodations are and how to appropriately assign and administer them so that state ELL achievement scores are a more accurate representation of ELLs' mastery of content knowledge.

Accommodation of ELLs involves changes to testing procedures, testing materials, or the testing situation in order to allow students meaningful participation in a content assessment. Effective accommodations for ELLs address the unique linguistic and socio-cultural needs of the student without altering the test construct. Accommodated scores should be sufficiently equivalent in scale that they can be pooled with unaccommodated scores (Acosta, Rivera, & Shafer Willner, 2008, p. 38). Accommodations may mitigate construct-irrelevant variance due to language, but they must meet standards of validity and reliability established in the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999). That is, an accommodation cannot alter the construct being assessed or provide undue assistance in answering the test item (Eliott, Kratochwill, & Schulte, 1998; Koenig & Bachman, 2004).

Empirical Research on Accommodations for ELLs

To measure the extent to which accommodations "simply remove an English proficiency barrier" (Sireci, et al., 2008, p. 115), researchers have conducted experimental and quasi-experimental studies to compare ELL and non-ELL test scores under either random assignment or a counterbalanced repeated measures design. Sireci et al. (2008) explain:

> When accommodations are used for ELLs, specific validity questions that are raised include the following: (a) Has the accommodation changed the construct measured? (b) Are scores from accommodated test comparable to scores from the standard version? (c) Do the scores from accommodated tests provide more accurate measurement of ELLs' knowledge and skills relative to scores from the standard test? And (d) Does the accommodation provide and unfair advantage to ELLs? (p. 117)

The goal of these studies is to determine if there is an interaction between student group and accommodation status. That is, these studies attempt to establish if ELLs benefit from use of the particular accommodation, while non-ELLs do not benefit from the same accommodation.

Two recent meta-analyses have examined the ELL accommodations research base to determine the extent to which particular accommodations have a positive effect on ELL test scores without changing non-ELL scores. In one meta-analysis, Kieffer, Lesaux, Rivera, and Francis (2009) found: (1) just one accommodation (i.e., providing English dictionaries or glossaries) had a statistically significant effect on ELL test scores, which led to only a small reduction in the achievement score gaps between ELLs and non-ELLs; (2) bilingual word-to-word dictionaries were more effective for students with intermediate or advanced levels of English language proficiency and literacy in the native language; and (3) students receiving content instruction in their native language performed better on content area assessments given in their native language than on assessments given in English. Kieffer et al. (2009) conclude that accommodations intended to reduce construct irrelevant variance due to English proficiency are not particularly effective mainly because these accommodations address "unnecessary language" use on the assessment, rather than focusing on the vital role played by students' level of academic English in the content area.

Pennock-Roman and Rivera's (2010) meta-analysis performed a similar analysis of effect size to determine the effectiveness of an ELL accommodation. They examined effect size using the following method:

> If (a) the mean [test score] on the accommodated version is higher by a non-trivial amount for ELLs [and] (b) the two means [for an accommodated version of the test and an unaccommodated version of the test] are essentially equal for non-ELLs, [then] (c) the accommodation may be effective in providing greater access to test content by reducing construct irrelevant variance [in this case due to English proficiency]. However, if a higher mean is also found for non-ELLs on the accommodated version, the accommodation may have lowered the difficulty of the test, or possibly altered the construct being measured. (p. 8)

Suggesting that Keiffer et al.'s (2009) meta-analysis underestimates potential effect sizes for effective accommodations, the Pennock-Roman and Rivera (2010) meta-analysis took into account particular circumstances under which each accommodation might be more efficacious: English language proficiency, test format, and time constraints. Pennock-Roman and Rivera (2010) found that (1) computer-administered glossaries were effective even when time limits were restricted; (2) the plain English accommodation was more effective for ELLs with high intermediate levels of English language proficiency; (3) the Spanish test version was the most

effective accommodation for Spanish-speaking students with low proficiency in English, and; (4) extended time had a significant effect on ELL test scores.

Limitations of the ELL Accommodation Research Base

A limited research base on ELL accommodation, marked by equivocal findings, preclude a conclusion on the effectiveness of ELL accommodations in reducing construct irrelevant variance due to low English proficiency. Both the Kieffer et al. (2009) and Pennock-Roman and Rivera (2010) acknowledge the limited research base on ELL accommodations in their meta-analyses. Kieffer et al. (2009) identified 11 empirical studies conducted between 1999 and 2005, and Pennock-Roman and Rivera (2010) identified two additional experimental studies for a total of 14 studies conducted between 1990 and 2007. In comparison, researchers conducted 32 experimental studies on accommodations for students with disabilities in a one-year period (Zenisky & Sireci, 2007, p. 4). Even so, as Johnstone, Altman, Thurlow, & Thompson (2006) note, the accommodations research base for both students with disabilities and ELLs "is still in its nascence. There is still much scientific disagreement on the effects, validity, and decision-making surrounding accommodations." (Johnstone et al., 2006 p. 12). More empirical research is needed for educators to make research-validated decisions on the use of accommodations for ELLs.

To address research limitations, the review consults a set of recommendations issued by a recently-convened panel which included experts knowledgeable about research, policy and practice in the areas of ELL assessment, psychometrics, language testing, second language acquisition, and instruction of ELLs, including Jamal Abedi, Gary Cook, Richard Duran, and Margo Gottlieb (Acosta, Rivera, & Shafer Willner, 2008). The study involved the application of a Delphi technique to obtain consensus from an expert panel about which accommodations were ELL-responsive. Members of the panel relied on professional judgment to vet the 104 accommodations found in state policies and/or guidelines (Shafer Willner, Rivera, & Acosta, 2008) and then mapped these 29 ELL-responsive accommodations to English language proficiency (ELP) levels and to selected student background variables such as native language proficiency and schooling background. The appendix of this review includes charts created from the Delphi study that present definitions of accommodations and an overview of the recommendations for matching accommodations based on student's English language proficiency level.

The Acosta et al. (2008) expert panel recommendations build on the emerging trend within the empirical research base to examine the effect of ELL accommodations on test scores by delineating ELLs in relation to different levels of English language proficiency and other background characteristics. For example, Kopriva, Emick, Hipolto-Delgado, and Cameron (2007) examined third and fourth grade ELL students taking content tests with accommodations. Using a randomized method, they found ELLs who were assigned accommodations matched to their discrete linguistic and cultural needs (i.e., English proficiency level, literacy in native language and English, and prior schooling) scored higher than ELLs who were assigned accommodations without regard to student profile, as well as ELLs who were offered no accommodations. In a study on eighth grade Mathematics students, Hofstetter (2003) found students performed best when the language of the mathematics assessment matched the language of the instruction, implying that educators must consider ELLs' language of instruction when assigning accommodations.

The remainder of this review examines each of the accommodations allowed for use on the DC CAS. Accommodations are evaluated based on existing empirical research, expert opinion, and allowance in other state accommodation policy guidelines. The accommodations are grouped by type of support provided: reference materials, read aloud, simplification, and indirect linguistic support.

Review of ELL Accommodations Allowed in the DC OSSE Testing Accommodations Manual

Overview of Accommodations Offered

The Office of the Superintendent (OSSE) provides guidance for accommodating ELLs in its *DC OSSE Testing Accommodations Manual*. The goal of this manual is to ensure students receive support that best matches their individualized accommodation needs. The *DC OSSE Testing Accommodations Manual* bases its policy on accommodations on empirical research.

As recommended by Rivera et al. (2008), accommodations in the DC manual are organized by the type of linguistic support (i.e., direct linguistic or indirect linguistic). Five accommodations provide oral direct linguistic support; two offer written direct linguistic support; and 9 provide indirect linguistic support. Table 1 lists the seven direct and nine indirect linguistic support accommodations allowed for use on the DC CAS.

Table 1

Accommodations Allowed for Use by ELLs on DC CAS Assessments

Direct linguistic support	Indirect linguistic support
1. Oral reading of the test items (mathematics, science, and writing only)	8. Extended testing time
2. Oral reading of directions	9. Use of place markers to maintain place
3. Repetition of directions	10. Time of day most beneficial to student (morning or afternoon)
4. Simplification of directions	11. Breaks during a subtest (lasting no longer than 3-5 minutes)
5. Simplification of writing prompt	12. Flexible scheduling (order of subtests is altered)
6. Use English dictionary (mathematics and science only)	13. Test administered over several days (one or two subtests per day)
7. Use bilingual word-to-word dictionary (mathematics and science only)	14. Person familiar with student administers test
	15. Preferential seating
	16. Small group testing

To ensure validity of the test content, use of reference materials (e.g., English dictionary and bilingual dictionary) is only allowed on the DC CAS mathematics and science tests, and oral reading of test items is not allowed on the reading content test. The remaining thirteen accommodations are allowed on all DC CAS content area tests.

Further analysis reveals that the majority of accommodations provide support with the language found in *test directions* rather than *test items. Of* the four other accommodations that provide ELLs with *test item* support, three are allowed with the mathematics and science assessments (accommodations #1, 6, and 7 in Table 1) and two are allowed with the writing assessment (accommodations #1 and 5 in Table 1).

Whereas most state policies merely provide a list of accommodations for ELLs (Shafer Willner, Rivera, & Acosta, 2008), the *DC OSSE Testing Accommodations Manual* provides decision makers with a five-step process and supporting guidance for matching accommodations to ELLs' specific needs, including their different levels of English language proficiency (pp. 50-55). The steps outlined in the manual consider students' language background, other relevant student characteristics, and whether the student has prior experience using the accommodation.

The first eight accommodations in Table 1 are considered ELL-responsive based on empirical research and findings from the Delphi panel (Acosta el al., 2008). Table 2 lists these ELL-responsive accommodations allowed by DC OSSE, indicating if each accommodation is supported by research and by expert opinion. The third column provides the number of state ELL

accommodation policies explicitly allowing this accommodation in either the state mathematics, science, or reading/language arts assessment (Shafer Willner et al., 2008).

Table 2
DC CAS Accommodations as Supported in Research, Expert Panels, and Other State Policies

Accommodation Type	Accommodation	Research Support	Expert Opinion	Allowed in State Policies
Time	Extended Testing Time	✓	✓	41
Reference Materials	Use bilingual word-to-word dictionary	✓	✓	39
	Use English dictionary	✓	✓	7
Read Aloud	Oral reading of test items		✓	40
	Oral reading of directions		✓	21
	Repetition of directions		✓	15
Simplification	Simplification of directions		✓	15
	Simplification of writing prompt		✓	3

Accommodations Offering Direct Linguistic Support

Reference materials.

The accommodations of English dictionary and bilingual word-to-word dictionary have empirical support. Kieffer et al. (2009) note that, on average, English dictionaries or glossaries have a strong positive effect on student test scores. They also conclude that bilingual word-to-word dictionaries are most appropriate for students who have intermediate or advanced levels of English language proficiency and have received recent content instruction in the native language. Pennock-Roman & Rivera (2010) concur, also finding strong effect sizes for both accommodations. Additionally, Pennock-Roman and Rivera (2010) found English dictionaries or glossaries were most effective for ELLs with intermediate or advanced levels of English language proficiency. As described in both Keiffer et al.'s and Pennock-Roman and Rivera's meta analyses, examples of empirical research that has addressed these accommodations include Kiplinger, Haug, & Abedi, (1998), Abedi, Courtney, & Leon (2003a), Albus, Bielinski, Thurlow, & Liu (2001), and Francis, Rivera, Lesaux, Kieffer (2006).

Adding to the empirical research base, the expert panel in the Delphi study (Acosta et al., 2008) considered the particular construct of different assessments when assessing the appropriate use of reference material accommodations. The panel indicated that bilingual dictionaries may not be appropriate for use with assessments measuring reading comprehension and concluded that "validity issues related to dictionaries and glossaries for reading assessments were considered difficult to codify in state policy in a way that would not lead to confusion for test administrators and local decision makers" (Acosta, et al., 2008, p. 20). Consistent with the panel's recommendation that states not offer reference material accommodations on reading tests, DC CAS only offers English dictionary and bilingual word-to-word dictionary on the math and science assessments.

Bilingual word-to-word dictionary are also one of the most commonly-allowed accommodations in state policies (40 of 51 SEAs). Far fewer SEAs allow English dictionaries (7 of 51 SEAs), even though this accommodation has a relatively strong research base, since many question whether it is appropriate to allow students access to a full definition of a word.

Read-aloud accommodations.

Read aloud accommodations have less documented empirical support than accommodations with reference materials. Both Kieffer et al. (2009)and Pennock-Roman and Rivera (2010) found accommodations involving *reading aloud and repeating test items had* little or no effect size on ELL test scores in relation to non-ELL test scores (see Castellon-Welington, 1999). Hafner (2001)'s examination of oral presentation involving reading and clarifying test directions found only a small positive effect on student test performance. Qualitative studies suggest the potential effectiveness of read aloud accommodations for ELLs. For instance, the Grade 10 New Hampshire Educational Improvement and Assessment Program (NHEIAP) conducted trials on read-aloud accommodations for the state mathematics test (2006). Focus groups from these trials provided student anecdotal evidence that read aloud accommodations made mathematics content more accessible to ELLs than tests without the accommodations. However, research in ELL accommodations is still emerging and continued research may provide more information on the effectiveness of read aloud accommodations.

The expert panel in Acosta et al.'s (2008) Delphi study rated three read-aloud accommodations as potentially helpful for ELLs with beginning English language proficiency (i.e., read aloud test items, repeat test items, repeat test directions). Similar to their analysis of the reference material accommodations, though, the expert panel cited concerns about using read aloud accommodations with reading assessments. The panel suggested that "it might be appropriate to provide a read-aloud or audio recording of multiple choice questions following a reading passage, but not to read aloud the reading passage itself" (Acosta et al., 2008, p. 22). DC CAP follows this advice as it prohibits the read aloud on the reading assessment.

Read aloud accommodations are some of the most common accommodations allowed in SEA assessment policies. Oral reading of the test is allowed by almost three-fourths of SEAs (40); oral reading of directions is allowed by almost half of SEAs (21); and repetition of directions is also allowed by almost half of SEAs (21). An emerging trend in state guidelines is to delineate read-aloud support by ELP level. ELLs with beginning ELP levels are allowed to hear the entire test read aloud verbatim, while ELLs with intermediate and advanced ELP levels are allowed to request read aloud support on an as-needed basis for words and phrases.

Simplification of directions and writing prompt.

Kieffer et al.'s (2009) meta-analysis found no statistically significant effect for simplification accommodations. In contrast, when controlling for English language proficiency level, Pennock-Roman and Rivera's (2010) analysis of the research base found a plain English version of the test to be effective for students at intermediate levels of English language proficiency instructed in English. However, DC CAS does not offer a plain English version of the test as an accommodation for ELLs, instead only providing simplification for directions and the writing prompt. Sireci et al. (2003) caution generalizing the findings of particular studies on simplification accommodations to broad understandings of the accommodation condition. Although research has demonstrated effective ways to simplify English text (e.g., Abedi, 2001), the methods used and quality of the accommodation vary widely depending on the construct of the test and the students who use the accommodation (Abedi, Hofstetter, Baker, & Lord, 2001; Abedi & Sato, 2007; Miles, Rivera, & Stansfield, 2000; Rivera & Stansfield, 2004).
In Acosta et al. (2008), the expert panel highly rated one direct linguistic support accommodation in English – *read aloud test items from a plain English script* for use by ELLs with beginning levels of English language proficiency, especially for students with interrupted formal education (SIFE) at the beginning level of English proficiency. The panel also rated two other simplification accommodations as potentially useful: *plain English test* and *simplification of test directions*. However, the panel recommended plain English tests for use by ELLs with intermediate and advanced levels of English language proficiency since at these levels, ELLs have developed some literacy in English.

Although simplification accommodations are less common than read-aloud accommodations, a number of states allow *simplification of directions* (15 of 51 SEAs). DC is only one of a handful of SEAs which allows simplification of the writing prompt.

Accommodations Offering Indirect Linguistic Support

Extended time.

The DC CAS allows the accommodation of "extended time on subtests" on all portions of the assessment. Chiu and Pearson (1999) observed that extended time was the most frequently researched accommodation, but the effectiveness of extended time as an ELL accommodation is still inconclusive. Keiffer et al. (2009) suggest that extra time does not provide a significant effect on ELL test scores, whether offered as a solo accommodation or in combination with other accommodations. In contrast, findings from the Pennock-Roman and Rivera (2010) meta-analysis indicate that extended time was found to be somewhat effective alone, but more effective in combination with a direct linguistic support accommodation (e.g., a dictionary or glossary). Research examined as part of this meta-analysis includes Abedi, Courtney, & Leon (2003b), Abedi, Hofstetter, Baker, & Lord, (2001), and Hafner (2000).

The expert panel in Acosta, Rivera, and Shafer Willner (2008)'s study concluded that extended time was the only indirect linguistic accommodation that may reduce potential barriers for ELLs due to lack of English proficiency. Considering second language acquisition research has found that processing speed in the second language tends to be slower than in the first (Bowles & Stansfield, 2008; Stansfield & Bowles, 2006), extended time may help ELLs comprehend and respond to test items. The panel also noted that extended time may be especially important when used in combination with direct linguistic support accommodations that require additional time to use or process, such as dictionaries, read-alouds and oral translations.

Forty-one SEAs include the provision of extended time in their state assessment policies for accommodating ELLs. Data collected from the 51 SEA assessment policies for accommodating ELLs as part of the *Descriptive Study of State Assessment Policies for Accommodating English Language Learners (*Shafer Willner, Rivera,& Acosta, 2008) shows that the vast majority of state policies do not quantify the amount of extra time allowed since these tests are criterion-reference assessments.

Other indirect linguistic support.

A number of other indirect linguistic support accommodations are allowed for use by ELLs, based on the existing research and on current SEA practices. The current iteration of the DC ELL accommodation list follows the Rivera, Collum, Shafer Willner, & Sia (2006) classification of indirect linguistic support accommodations. In this earlier study, *indirect linguistic support accommodations* were given a more general classification focusing on a wider range of adjustments to test conditions provided to ELLs. Such accommodations are designed to help ELLs process language more easily, but they are not direct modifications of the *language* of the test. The indirect linguistic support accommodations allowed for use by ELLs with the DC CAS assessments are

- small group setting
- time of day most beneficial to student (morning or afternoon)
- extra or longer breaks allowed between subtests
- breaks during a subtest (lasting no longer than 3-5 minutes)
- flexible scheduling (order of subtests is altered)
- test administered over several days (one or two subtests per day)
- use of place markers to maintain place
- person familiar with student administers test

- preferential seating

Since 2006, many researchers have begun to limit indirect linguistic support to *extended test time.* The Acosta et al. (2008) expert panel considered the other indirect linguistic support accommodations to be general test administration practices rather than accommodations. According to the panel, some test administration practices, such as administering the test in a separate setting, might facilitate the administration of direct linguistic accommodations, but do not reduce construct-irrelevant variance due to language proficiency. This recommendation is consistent with the findings of research meta-analyses on ELL accommodations (e.g., Kieffer et al., 2009; Pennock-Roman & Rivera, 2010). These two meta-analyses have found that *extended testing time* is the only indirect linguistic support accommodation which has a positive effect on ELL test scores for beginning, intermediate, and advanced levels of English language proficiency.

Similarly, the Shafer Willner, Rivera, & Acosta (2008) descriptive review of state assessment policies for accommodating ELLs found that the delineation of timing/scheduling and setting accommodations (such as those listed in the DC ELL accommodation list) is now being framed in many state policies as a locally-determined test administration practice by school staff, and therefore are not defined as testing accommodations (pp. 19-20). While these indirect linguistic accommodations in addition to extended time are currently included in DC policy, GW-CEEE has recommended to OSSE to reframe the accommodation list so that all of the indirect linguistic support accommodations currently allowed to ELLs in the *DC OSSE Testing Accommodations Manual* are reclassified as general test administrative practices.

Summary

In summary, three of the ELL accommodations are supported by the research as effective in reducing construct-irrelevant variance due to English proficiency: extended time, bilingual word-to-word dictionary, and English dictionary. The research base for the read-aloud and simplification accommodations ELLs is equivocal on the potential of these accommodations to reduce construct-irrelevant variance due to English proficiency. Research and expert opinion supports extended time as an indirect linguistic accommodation for ELLs and suggests that the remaining indirect linguistic accommodations offered in DC be classified as test administration practices. There is little or no research base on the extent to which the other indirect linguistic support accommodations reduce remove barriers due to English language proficiency.

DC CAS ELL accommodations are similar to the roughly one-third to one-half of SEA policies and/or guidelines in that offers support on the reading assessment for test directions in English (including read-aloud, repetition, simplification, and/or clarification accommodations), and similar to the one-sixth or fewer SEAs which do not allow support for reading or writing assessment test items in the categories of scribed response, sight translation, customized dual language glossaries.

In terms of provision of support to ELLs with different levels of ELP, like most SEAs, DC CAS ELL accommodations offer a range of read aloud and simplification support in English for test directions which may be of assistance to ELLs with lower ELP levels (per the expert panel recommendations found in Acosta et al., 2008). The DC CAS ELL accommodation support offered with test items involves simplification of the writing prompt, reference material support (English dictionary and bilingual word-to-word dictionary), and read-aloud support.

Discussion

The OSSE team has selected ELL accommodations for the DC CAS which are consistent with the existing research base and commonly accepted as standard, well-established practice among states. Three of the ELL accommodations allowed in the DC assessment policy for

accommodating ELLs are consistent with the existing research base, while the other direct linguistic support accommodations are consistent with the 2008 expert panel recommendations.

Yet a number of unanswered questions remain. Some of these questions are stimulated by the existing research base and the need to confirm the findings from this research base with the data from DC CAS tests: There is a general question regarding whether there are accommodations in the current DC CAS ELL accommodation guidelines which provide a boost to both ELL and to non-ELL test scores. Thus, it is important to examine, as Sirici et al. (2003) explain, whether the DC CAS ELL accommodations appropriately reduce construct irrelevance due to English proficiency by providing a "differential boost" (greater than expected) to ELL test scores while not providing more than a (typical) "boost" to the test scores of non-ELs (p. 36). OSSE is considering consulting an expert panel to develop a plan for research.

In particular it would be useful to examine this data with the read-aloud accommodations offered (read aloud and repeat directions, read aloud test item on demand, and read aloud all test items), the simplification accommodations allowed (simplify directions, simply writing prompt), and the reference material accommodations (bilingual word-to-word dictionary and English dictionary). Is the less commonly-allowed accommodation, English dictionary, appropriate for use by ELs in DC?

In light of recent research that highlights the importance of matching accommodations to English language proficiency levels (Abedi, Courtney, Mirocha, Leon, & Goldberg, 2005; Kopriva et al. 2007; Pennock-Roman & Rivera, 2010), the *DC OSSE Testing Accommodations Manual* now includes guidance for assigning accommodations according to the ELLs' level of ELP. A next step is to examine the impact of assignment of ELL accommodations by ELP level on ELL test ELL scores for the DC CAS? Are these findings consistent with the emerging research base? In particular, more specific analysis might examine the impact of ELP level on different accommodations such as read aloud (in DC ELLs with beginning ELP levels are allowed to hear the entire test read aloud verbatim, while ELLs with intermediate and advanced ELP levels are allowed to request read aloud support on an as-needed basis for words and phrases).

Concluding thoughts

The purpose of this review was to examine the extent to which the ELL accommodations in the DC accommodation policy are based on research, expert opinion, and/pr practice. However, the limitation of few empirical studies on the effectiveness of ELL accommodations prevents any SEA from ensuring all ELL accommodations are research-based. While it is possible to triangulate the research findings with expert opinion and trends in other state policies, OSEE plans to gather and analyze its own data to determine the impact, if any, of accommodations on ELL test scores. Based on the emerging understandings of the impact of English language proficiency level on ELL test scores, the empirical study will not only examine student test scores under accommodated and unaccommodated conditions, but also analyze the degree to which ELLs' English language proficiency mediates the effect of each accommodation**.**

References

Abedi, J., Courtney, M., & Leon, S. (2003a). *Effectiveness and validity of accommodations for English language learners in large-scale assessments (CSE Technical Report No. 608)*. Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing. Retrieved December 1, 2004 from http://www.cse.ucla.edu/products/reports_set.htm.

Abedi, J., Courtney, M., & Leon, S. (2003b). *Research-supported accommodation for English language learners in NAEP (CSE Tech. Rep. No. 586).* Los Angeles, CA: University of California, National Center for Research on Evaluation, Standards, and Student Testing. Retrieved December 1, 2004 from http://www.cse.ucla.edu/products/reports_set.htm

Abedi, J., Hofstetter, C., Baker, E., & Lord, C. (2001). *NAEP math performance and test accommodations: Interactions with student language background (CSE Tech. Rep. No. 536)*. Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing. Retrieved December 1, 2004 from http://www.cse.ucla.edu/products/reports_set.htm.

Acosta, B., Rivera, C., & Shafer Willner, L. (2008). *Best practices in the accommodation of English language learners: A Delphi study*. Prepared for the LEP Partnership, U.S. Department of Education. Arlington, VA: The George Washington University Center for Equity and ExcELence in Education. Available: http://ceee.gwu.edu/ELaccommodations.

Albus, D., Bielinski, J., Thurlow, M., & Liu, K. (2001). *The effect of a simplified English language dictionary on a reading test. (LEP Project Rep. No. 1)*. Minneapolis, MN: University of Minnesota, National Center for Educational Outcomes. Retrieved December 1, 2004 from http://education.umn.edu/NCEO/OnlinePubs/LEP1.html.

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

CastELon-WELington, M. (2000). *The impact of preference for accommodations: The performance of ELLs on large-scale academic achievement tests (Tech. Rep. No. 524.)* Los Angeles, CA: University of California, National Center for the Study of Evaluation, Standards, and Student Testing. Retrieved December 1, 2004 from http://www.cse.ucla.edu/CRESST/Reports/TECH524.pdf

Eliott, S. N., Kratochwill, T. R., & Schulte, A. G. (1998). The assessment accommodations checklist: Who, what, where, when, why, and how? *Teaching Exceptional Children, 31*(2), 10-14.

Francis, D. J., Rivera, M. Lesaux, N. Kieffer, M. & Rivera, H. (2006). *Practical guidelines for the Education of English Language Learners: Research-based recommendations for instruction and academic interventions.* Houston, Texas: Center on Instruction. Retrieved January 20, 2007 from: http://www.centeroninstruction.org/resources.cfm?category=ELL&subcategory=research&grade_start=0&grade%20_end=12,%20pp.%203-30

Hafner, A. L. (2000). *Evaluating the impact of test accommodations on test scores of LEP students and non-LEP students*. Dover, DE: Delaware Department of Education. Retrieved December 1, 2004 from http://www.doe.state.de.us/aab/Atch%2013%20Evaluating%20the%20Impact%20of%20Test%20Accommodations%20on%20Test%20Scores%20of%20LEP%20&%20Non-LEP%20Students.pdf

Hofstetter, C. H. (2003). Contextual and mathematics accommodation test effects for English language learners. *Applied Measurement in Education, 1 April 2003* (pp. 159-188.) Lawrence Erlbaum Associates, Inc.

Kieffer, M. J., Lesaux, N. K., Rivera, M., & Francis, D. J. (2009). Accommodations for English language learners taking large-scale assessments: A meta-analysis on effectiveness and validity. *Review of Educational Research, 79*(3); 1168-1201.

Kiplinger, V. L., Haug, C. A., & Abedi, J. (2000, June). *A math assessment should test math, not reading: One States' approach to the problem*. Paper presented at the 30th annual National Conference on Large-Scale Assessment, Snowbird, Utah.

Koenig, J. A., & Bachman, L. F. (Eds.). (2004). *Keeping score for all: The effects of inclusion and accommodation policies on large-scale educational assessments*. Washington, DC: National Research Council.

Kopriva, R. J., Emick, J. E., Hipolito-Delgado, C. P., & Cameron, C. A. (2007). Do proper accommodation assignments make a difference? Examining the impact of improved decision making on scores for English language learners. *Educational Measurement: Issues and Practice*, (Fall), 11-20.

Pennock-Roman, M. & Rivera, C. (2010). *Mean Effects of Test Accommodations for ELLs and Non-ELLs: A Meta-Analysis.* Denver, Colorado: Paper presented at 2010 Annual Meeting of the American Educational Research Association.

Pennock-Roman, M. & Rivera, C. (2007). *Test validity and mean effects of test accommodations for ELLs and non-ELLs: A meta-analysis*. Washington, DC: National Center for the Improvement of Educational Assessment, WestEd, and the Assessment and Accountability Comprehensive Center.

Rivera, C., Acosta, B., & Shafer Willner, L. (2008). *Guide for the refinement of state assessment policies for accommodating English language learners.* Prepared for the LEP Partnership, U.S. Department of Education. Arlington, VA: The George Washington University Center for Equity and ExcELence in Education. Available: http://Ells.ceee.gwu.edu

Rivera, C., Collum, E., Shafer Willner, L., & Sia Jr., J. K. (2006). An analysis of state assessment policies addressing the accommodation of English language learners. In C. Rivera, & E. Collum (Eds.), *A national review of state assessment policy and practice for English language learners* (pp. 1-173). Mahwah, NJ: Lawrence Erlbaum Associates.

Shafer Willner, L., Rivera, C., & Acosta, B. (2008). *Descriptive analysis of state 2006-2007 content area accommodations policies for English language learners* (2008). Prepared for the LEP Partnership, U.S. Department of Education. Arlington, VA: The George Washington University Center for Equity and Excelence in Education. Available: http://ceee.gwu.edu/ELaccommodations

Sireci, S. G., Han, K. T., & WELs, C. S. (2008). Methods for evaluating the validity of test scores for English language learners. *Educational Assessment, 13*(2), 108-131.

Sireci, S.G., Li, S., & Scarpati S.(2003) *The effects of test accommodation on test performance: A review of the literature*. (Commissioned paper by the Natinoal Academy of Sciences/National Research Council's Board on Testing and Assessment). Washington, DC: National Research Council.

Zenisky, A. L. & Sireci, S. G. (2007). *A summary of the research on the effects of test accommodations: 2005-2006* No. 47. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Appendix
Definition of Accommodations

Table A-1
Direct and Indirect Linguistic Support Accommodations for English and Native Language (Acosta et al., 2008, p. 4)

Direct Linguistic Support Accommodations English	Native Language
Plain English consists of test items and/or test directions for which linguistic complexity has been reduced while maintaining the level of difficulty of the test construct. Plain English text is characterized by linguistic structure(s) and vocabulary that avoid ambiguity, colloquialisms, or multiple meanings. Plain English is also referred to in the research literature and/or in state assessment policies as "modified English," "simplified English," "simplification," or "plain language" (Abedi & Sato, 2007; Miles, Rivera, & Stansfield, 2000; Rivera & Stansfield, 2004).	Written translation is the rendering of all or part of an English-language assessment into a second language. Accommodations in this category include written translation of test directions, side-by-side dual language versions of the test, or translated versions of entire tests.
Scripted oral English includes reading aloud and repeating test items or directions from a script and/or presenting the text to the test-taker through an audio recording or CD. The learner simultaneously has access to the written text.	Scripted oral translation involves reading aloud a professionally translated script of translated test items and/or directions or presenting the translation through an audio recording or CD.
Oral Response in English includes accommodations that allow students to answer test items orally in English. Oral responses are tape-recorded and/or scribed and entered onto the student's test form by the test administrator.	Response in native language involves allowing students to respond either orally or in writing in their stronger language. Native language responses may either be scored in the native language or translated into English prior to scoring.
English reference materials include English dictionaries and glossaries provided in print or electronically. A dictionary defines words. The types of English dictionaries used to accommodate ELLs include standard dictionaries, learners' dictionaries, and customized dictionaries. A learner's dictionary is designed specifically for ELLs and defines words in plain English. Like some standard English dictionaries, learners' dictionaries also give examples of usage and may provide synonyms. A customized dictionary refers to a dictionary that has been altered or specially compiled for a given context. It may refer to a learner's dictionary in which language has been simplified specifically for ELLs. A customized dictionary also may contain a specialized list of standard dictionary definitions compiled for a particular assessment and containing words relevant to that assessment. English glossaries are specialized lists of words with definitions or explanations customized to fit the perceived needs of the test taker. Glossaries may use simplified English.	Dual language reference materials consist of dictionaries and glossaries provided in print or electronically in both English and a second language.
Clarification in English involves the provision of oral explanations of text considered potentially difficult for ELLs to access. The reformulated input, which is sometimes offered in sheltered English, is expected to be more easily understood and manageable. Clarification differs from scripted oral English in that instead of reading from a script, the test administrator provides the explanation or clarification on-the-fly. Examples of clarification accommodations include "clarify/explain test directions in English," and "simplify test directions."	Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language. This type of accommodation differs from scripted oral translation in that instead of reading from a script, the test administrator (who is typically competent in the language of the translation) orally translates as he or she reads. This "on-the-fly" interpretation also distinguishes sight translation from written translation (Stansfield, 2008).
Indirect Linguistic Support Accommodations	
An indirect linguistic support accommodation consists of extending the time limits of a test to facilitate ELLs' language processing. Extended time may be provided as a stand-alone accommodation or in combination with one or more direct linguistic support accommodations. The use of dictionaries, glossaries, side-by-side dual language tests, oral accommodations (e.g., read-alouds or oral translations), and response accommodations all require extended time for handling the additional materials or adjustments.	

Table A-2
Mapping of ELL Accommodations in English to English Language Proficiency (ELP) levels

Accommodation	ELP Levels Beginning	Intermediate	Advanced
Plain English			
Provide plain English test	○	●	●
English reference materials			
Provide customized English glossary		●	●
Scripted oral English			
Play audio tape/CD of test items		○	
Play audio tape/CD of test directions		○	
Read aloud test items	○	○	
Read aloud test items from plain English script	●	●	
Read aloud test directions		●	
Repeat test items	○		
Repeat test directions	○		
Clarification in English			
Clarify/explain test directions		○	
Simplify test directions	○	●	
Oral Response			
Allow student to respond orally in English; scribe response		○	
Use tape recorder to record test responses		○	
Allow extended time	●	●	●

● Likely to reduce construct-irrelevant variance for ELLs at this English language proficiency level.
○ May reduce construct-irrelevant variance for ELLs at this English language proficiency level.

The expert panel convened in Acosta et al. (2008) found

- ELLs at the lowest levels of English language proficiency tend to experience the greatest need for accommodations on English language tests, but they are the least able to use them. Accommodations for students at beginning levels of English proficiency consisted primarily of oral, rather than written, accommodations. Native language accommodations were suggested only for beginning ELL students who are literate in their first language or who had received instruction in that language.
- ELLs at an intermediate English language proficiency level have usually developed some literacy in English, so they are expected to benefit from a wider variety of both written and oral options. Accommodations involving simplification of language, oral delivery of the assessment, and bilingual word-to-word dictionaries are recommended.
- The need for accommodations was expected to decrease for students at an advanced English language proficiency level. If offered accommodations, these students would be more prepared than students at lower levels of ELP to make use of accommodations such as plain English [simplified text] and English glossaries (pp. 17-18).