English Language Proficiency Assessments for California Accessibility Resources for Operational Testing

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Introduction

As California has implemented new English language development (ELD) standards that correspond to the rigorous language demands of new academic content standards to prepare all students for college and careers, the California Department of Education (CDE) endeavored to develop new English language proficiency (ELP) assessments aligned with the 2012 *California English Language Development Standards.*

After years of developing the English Language Proficiency Assessments for California (ELPAC), Educational Testing Service (ETS), the CDE, and local educational agencies (LEAs) administered the first operational paper-based ELPAC in 2017–18. The ELPAC consists of two separate assessments: the Initial ELPAC for initial identification and the Summative ELPAC to measure annual progress.

In November 2018, the State Board of Education approved the development of a computer-based ELPAC and Alternate ELPAC. The addition of an Alternate ELPAC provides for a comprehensive suite of assessments that allows all students an opportunity to demonstrate their progress toward ELP.

The transition to a standardized, computer-based delivery of the ELPAC, along with the development of a computer-based Alternate ELPAC, provides greater opportunities to increase the range and standardization of accessibility resources that are available to students. For example, resources such as American Sign Language (ASL) videos, text to speech, and closed captioning are possible in a computer-based environment but are not available on a paper-based assessment. Additionally, the development of a new Alternate ELPAC will further increase access for students with the most significant cognitive disabilities.

The document aims to be a comprehensive resource guide or framework for administrations of the paper-pencil ELPAC, computer-based ELPAC, and Alternate ELPAC. Most accessibility resources—universal tools, designated supports, and accommodations—will be available for the Alternate ELPAC through the online testing interface. However, because the Alternate ELPAC will be administered to students one-on-one by a test examiner, some embedded resources will not be provided.

Stakeholder Input

Over the course of developing the accessibility resource recommendations, ETS and the CDE have engaged in meaningful collaboration with several stakeholder groups. These discussions allowed for a better understanding of the challenges and needs of the students who will take the ELPAC or the Alternate ELPAC. In response to these discussions, the CDE and ETS have leveraged existing California Assessment of Student Performance and Progress (CAASPP) accessibility resources as a way to provide a consistent approach to accessibility across the state. This approach ensures all students have the opportunity to show what they know and what they can do in English. The CDE and ETS considered the resources that were appropriate for the construct and have recommended new resources that are specific to the needs of the diverse students who will take the ELPAC or the Alternate ELPAC (refer to **Table 1** through **Table 4** for an overview of the allowable accessibility resources).

A Multitiered Approach to Accessibility

Providing this range of resources helps ensure that students have multiple means of access to the test to demonstrate their language skills and to ensure their performance is a measure of their language skills and not a result of their technology skills or disability status.

Recent educational reforms and technological advances have led to new approaches to accessibility. As a result, students who may not have received accommodations in the past may now benefit from needed accessibility resources both in instruction and on assessments. The Smarter Balanced three-tiered framework for accessibility was developed with extensive input from national experts, as well as state-level representatives from the Smarter Balanced Assessment Consortium, including California. The framework is based on a thorough literature review, which included ratings of commonly available resources and incorporated findings from cognitive labs and pilot and field tests (Smarter Balanced, 2018, p. 3).

A multitiered approach is consistent with that used by Smarter Balanced and will apply to both the computer-based ELPAC and Alternate ELPAC. This approach will address a wider range of student needs than did the previous generation of paper-based assessments and support a more personalized and inclusive testing experience.

Recommendations for resources were the result of a detailed synthesis of allowable resources in the field, across existing CAASPP assessments, such as Smarter Balanced for English language arts/literacy and mathematics and the California Alternate Assessments (CAAs). World-class Instructional Design and Assessment and English Language Proficiency Assessment for the 21st Century frameworks were reviewed for an examination of linguistic supports to inform the computer-based ELPAC and Alternate ELPAC frameworks.

The following multitiered approach includes embedded resources, which are delivered digitally through the online testing interface; and non-embedded resources, which are provided locally by test examiners:

1. **Universal tools**—Resources that are available to all students on the basis of student preference and selection

2. **Designated supports**—Resources that are available for use by any student for whom the need has been indicated by an educator or team of educators (with parent or guardian and student input as appropriate)

3. **Accommodations**—Changes in procedures or materials that increase equitable access during testing for students who need them, based on documentation through an individualized education program (IEP) or Section 504 plan, resulting in the generation of valid assessment results

The non-embedded resources described in this document will be applicable for the paper-based ELPAC administrations for those students whose needs are so unique they cannot otherwise participate in the administration of the computer-based ELPAC. It is important to note that non-embedded resources also provide access to students who will participate in the Alternate ELPAC administration. Test examiners should consider a student's individual needs when determining the resources that are made available for a student taking the Alternate ELPAC.

Specific Assessment and Accessibility Considerations for the ELPAC

The computer-based ELPAC and Alternate ELPAC must be accessible for a very diverse group of students, including students with the most significant cognitive disabilities. Target test-takers will possess a wide range of cultural backgrounds, linguistic knowledge, and cognitive needs. Some of these students will also be new arrivals who are in their first year of enrollment in U.S. schools and may arrive with interrupted formal educational experiences. Additionally, some of these students may not have been identified to receive special education services yet.

These students may also be first-time test takers and their experiences in taking the Initial ELPAC may be their first exposure to standardized assessment practices. The Initial ELPAC may also be some students' first experience with using a computer. Because the Initial ELPAC will be offered to students as early as kindergarten, some test takers will be very young and will, in addition to the newly arrived students, be experiencing the Initial ELPAC as their first test-taking experience (Wolf, Guzman-Orth, & Wain, 2016; Guzman-Orth, Laitusis, Thurlow, & Christensen, 2016). Furthermore, some students taking the ELPAC may also have disabilities which may require them to access the ELPAC with some additional support. Students with an IEP or Section 504 plan may need to use specific accommodations to access the content to appropriately show what they know and are able to do.

Considerations for the Alternate ELPAC

The Alternate ELPAC will be an online, linear assessment delivered under untimed testing conditions. Test eligibility criteria and processes, as well as online delivery, will make the Alternate ELPAC consistent with the CAAs.

It is important to note that eligible students will not be expected to interact directly with the computer while taking the Alternate ELPAC. Instead, the one-on-one administration model will allow the test examiner to interact with the computer on behalf of the student as appropriate to the student's individual needs and abilities. For this reason, the following embedded resources are not available during the Alternate ELPAC:

- ASL videos (The test examiner is allowed to sign to the student when ASL or Manually Coded English is the language of instruction.)
- Braille, either by means of an embosser or refreshable display (The test examiner can request print-on-demand functionality to produce such documents.)
- Closed captioning
- Text-to-speech
- Translated test directions

The Alternate ELPAC administration may include additional instructional or physical resources needed for communication. Some test practices, such as hand-over-hand manipulation, are inappropriate and not allowed. Examples of permissible non-embedded instructional and physical resources for the Alternate ELPAC are listed in the next subsections.

Examples of Instructional Resources

This list represents resources and strategies already in use in instructional settings for eligible students:

- Allowing the student to use an augmentative communication device (e.g., Audiovox, switch)
- Allowing nonverbal students to respond with gestures, movements, or vocalization in place of speech
- Accepting eye gaze as a way of indicating a response
- Accepting a change in muscle tone or a change in facial expression as an observed behavior
- Allowing students to direct another person (aide or test examiner) in performing physical tasks

Examples of Physical Resources

This list represents resources and strategies already in use in physical settings for eligible students:

- Structuring the test environment to eliminate distractions for students who have attention difficulties and are particularly distractible
- Positioning and stabilizing the student to allow for the most controlled movement possible

Accessibility Resources and Their Recommended Use in Operational Assessments

ETS experts in ELP and accessibility have reviewed the existing resources for appropriateness for the computer-based ELPAC and Alternate ELPAC. Recommendations for resources were the result of a detailed synthesis of allowable resources in the field and across existing CAASPP assessments. The goal of the range of resources recommended for the ELPAC is to ensure that students have multiple means of access to the test to demonstrate their language skills and to ensure their performance is a measure of their language skills and not a result of their technology skills or disability status.

Table 1, Table 2, and Table 3 list the embedded and non-embedded universal tools, designated supports, and accommodations, respectively, their recommended use for the ELPAC, and applicability to paper-pencil or computer-based format. ETS will continue to conduct research and collaborate with experts to inform further refinements for the available resources annually, as student needs and abilities change over time. In some instances, a student's needs may require the use of combined resources (i.e., paper- and computer-based resources). Test examiners should plan ahead in these rare instances.

Table 4 is a list of embedded and non-embedded accessibility resources from the existing CAASPP Matrix One that are not recommended for use on either the ELPAC or the Alternate ELPAC.

LEAs are instructed to contact the CDE to request approval for the use of specific unlisted resources.

Note that the following ELPAC resources are not currently identified as a resource for CAASPP administrations:

- Oral clarification of test directions by the test examiner in English
- Test navigation assistant
- Designated interface assistant (DIA)
- Manually Coded English

Universal Tools

Universal tools are accessibility resources for the assessment that are available to all students based on student preference and selection (Smarter Balanced, 2018, p. 6). **Table 1** lists recommended universal tools for the computer-based ELPAC and Alternate ELPAC.

The following notations are used in **Table 1**:

1. Breaks on the ELPAC are domain specific (unlike the CAASPP, which is item-based).
2. Specific examples are provided for computer- or paper-based administrations.
3. This new role meets the needs of ELPAC technology novices and young test takers.

Table 1. ELPAC Accessibility Resources—Universal Tools

Universal Tool	Delivery Mode	Embedded	Non-embedded	Description
Breaks [1]	Paper and computer	Yes	Yes	Breaks, including testing over more than one day, between the domain sections are permitted. The use of this universal tool may require students' needing more overall time to complete the assessment.
Digital notepad	Computer	Yes	No	This tool is used for making notes about an item. The digital notepad is item-specific and available through the end of the test segment.
Expandable items	Computer	Yes	No	Each item can be expanded so that it takes up a larger portion of the screen.
Expandable passages	Computer	Yes	No	Each passage or stimulus can be expanded so that it takes up a larger portion of the screen.

Table 1 *(continuation one)*

Universal Tool	Delivery Mode	Embedded	Non-embedded	Description
Highlighter [2]	Paper and computer	Yes	Yes	**Paper:** Use of a highlighter in the test book for grades two through twelve is permitted. **Computer:** The highlighter is also a digital tool for marking desired text, item questions, item answers, or parts of these with a color.
Keyboard navigation	Computer	Yes	No	Navigation through text can be accomplished by using a keyboard (using the function keys instead of a mouse).
Line reader [2] (grades 3–12)	Paper and computer	Yes	Yes	**Paper:** The student can use a paper line reader. **Computer:** The student uses an onscreen tool to assist in reading by raising and lowering the tool for each line of text on the screen.
Mark for review [2] (grades 2–12)	Paper and computer	Yes	Yes	**Paper:** Students may mark in their test books, including noting items for review (highlighters) for grades two through twelve and (nonhighlighters) for grades three through twelve. **Computer:** Allows students to flag items for future review during the assessment.
Oral clarification of test directions by the test examiner in English	Paper and computer	No	Yes	The test examiner provides clarification of test directions to students in English.

Table 1 *(continuation two)*

Universal Tool	Delivery Mode	Embedded	Non-embedded	Description
Scratch paper	Paper and computer	No	Yes	Scratch paper to make notes or record responses is allowable. Only plain or lined paper is appropriate. Assistive technology devices are permitted to make notes.
Strikethrough [2] (Grades 3–12)	Paper and computer	Yes	Yes	**Paper:** Students may use pencils in their test books to strike through images or options. **Computer:** Allows users to cross out answer options. If an answer option is an image, a strikethrough line will not appear, but the image will be grayed out.

Table 1 *(continuation three)*

Universal Tool	Delivery Mode	Embedded	Non-embedded	Description
Test navigation assistant [3]	Computer	No	Yes	New arrivals, students who are unfamiliar with the test delivery device or are technology novices and do not have the necessary computer skills to participate in the computer-based ELPAC may have a trained test examiner help with mouse point-and-click and scroll bar assistance, onscreen tool or button navigation (i.e., back, next, submit, start and stop recording, play speaking, and recording), and keyboarding assistance necessary for starting the test session. The test examiner is allowed to assist *only* with the technology as indicated by the student. The test navigation assistant can be used during one-on-one or group administrations. The use of keyboarding assistance in the test is not permitted. The test navigation assistant must follow approved guidelines.
Writing tools (grades 3–12)	Computer	Yes	No	Selected writing tools (i.e., bold, italic, bullets, undo, and redo) are available for all student-generated responses.

Table 1 *(continuation four)*

Universal Tool	Delivery Mode	Embedded	Non-embedded	Description
Zoom (in or out)	Computer	Yes	No	The default font size for all tests is 14 point. The student can make text and graphics larger by selecting the [**Zoom In**] button. The student can select the [**Zoom Out**] button to return to the default or smaller print size. When using the zoom feature, the student only changes the size of text and graphics on the current screen.

Designated Supports

Designated supports are accessibility resources that are available for use by any student for whom the need has been indicated by an educator or team of educators (with parent or guardian and student input as appropriate) (Smarter Balanced, 2018, p. 10) and are regularly used in the classroom. Descriptions for some computer-delivered designated supports and accommodations are available in the *Smarter Balanced Usability, Accessibility, and Accommodations Guidelines* (*https://portal.smarterbalanced.org/library/en/usability-accessibility-and-accommodations-guidelines.pdf*).

Although an IEP or Section 504 plan is not required for use, a student's IEP or Section 504 plan may indicate the need for a designated support. **Table 2** lists recommended designated supports for the computer-based ELPAC.

The following notation is used in **Table 2**:

4.   This new role meets the needs of ELPAC technology novices and young test takers.

Table 2. ELPAC Accessibility Resources—Designated Supports

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Amplification	Paper and computer	No	Yes	Students may use amplification assistive technology (e.g., headphones, FM System, noise buffers, white noise machines) to increase the volume provided in the assessment platform. Use of this resource likely requires a separate setting. If the device has additional features that may compromise the validity of the test (e.g., internet access), the additional functionality must be deactivated to maintain test security.
American Sign Language (ASL) or Manually Coded English	Paper and computer	No	Yes	Students who are deaf or hard of hearing and who typically use Manually Coded English can have the test directions signed to them.

Table 2 *(continuation one)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Color contrast	Computer	Yes	Yes	Students with attention difficulties may need this resource for viewing test content. It also may be needed by some students with visual impairments or other print disabilities (including learning disabilities). Choice of colors should be informed by evidence that color selections meet the student's needs.
Color overlay	Paper and computer	No	Yes	Students with attention difficulties may need this resource to view test content. This resource may also be needed by some students with visual impairments or other print disabilities (including learning disabilities). Choice of color should be informed by evidence of those colors that meet the student's needs.

Table 2 *(continuation two)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Designated interface assistant (DIA) [4]	Computer	No	Yes	This designated support is available to students who are technology novices and have limited keyboarding skills that prevent them from responding. The DIA is available to help the student interact with, or type, their hand-written responses on the test platform. The DIA support should only be used during one-on-one administration.
Magnification	Paper and computer	No	Yes	Students with visual impairments or other print disabilities may use this designated support to adjust the size of specific areas of the screen or test book (e.g., text, formulas, tables, graphics, and navigation buttons) with an assistive technology device. Magnification allows increasing the size to a level that meets the student's visual needs. The use of this resource may result in the student needing additional overall time to complete the assessment.

Table 2 *(continuation three)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Masking	Paper and computer	Yes	Yes	Students with attention difficulties may need to mask content not of immediate need or that may be distracting during the assessment. This resource also may be needed by students with print disabilities (including learning disabilities) or visual impairments.
Medical supports (e.g., glucose monitor)	Paper and computer	No	Yes	Educators should follow local policies regarding medical supports and ensure students' health is the highest priority. Electronic medical support settings must restrict access to other applications or the test examiner must closely monitor the use of the medical support to maintain test security. Use of electronic medical supports may require a separate setting to avoid distractions to other test takers and to ensure test security.

Table 2 *(continuation four)*

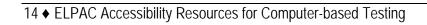| Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Mouse pointer (size and color)	Computer	Yes	No	Students with visual impairment who need additional enlargement or a mouse pointer in a different color to more readily find their mouse pointer on the screen will benefit from the mouse pointer resource. Students who have visual perception challenges will also find this beneficial. The size and color are set during registration and cannot be changed during the administration of the assessment. Students should have ample opportunity to practice during daily instruction with the size and color to determine student preference. The mouse pointer can be used with the zoom universal tool. If students are using a magnification program (refer to designated support, magnification), the enlarged mouse pointer is built into magnification programs and the mouse pointer may not be needed.
Noise buffers	Paper and computer	No	Yes	The student (not groups of students) wears equipment to reduce environmental noises. Students may have these testing variations if regularly used in the classroom. Students who use noise buffers will need headphones unless they are tested individually in a separate setting.

Table 2 *(continuation five)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Pause or replay audio—Listening domain	Paper and computer	Yes	Yes	Students who may need the audio to slow down or stop momentarily may have the audio presentation in the Listening domain be paused or replayed during the administration of the test questions.
Pause or replay audio—Speaking domain	Paper and computer	Yes	Yes	Students who may need the audio to slow down or stop momentarily may have the audio presentation in the Speaking domain paused or replayed during the administration of the test questions in the Summarize an Academic Presentation task.
Print on demand	Computer	No	Yes	Some students with disabilities, newcomers, or students with limited or no experience viewing text on a computer screen may need paper copies of either passages and stimuli or items. A very small percentage of students should need this designated support. The use of this designated support may result in the student needing additional time to complete the assessment.

Table 2 *(continuation six)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Read aloud for items (Writing domain)	Paper and computer	No	Yes	Students who are struggling readers may need assistance accessing the assessment by having all or portions of the assessment read aloud, or the test examiner may allow the student to read aloud. This resource also may be needed by students with reading-related disabilities. The use of this resource may result in the student needing additional overall time to complete the assessment.
Separate setting (e.g., most beneficial time, special lighting or acoustics, adaptive furniture)	Paper and computer	No	Yes	Students who are easily distracted (or may distract others) in the presence of other students, for example, may need an alternate location to be able to take the assessment.
Simplified test directions	Paper and computer	No	Yes	Students who need oral clarification of the test directions in English may benefit from this resource. Students who need this resource may benefit from testing in a separate setting to avoid distracting other test takers.

Table 2 *(continuation seven)*

Designated Support	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Streamline	Computer	Yes	No	Streamline may benefit a small number of students who have specific learning or reading disabilities or a visual impairment that have been identified through an IEP. In streamline, the text is presented in a more sequential format. Students should have familiarity interacting with items in a streamline format.
Translated test directions	Paper and computer	No	Yes	Students who have limited English language skills (whether or not designated as English learners [ELs] or ELs with disabilities) can use the translated test directions. In addition, a biliterate adult trained in the test administration manual can read the test directions to the student. The use of this resource may result in the student needing additional overall time to complete the assessment.
Turn off any universal tool(s)	Computer	Yes	No	Students who are easily distracted (whether or not designated as having attention difficulties or disabilities) may be overwhelmed by some of the universal tools. Knowing which specific tools may be distracting is important for determining which tools to turn off.

Accommodations

Accommodations are available to students who have a documented need for the accommodations via an IEP or Section 504 plan (Smarter Balanced, 2018, p. 18). **Table 3** lists recommended accommodations for the computer-based ELPAC.

The following notation is used in **Table 3**:

5. Not available with the Alternate ELPAC as an embedded resource. Note the special considerations for ASL or Manually Coded English administrations due to the addition of the Speaking and Listening domains.

Table 3. ELPAC Accessibility Resources—Accommodations

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Alternate response options	Computer	No	Yes	Students who have some physical disabilities (including both fine motor and gross motor skills) may need to use the alternate response options accommodation. Some alternate response options are external devices that must be plugged in and compatible with the assessment delivery platform.
Alternate response options (i.e., adapted keyboards, large keyboards, Sticky Keys, MouseKeys, FilterKeys, adapted mouse, touch screen, head wand, and switches.)	Paper	No	Yes	Use of an assistive device that does not interfere with the independent work of the student. Student responses must be transcribed into the Answer Book by the test examiner or scribe.

Table 3 *(continuation one)*

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
American Sign Language (ASL) or Manually Coded English [5]	Paper and computer	Yes	Yes	Some students who are deaf or hard of hearing (DHH) and who typically use ASL or Manually Coded English may need this accommodation when accessing text-based content in the assessment. The use of this accommodation may result in the student needing additional overall time to complete the assessment. For many students who are DHH, viewing signs is the only way to access information presented orally. It is important to note, however, that some students who are hard of hearing will be able to listen to information presented orally if provided with appropriate amplification and a setting in which extraneous sounds do not interfere with clear presentation of the audio presentation in a listening test.
				In the current ELPAC regulations, ASL or Manually Coded English is approved for use as an accommodation on the Listening, Speaking, and Writing domains for both the presentation of, and students' responses to, the test questions. Special administrative considerations may be needed for the Initial and Summative ELPAC administrations for students in kindergarten through grade two and new arrivals at any grade level. Note that if a student using an embedded ASL accommodation responds using ASL, an ASL interpreter would need to be appropriately scribed and recorded into the test delivery system.

Table 3 *(continuation two)*

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Audio transcript (includes braille transcript)	Paper and computer	Yes	Yes	Some students who are DHH may have difficulty hearing the listening portion of the passage and also do not have enough functional vision to read the closed captioning provided for the passage. These students who are visually impaired or blind and DHH *and* who use braille may have access to braille transcripts. These students must be registered in the Test Operations Management System, for both braille and closed captioning. In addition, this includes the use of written scripts by a test examiner for students when streamed audio is not available. The use of this accommodation may result in the student needing additional overall time to complete the assessment.
Braille (embossed and refreshable) [5]	Computer	Yes	Yes	Students with visual impairments may read text via braille. Tactile overlays and graphics also may be used to assist the student in accessing content through touch. The use of this resource may result in the student needing additional overall time to complete the assessment. If a student's language or presentation are set to braille, there are no additional settings that need to be provided in order for embossing to be available.
Braille [5]	Paper	No	Yes	Students with visual impairment and whose IEP or Section 504 plan require the use of paper braille versions require them under the following conditions: • If students cannot access the assistive technology for refreshable braille presentation • If embossers needed to print test content on demand are needed for the administration of the computer-based ELPAC

Table 3 *(continuation three)*

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Breaks	Paper and computer	No	Yes	Students with disabilities may need to take breaks during the ELPAC domain level test administrations. Extended breaks in the middle of a domain level test administration are allowed as an accommodation for students with disabilities who have a documented need. The ELPAC test examiner may need to introduce special administrative considerations to support students needing this resource.
Closed captioning [5]	Computer	Yes	No	Students who are DHH and who typically access information presented via audio by reading words that appear in synchrony with the audio presentation may need this resource to access audio content. For many students who are DHH, viewing words (sometimes in combination with reading lips and ASL or Manually Coded English) is how they access information presented orally. It is important to note, however, that some students who are hard of hearing will be able to listen to information presented orally if provided with appropriate amplification and a setting in which extraneous sound does not interfere with clear presentation of the audio presentation in the Listening domain.
Large-print special form (as requested)	Paper	No	Yes	Students with visual needs who cannot use the zoom or magnification resource on the computer-based ELPAC can request printed large-print test books, Answer Books, and examiner manuals. LEAs will need to request preapproval to qualify for these printed materials.

Table 3 *(continuation four)*

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Scribe	Paper and computer	No	Yes	Students who have documented significant motor or processing difficulties, or who have had a recent injury (such as a broken hand or arm) that make it difficult to produce responses may dictate their responses to a human who records, verbatim, what they dictate according to scribing guidelines. The use of this resource may result in the student needing additional overall time to complete the assessment. A trained scribe may transcribe the students' responses into the Answer Book or testing interface. The scribe must follow the recommended scribe protocol approved by the CDE.
Speech-to-text	Computer	No	Yes	Students who have motor or processing disabilities (such as dyslexia) or who have had a recent injury (such as a broken hand or arm) that make it difficult to produce text or commands using keys may need alternative ways to work with computers. Students will need to be familiar with the software and have had many opportunities to use it prior to testing. Speech-to-text software requires that the student go back through all generated text to correct errors in transcription, including use of writing conventions; thus, prior experience with the accommodation is essential. If students use their own assistive technology devices, all assessment content should be deleted from these devices after the test for security purposes. For many of these students, using voice recognition software is the only way to demonstrate their composition skills. Still, use of speech-to-text does require that students know writing conventions and that they have the review and editing skills required of students who enter text via the computer keyboard. It is important that students who use speech-to-text also be able to develop planning notes via speech-to-text and view what they produce while composing via speech-to-text.

Table 3 *(continuation five)*

Accommodation	Delivery Mode	Embedded	Non-embedded	Recommendations for Use
Text-to-speech (Listening, Speaking, Writing) [5]	Computer	Yes	No	This accommodation is appropriate for a very small number of students. Students who use text-to-speech will need headphones unless tested individually in a separate setting. The use of this accommodation may result in the student needing additional time to complete the assessment.
Word processor (Writing domain) (grades 3–12)	Paper	No	Yes	Students who use word processing software for their responses on the Writing domain for grades three through twelve must have spelling and grammar check turned off.

Table 4 identifies accessibility resources that are *not* recommended for use on the Initial or Summative ELPAC administrations due to the tested construct even though they are used for CAASPP assessments.

Table 4. CAASPP Accessibility Resources—Not Recommended for ELPAC Administrations

Resources Not Recommended for ELPAC Administrations	Delivery Mode
100s number table	Non-embedded
Abacus	Non-embedded
Bilingual dictionary	Non-embedded
Calculator	Embedded and non-embedded
Dictionary	Embedded and non-embedded
English glossary	Embedded
Global notes	Embedded
Math tools	Embedded
Multiplication table	Non-embedded
Science charts	Embedded and non-embedded
Science tools	Embedded
Spell-check	Embedded
Thesaurus	Embedded and non-embedded
Translations (glossary)	Embedded and non-embedded
Translations (Spanish stacked)	Embedded
Word prediction	Non-embedded

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Biographical Summaries, Educational Testing Service (ETS) Assessment Design Team Members

Dr. Kenji Hakuta is the Lee L. Jacks Professor, *emeritus*, at the Stanford University Graduate School of Education. He received his Ph.D. in experimental psychology from Harvard University in 1979, has held faculty positions at Yale University and the University of California at Santa Cruz, and served as the Founding Dean of the School of Social Sciences, Humanities and Arts at the University of California, Merced. He has been elected to the National Academy of Education, the American Association for the Advancement of Science, the American Academy of Arts and Sciences, and the American Educational Research Association. Hakuta has published research in the areas of psycholinguistics, bilingualism, language shift, and the acquisition of English in immigrant students. He is the author and editor of many articles and books, including *Mirror of Language: The Debate on Bilingualism* (1986) and *In Other Words: The Science and Psychology of Second Language Acquisition* (1994). Besides research, Hakuta is professionally active in the areas of language policy, education of language-minority students, affirmative action in higher education, and improvement of quality in educational research. He has served on the boards of the Spencer Foundation and ETS, and he chaired the National Educational Research Policy and Priorities Board of the U.S. Department of Education. In California, he served on the Department of Education's committee to develop the state English Language Development Standards, and he was the author (and co-chair) of the California English Learner Roadmap policy. Hakuta has been actively involved in supporting the work of school districts and states around the country to improve education for English learners. He currently advises the Council of Chief State Schools Officers in supporting state collaborative efforts around English learners.

Diane August, Ph.D. is a managing researcher at the American Institutes for Research (AIR). At AIR she is responsible for directing the English-language learner work for the Center for English Language Learners. Her area of expertise is policy, research, and technical assistance related to the education of preschool and school age second-language learners. Dr. August brings 40 years of experience in the many aspects of educating language-minority children. Prior to her position at AIR, she was a senior research scientist at the Center for Applied Linguistics (CAL), where she directed federally-funded studies related to the development of literacy in English-language learners. At CAL she also served as co-principal investigator at the National Research and Development Center for English Language Learners, funded by the Institute of Education Sciences, where she developed, implemented, and evaluated innovative STEM programs for secondary school second-language learners. Previously, she was a senior program officer at the National Academy of Sciences, where she was study director for the Committee on Developing a Research Agenda on the Education of Limited English Proficient and Bilingual Students. Dr. August has worked as a teacher, school administrator, legislative assistant, grants officer for the Carnegie Corporation, and director of education for the Children's Defense Fund. In 1981, she received her Ph.D. in education from Stanford University and in 1982 completed a postdoctoral fellowship in psychology, also at Stanford. She has published widely in journals and books.

Dr. Martha Thurlow is the director of the National Center on Educational Outcomes. In this position, she addresses the implications of contemporary U.S. policy and practice for students with disabilities and English learners, including national and statewide assessment policies and practices, standard-setting efforts, and graduation requirements. Dr. Thurlow has conducted research for the past 45 years in a variety of areas, including assessment and decision making, learning disabilities, early childhood education, dropout prevention, effective classroom instruction, and integration of students with disabilities in general education settings. Dr. Thurlow has published extensively on all of these topics, authoring numerous books and book chapters, and publishing more than 200 articles and reports. From 1995 to 2003, she completed her eight-year term as co-Editor of Exceptional Children, the research journal of the Council for Exceptional Children, and is currently associate editor for numerous journals.

Dr. Danielle Guzman-Orth, Research Scientist, is a research scientist in the Center for English Language Learning and Assessment Research at ETS. She earned her doctorate in special education at the University of California, Santa Barbara. She specializes in monolingual and bilingual assessments, with particular focus on accessibility and accommodations for English learners (ELs), including ELs at risk and ELs with disabilities. She has provided technical assistance for state and consortia clients regarding accessibility and accommodations for their special populations (ELs, students with disabilities, ELs with disabilities, and K–2 students). She has led and consulted on numerous research studies for state and consortia contracts such as California Assessment of Student Performance and Progress (CAASPP) Primary Language stakeholder meetings, the California Spanish Assessment, and the California Science Test, as well as the English Language Proficiency Assessments for California, Smarter Balanced, Partnership for the Assessment of Readiness for College and Careers, and the English Language Proficiency Assessment for the 21st Century (ELPA21). She is a member of the editorial board for the *Journal of Hispanic Higher Education* and she has authored numerous client reports and published her work on EL assessment in peer reviewed journals, such as the *Journal of Psychoeducational Assessment* and the *Journal of Educational Psychology*, with various articles and book chapters in press at this time.

Dr. Markku (Mark) Hakkinen, Managing Senior Research Developer, is a research scientist in the Research and Development division at ETS, where he utilizes his expertise in addressing national and international accessibility standards for computer-based systems. At ETS, he works on a variety of accessibility and technology projects, including exploring accessibility challenges of tablet computers, gaming technologies, and ETS' current computer-based testing platforms. During his career, Dr. Hakkinen has placed significant focus on nonvisual interfaces to information, based upon experience gained initially as a research programmer supporting psychoacoustics research at the Central Institute for the Deaf and from his early graduate research in speech-based warning systems. He earned both his Ph.D. and M.S. in cognitive science from the University of Jyväskylä in Finland and his B.S. in psychology from Washington University.

Justine Pascalides, Director of Accessibility, Alternate Formats, and Permissions, is responsible for guiding the computer-based accessibility solution for ELPAC and overseeing the creation of the program's accessible test components. For the past 10 years, Justine has worked at ETS with the goal of making tests and test products fully accessible to all populations, including individuals with disabilities. Her duties include working toward program conformance with international accessibility standards (WCAG 2.0 AA-AA), providing programs with guidance toward building fully accessible digital testing solutions, and overseeing item permissions efforts. Prior to her time with ETS, Justine worked for three years with Questar Assessment, Inc. as a project manager over the MI-Access project (Michigan's K–12 alternate assessment for students with cognitive disabilities). Justine holds a certificate in project management from Rutgers University and earned her B.A. in psychology and archaeology from the State University of New York at Potsdam.

Jennifer Schilke, Assessment Process Specialist, has more than 15 years of experience in process, product, and project management. Prior to joining ETS in 2013, Jennifer worked as a senior manager and product manager for COMCAST. She also has experience working as a functional/business analyst and as a senior software support/consultant for PROPHET 21. In her work for ETS, Jennifer utilizes her strong background in education, research, assessment, testing, and management. She earned her Ed.S. in school psychology from Rider University and her B.S. in English education from Mount Saint Mary's College in Emmitsburg, Maryland.