

MEMORANDUM

DATE: April 14, 2015

TO: MEMBERS, State Board of Education

FROM: TOM TORLAKSON, State Superintendent of Public Instruction

SUBJECT: Improving the Reliability of the California Home Language Survey

Summary of Key Issues

In February and May of 2014, the California Department of Education (CDE) met with representatives from four local educational agencies (LEAs), researchers, and other stakeholders to review the current Home Language Survey (HLS) and make recommendations for revising the tool. The HLS, in place for many years, is used to identify whether newly enrolling students are potential English learners and based on HLS responses provided by their parents or guardians require an initial assessment of English language proficiency to determine whether they are in fact English learners. The CDE had gathered input on HLS revisions from its statewide network of district and county EL professionals in March 2013. Also, in September 2013, the CDE participated in a national working session with several states, stakeholders, and researchers convened by the Council of Chief State School Officers (CCSSO) aimed at strengthening the reliability, accuracy, and usefulness of HLS questions and processes.¹ From these meetings, a proposed HLS was developed (Attachment 1) and will be used in a pilot study by the Regional Education Laboratory-West (REL-West) and the California Comprehensive Center (CA CC), both at WestEd, in collaboration with the University of California Los Angeles (UCLA) Graduate School of Education & Information Studies (GSEIS). The six participating districts in the study are: ABC Unified School District, Robla Elementary School District, Torrance Unified School District, Inglewood Unified School District, Alisal Union School District, El Segundo Unified School District.

The CDE has requested that the REL–West and the CA CC provide applied research and technical assistance with regard to the identification of potential English learners (ELs). Specifically, REL-West, CA CC, and UCLA will conduct a pilot study examining the clarity of the questions, and the extent to which the CDE’s newly proposed HLS can predict, better than the current HLS, which students are potential ELs who will subsequently be classified as ELs and which students are not, based on their initial California English Language Development Test (CELDT) performance.

¹ See Linqunti, R., & Bailey, A.L. (2014). *Reprising the home language survey: Summary of a national working session on policies, practices, and tools for identifying potential English learners*. Washington DC: Council of Chief State School Officers.

Attachment 2 describes the study in detail and identifies the participating institutions, research questions, timeline, data, and methods for analyzing the data. To recruit LEAs for the HLS Reliability Pilot Study, the study was described at the Accountability Leadership Institute held in December 2014; and a flyer about the study (Attachment 3), was distributed to the Bilingual Coordinators Network in January 2015, describing elements that are important for LEAs to understand before they commit to participating in the study.

Attachment(s)

Attachment 1: Proposed Home Language Survey Questions (1 page)

Attachment 2: Improving the Reliability of the California Home Language Survey
(8 pages)

Attachment 3: California Home Language Survey Reliability Pilot Study (2 pages)

Proposed Home Language Survey Questions

1. *Which language(s) does your child **currently**...*
 - a. understand?
 - b. speak?²
 - c. read? [for grades 1 and higher]
 - d. write? [for grades 1 and higher]

2. *Which language does your child usually **use**...*
 - a. at home with parent(s)/guardian(s)?
 - b. at home with brothers and sisters (if applicable)?
 - c. at home with other family members (if applicable)?
 - d. in school, including preschool if enrolling kinder (if applicable)?
 - e. outside of home and school with friends and others?

3. *Which language does your child usually **hear**³...*
 - a. at home with parent(s)/guardian(s)?
 - b. at home with brothers and sisters (if applicable)?
 - c. at home with other family members (if applicable)?
 - d. in school, including preschool if enrolling kinder (if applicable)?
 - e. outside of home and school with friends and others?

² For American Sign Language (ASL) users, to “speak” means to sign using ASL.

³ For ASL users, to “hear” means to view ASL being signed.



Improving the Reliability of the California Home Language Survey

December 1, 2014

Overview

The Regional Education Laboratory-West (REL-West) and the California Comprehensive Center (CA CC), both at WestEd, have offered to provide applied research and technical assistance for decision-making with regard to the Home Language Survey (HLS) and identification of potential English learners (ELs) to inform the California Department of Education (CDE). Specifically, REL-West's English Learner Alliance, the CA CC, and the UCLA Graduate School of Education & Information Studies (GSEIS) will conduct a pilot study examining the extent to which CDE's newly Proposed (HLS) can improve the identification of potential ELs who will subsequently be classified as ELs and which students are not, based on their Initial California English Language Development Test (CELDT) performance. CDE's request is also relevant to its participation in national efforts to move toward a more common definition of English learner.⁴

In current practice, an HLS is completed for every newly registering student, and students whose HLS responses identify them as potential ELs are then examined using the Initial CELDT to determine whether the student is an EL. This study will examine responses to both the Current HLS and the newly Proposed HLS, as well as patterns between the two HLSs and Initial CELDT performance of new students registering for school during June–August 2015⁵ in four participating school districts. The results of this study will inform the creation of empirically-derived decision rules for interpreting the Current and Proposed HLSs in ways that will help to avoid the unnecessary assessment of students. These results will be submitted to CDE's English Learner Support Division and the Assessment Development and Administration Division to provide empirical information for CDE policy-making. Both divisions will be informed of progress at key points during the study, and they will be consulted as needed for input on emerging issues and opportunities. Two reports of findings with relevant considerations for decision-making will be provided.

Participating Institutions

- California Department of Education (CDE)
- CA School Districts (4 to 6 districts, 2 to 4 schools per district)
- WestEd REL West EL Alliance

⁴ See *Linquanti & Bailey (2014) and Linquanti & Cook (2013)*.

⁵ Initial CELDT testing window for SY 2015/16 begins on July 1.

- California Comprehensive Center (CA CC) at WestEd
- UCLA Graduate School of Education & Information Studies (GSEIS)

With the support of the selected California school districts, we will request individual school participation. The school sample will focus on elementary schools, as kindergarteners are the majority of newly registering students. The number of participating schools will be based on the number of expected new students compared to the number of students needed to meet statistical power requirements.

Research Questions

Phase I

Research question 1: Are the Proposed HLS questions clear to respondents and understood as intended by the survey developers?

Phase II

Research question 2: Which patterns of response in the Proposed HLS questions are most strongly associated with proficient/not proficient scores on the Initial CELDT assessment?

Research question 3: How does the accuracy of the Proposed HLS questions in predicting which students will be English learners compare to that of the Current HLS questions?

Research question 4: What challenges, if any, are there in administering and interpreting responses to the Proposed HLS questions that could have consequences for eventual statewide implementation of the proposed questions?

Timeline

The project will begin in January and finish by November 2015. The project will occur in two phases: Phase I for research question 1, and Phase II for research questions 2, 3, and 4.

Phase I

RQ 1: Clear and comprehensible home language survey (HLS) questions

January – April, 2015; led by Alison Bailey, UCLA

- Prepare and conduct focus groups/interviews with select parents/guardians who review the Proposed HLS questions
- Analyze parent/guardian focus group/interview data and prepare report by March 2015
- Review feedback and consider adjustments to Proposed HLS questions
 - Present any proposed adjustments and rationale to CDE and WestEd for discussion
 - CDE determines final set of Proposed HLS questions for piloting by April 2015

Phase II

RQs 2, 3 & 4: Patterns of response that optimize Initial CELDT proficient/not proficient prediction and value added by Proposed HLS questions compared to Current HLS questions; Challenges in administration and interpretation of HLS responses for HLS administrators⁶

July – November;

RQs 2, 3 led by Eric Haas, WestEd REL West EL Alliance, and Robert Linquanti, CA CC;

RQ 4 led by Alison Bailey, UCLA;

- Collect Current HLS responses, Proposed HLS responses, and Initial CELDT scores from participating schools during July – August 2015 registration period
- Conduct data analysis in August – September 2015
- Prepare and conduct post-administration surveys with those who administer the Proposed HLS
- Analyze HLS administrators' responses
- Review (1) HLSs and Initial CELDT analyses and (2) HLS administrator survey responses and identify any suggested adjustments to Proposed HLS questions and recommendations for training, administration, and interpretation
- Submit final report to CDE by November 2015

Data

Phase I

RQ 1: Clear and comprehensible home language survey (HLS) questions

- Parent focus group/interview data (4-6 groups of 6-8 parents per group): a purposive sample of parents, selected to represent a range of family language profiles (i.e., both parents native English speakers, both parents LOTE⁷ speakers, one parent LOTE speaker, and most prevalent first languages); focus groups will be conducted in parents' first language as necessary.

Phase II

RQs 2, 3 & 4: Patterns of response that optimize Initial CELDT proficient/not proficient prediction and value added by Proposed HLS questions compared to Current HLS questions; Challenges in administration and interpretation for HLS administrators

- Current HLS responses: all students in each participating school in Spring through Summer enrollment for following school year
- Proposed HLS responses: all students in each participating school in Spring through Summer enrollment for following school year
- Initial CELDT data: all students in each participating school who answered LOTE on questions 1 – 3 on the Current HLS (Current Rule) and therefore were assessed using the Initial CELDT

⁶ Administrators from a subsample of schools in the participating districts.

⁷ Language Other Than English

- HLS administrators' survey data: a survey will be distributed to school and district staff who administered the Current HLS and the Proposed HLS during the pilot study for their description of the administration process, such as how consistently the Current HLS decision rule was followed and noting any exceptions; and administrator perceptions of parents' experiences in answering the proposed HLS questions and administrators' experiences in interpreting the Proposed HLS responses.

Analysis methods

Phase I

RQ 1: Clear and comprehensible home language survey (HLS) questions

Selected parents will be invited to explore and provide feedback on the Proposed HLS questions in January – March, prior to the administration of the Proposed HLS during the pilot study enrollment period in June – August. The parents will be interviewed in a focus group format to determine (1) how well they understand the questions in relation to the question purpose and (2) suggestions for making the questions clearer to respondents, as necessary. Focus group responses will be audio-recorded (and translated from parents' native languages to English, if applicable), difficulties with the Proposed HLS questions (themes that emerge from the focus groups' discussions) will be coded, and suggested wording changes will be documented.⁸

Phase II

RQs 2, 3 & 4: Patterns of response that optimize Initial CELDT proficient/not proficient prediction and value added by Proposed HLS questions compared to Current HLS questions; Challenges and initial interpretation for HLS administrators

RQs 2 & 3

A) Overall HLS reliability

The analytic sample will include students who meet the Current Rule⁹ on the HLS for assessment using Initial CELDT. These are the students who will have Initial CELDT data. Students whose Current HLS responses indicated as native English speakers do not generate Initial CELDT data.

⁸ Patterns in the responses to part (1) will be described for each Proposed HLS question. For part (2), we are considering describing differences in the parent responses compared to their "actual" circumstances as determined by the interview through coding with an established set of codes. Patterns in stated versus "actual" per HLS question will be described.

⁹ We understand the current HLS decision rule is that any answer other than "English" to any of the first three questions on the Current HLS means that the student is a potential EL and takes the Initial CELDT. We will need to verify the Current HLS decision rule at each of the four participating districts.

To address RQs 2 & 3, we will use logistic regression as shown in equation [1].¹⁰

$$[1] \quad \Pr(\textit{Proficiency}_j = 1) = \textit{logit}(b_0 + b_1X_j + e_j)$$

The probability of an outcome coded as 1 (scoring proficient on the Initial CELDT assessment)¹¹ for student j is a nonlinear function of student j 's score as derived from the HLS (X_j). b_0 and b_1 are parameters to be estimated from the data that will be presented as odds ratios; these relate to how the odds of scoring proficient on the Initial CELDT change with a one-unit change in the HLS-derived score based on the number of responses of LOTE on the HLS. The logit function is used because the dependent variable is binary.¹² This approach will enable us to calculate the probability of scoring proficient on the Initial CELDT associated with any HLS interpretation and decision rules that lead to administration of the Initial CELDT, using the Current HLS and the Proposed HLS. Comparisons of the probabilities of scoring proficient on the Initial CELDT will be made between various decision rules for the Current HLS and various decision rules for the Proposed HLS (RQ 3).

If the results for RQ 3 point toward the use of the Proposed HLS, then additional analyses (part B) will be conducted to determine if a more economical subset of Proposed HLS questions might produce similar results to those obtained by using all 14 sub-questions.

B) More Economical Proposed HLS

Although the Proposed HLS questions provide the opportunity to incorporate up to 14 sub-questions to build a new decision rule for identifying potential ELs, a more economical set of questions may be equally reliable and preferred, from both policy and implementation perspectives. To determine what might be more economical subsets of Proposed HLS questions than the full Proposed HLS, we propose examining outcomes of rules that use the full set, and outcomes of rules that use subsets of fewer Proposed HLS questions. Specifically, we propose to employ factor analysis to identify and remove questions that do not correlate significantly with the proficient/not proficient distinction on the Initial CELDT assessment.

Confirmatory factor analysis (CFA) can be used to test specific hypotheses about the relationships among the sub-questions. The method can then test a number of different specifications (i.e., specifications that differ in the number of clusters of sub-questions or

¹⁰ Because observations may be clustered within schools or districts, we will adjust our impact estimates for the effects of clustering by estimating Huber-White standard errors (Greene, 2003) which avoid the downward bias on the standard errors that clustering otherwise causes.

¹¹ We are using the dichotomous variable of proficient or not proficient on the Initial CELDT assessment as the outcome variable because this is ultimately what matters for initial EL classification. We considered using the Initial CELDT assessment as a continuous variable based on actual CELDT raw or scale scores, but decided on the dichotomous instead.

¹² This model is described more fully in Rabe-Hesketh & Skrondal (2012).

the sub-questions in a cluster) and determine which hypotheses best match the available data (i.e., which model “fits” the best). We will run a three-factor model (see figure 1, next page) in which the components will be grouped according to their domain. The analyses will be run with MPLUS software using the weighted least square estimator (WLSMV), the default for categorical indicators.

In identifying the best-fit model from the CFA, we may identify a more economical set of questions. Preliminary results will guide us in conducting additional analyses that may help to simplify both the administration and decision rules for interpreting responses to the Proposed HLS. We will be able to build a set of decision rules for identifying potential ELs to take the Initial CELDT based on this CFA model. We will present to CDE results from the Current Rule with the Current HLS and possible rules for use with one or more permutations of the Proposed HLS.¹³

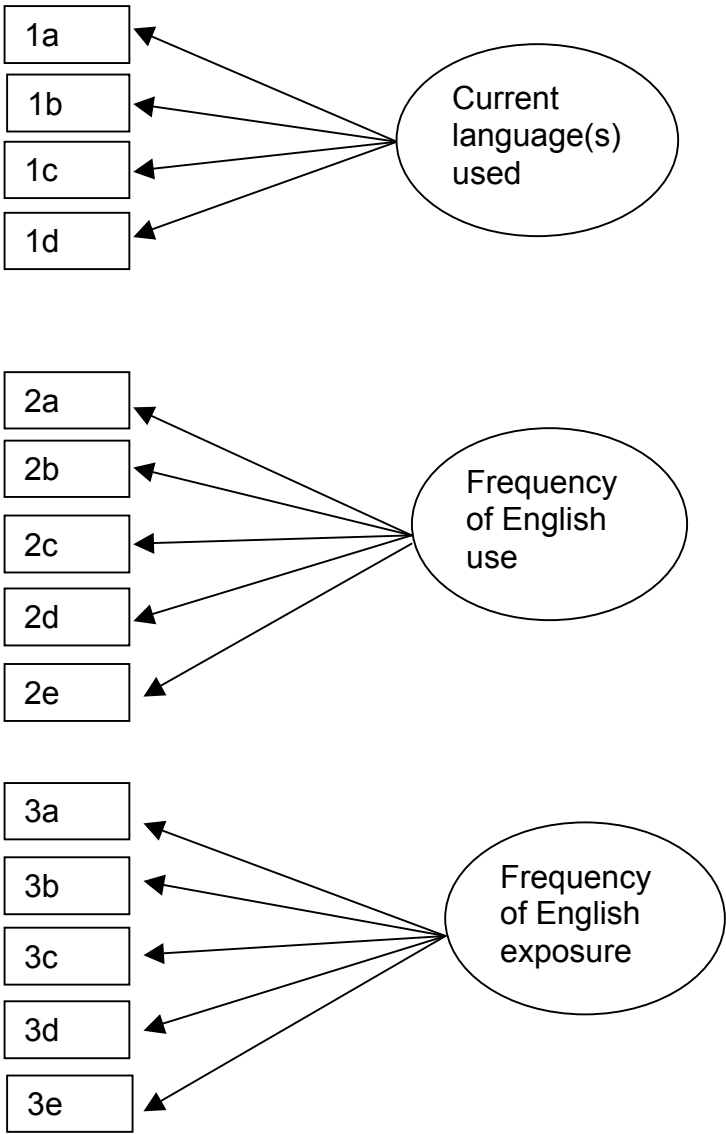
RQ 4

School and district staff who administered the Current HLS and the Proposed HLS during the pilot study will be given a survey to complete after administration of both HLSs and decisions are made to administer Initial CELDT based on Current HLS responses.¹⁴ The CA CC, UCLA GSEIS, and REL West will develop the survey, which will address the staff’s experience of administering the Current and Proposed HLSs with parents, and the administrators’ experiences examining and interpreting responses to the proposed HLS questions. The survey responses will be coded based on a set of pre-identified themes and themes that emerge from the coding. The codes will be qualitatively and quantitatively analyzed, including similarities and differences across the school and district administrations. Suggestions for adjustments to the Proposed HLS questions and recommendations for training, administration, and interpretation of the Proposed HLS will be developed.

¹³ Any determination of which HLS decision rule to use will need to consider the possibilities of measurement error, both for false positives (students who take the Initial CELDT and score proficient (IFEP)) and false negatives (students who were not requested to take the Initial CELDT but subsequently found to be EL students (“discovered”)). In addition, there is a second category of false positives: those students who do not score proficient on the Initial CELDT due to non-second language related issues, such as unfamiliarity with test-taking. Thus, over-identifying students as potential ELs who must take the Initial CELDT may also cause some misclassifications.

¹⁴ This sequencing is important to avoid “contaminating” decision-making based on the current HLS with surveys that ask administrators about interpreting responses to the proposed HLS questions. We will clarify that pilot participants should follow their current decision-making rules based on the Current HLS responses only.

Figure 1. A three-factor CFA model for the revised home language survey



References

- Greene, W. H. (2003). *Econometric analysis (5th ed)*. Upper Saddle River, NJ: New York University.
- Linquanti, R., & Bailey, A.L. (2014). *Reprising the home language survey: Summary of a national working session on policies, practices, and tools for identifying potential English learners*. Washington DC: Council of Chief State School Officers.
- Linquanti, R., & Cook, G. (2013). *Toward a "common definition of English learner": Guidance for states and state assessment consortia in defining and addressing policy and technical issues and options*. Washington DC: Council of Chief State School Officers.
- Rabe-Hesketh, S., & Skrondal, A. (2012). *Multilevel and longitudinal modeling using Stata, Third Edition*. College Station, TX: Stata Press.



California Home Language Survey Reliability Pilot Study

The Regional Educational Laboratory (REL) West and the California Comprehensive Center at WestEd, in collaboration with the UCLA Graduate School of Education & Information Studies, are recruiting districts and their schools to participate in a study of proposed revisions to the Home Language Survey (HLS) used in California.

Who?

We are seeking 4 to 6 districts, 2 to 4 schools per district, to participate:

- mostly elementary schools; some middle and high schools
- newly registering students for 2015/16
- some parent/guardian participants for focus groups

What?

Participating schools and districts will support the study by:

- Administering a proposed HLS along with the current HLS for newly-registering students (note: current HLS still used for initial CELDT)
- Sharing de-identified student data with the research team:
 - current HLS results
 - proposed HLS results
 - initial CELDT scores (locally scored)
 - student age/grade level, gender, and home language(s)
- Providing logistical support for focus group interviews via outreach to 6-8 parents from participating schools and procuring interview room
- Responding to brief questionnaire on school/district personnel experiences in administering the proposed HLS

All data and analyses will be confidential or anonymous.

Why?

Be part of a national effort to explore and strengthen the reliability and use of HLS results; learn firsthand the potential value of refined HLS questions; contribute vital insights.

When?

February 23 – March 27: Research team conducts parent focus group interviews
May 4 – August 14: Districts administer current & proposed HLSs, CELDT
By August 28: Districts share HLS and CELDT data with research team and complete brief questionnaire on their experiences with the proposed HLS
September 30: Final reports completed and shared with districts, CDE

Next Steps?

By February 6:

Sign up to participate

By February 20:

Complete Memorandum of Understanding (MOU)

Questions?

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