

The next generation of accessible voting

Designing election systems for language access

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Ensuring adequate access to language materials in the languages voters understand is a key element of a fair, effective, and responsive election system in the United States.

Language access provisions of the Voting Rights Act (VRA) amendments in 1975 were, in part, a direct response to the English proficiency tests that were once the eligibility criteria for voting in American elections. Rather than impose prohibitive language requirements upon populations that speak and read English “less than well,” Section 203 was designed “to permit persons disabled by such disparities [educational inequality] to vote now¹.”

Under Section 203 of the Voting Rights Act (VRA), a jurisdiction is required to provide language assistance if it meets two criteria:

- A population threshold or “trigger” of 5% limited-English proficient (LEP) voting-age citizens
- An illiteracy rate of the language minority voting-age citizens that exceeds the national illiteracy rate

This report reviews the evolution of language assistance requirements under the VRA. Starting from existing procedures in place to implement language assistance, we explore successes and gaps as reported in the literature and interviews with key stakeholders.

This exploration of how well jurisdictions are meeting their current VRA requirements and how well they are likely to meet new language access needs is a baseline for thinking about how voting systems and other election design participates in meeting voter needs for language access.

Language assistance under the VRA affects LEP voters who are Asian American, Alaska Native, American Indian, and persons of Spanish heritage. Currently, approximately 22 million eligible voting-age citizens are subject to coverage under Section 203 of which 76% are Hispanics, 22% are Asian, and the remaining 2% are Alaska Natives or American Indian voting-age citizens. All four language groups saw an increase in

¹ Voting Rights Act of 1975, 2 U.S.C.C.A.N. §1279 (2006)

coverage in the 2016 determinations, with Alaska Native coverage leading the group.

Implementation of Section 203 is uneven. Our analysis suggests that many jurisdictions already face challenges in meeting VRA Section 203 requirements, and many more are not prepared to meet new language access needs as those needs emerge over the next 5 to 10 years.

In addition to federal law, some jurisdictions are also bound by state law to offer language assistance – this level of coverage tends to be less comprehensive than Section 203 requirements. Still other jurisdictions voluntarily offer language support to growing minority groups in their communities. The combination of federal, state, and voluntary coverage means demand for language assistance is likely to continue to increase as election administrators respond to demographic changes in the coming years. Smaller jurisdictions face the challenge of time and resources to administer language assistance in more than one language.

For election administrators, successful implementation of language assistance requires community buy-in, good translated materials, and poll worker training. Our research suggests there are many good practices on community outreach to promote language services and encourage civic participation within a language minority group.

For languages that have multiple dialects, translations pose a bigger challenge, as they must accurately represent the language nuances of the community being targeted. Translations require additional time that also cuts into election cycle deadlines.

Visibility of translated materials and poll worker support together shape the experience of LEP voters on the day of election. Research suggests that poll workers might not be aware of the rights of LEP voters, which can disenfranchise minority groups further. Vote centers offer new opportunities for supporting multiple languages at once in the form of ballot-on-demand and multilingual digital voting.

There is a much less robust literature and field research on design practices for election materials supporting more than one language. This report looked for what we know and what we don't know about:

- The best practices in designing paper and digital ballots, and other election materials for multiple languages
- How well current practice in election design meets the needs of LEP voters
- Gaps in the current voting system standards, where new requirements could improve the voting experience

The most comprehensive design guidelines are offered in the 2007 EAC-funded *Effective Designs for the Administration of Federal Elections*. This report recommends “no more than two languages simultaneously” on printed materials and one language at a time for digital interfaces.

The key issues for designing paper ballots are fitting languages within a limited space, and treating each language equally. The EAC’s guidelines offer a good starting point for ballot layout in two languages. There is less information on the use of typeface and layout to distinguish between languages using western and non-western characters in a way that is easy for LEP voters to follow. For other printed materials like vote-by-mail, voter guides, and other voter information, the EAC limits its recommendations to typeface and physical placement of election artifacts at the polling place.

In digital interfaces, plain interaction is critical to how voters, especially LEP voters, engage with digital interfaces. For digital ballots, voters must have the option to choose a language preference as well as toggle between languages. Further testing can reveal the optimum location to show language preferences on a screen. Best practices for digital ballots can also be used to design multilingual websites as well as offer language services on voting systems like ballot marking devices.

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Language access in U.S. elections

Language assistance includes the legal requirements as well as the social and political culture in which language assistance is offered.

The Voting Rights Act was designed to eliminate discriminatory practices against minority groups trying to get involved in the political process. This started with African Americans in the South, Puerto Ricans in the U.S. (largely in New York), and now includes any language minority group that meets a trigger formula for requiring assistance. Section 203 of the Voting Rights Act is a temporary provision of the VRA to help non-native English speakers participate in the political process of voting in the language of their choice. This can be done through bilingual written materials as well as oral assistance.

The early minority language provisions in the VRA of 1965 were very limited in scope. They focused on enfranchising Puerto Ricans by requiring that voting materials be translated into Spanish, as well as suspending literacy tests in covered jurisdictions. This decision took into account the historical relationship between the Congress and Puerto Rico, the reality of Spanish already being used in Commonwealth schools, and migration policies that encouraged Puerto Ricans to settle in the U.S.

It was not until 1970 that state literacy tests or other “tests or devices” were temporarily suspended nationwide, with Justice William O. Douglas of the Supreme Court acknowledging that “most States do not have literacy tests; ... the tests have been used at times as a discriminatory weapon against some minorities, ... [and] radio and television have made it possible for a person to be well informed even though he may not be able to read and write².” This allowed all qualified language minorities to register and vote regardless of their literacy in English or any other language.

In 1975, Congress elected to institute a permanent nationwide ban on literacy tests. Section 203 and Section 4(f) (4) expanded the reach of political participation to non-English native speakers in the United States. Under Section 203 (b), *assistance* means that “...no State or political subdivision shall provide registration or voting notices, forms, instructions, assistance, or other materials or information relating to the electoral process, including ballots, only in the English language...”³ if the affected

² 400 U.S. 112, 147 (1970)

³ Public Law 94-73, Title III § 203 (b)

language population reaches the trigger formula and has an illiteracy rate higher than the national rate (US Congress). Section 203 (c) further clarifies that when the covered language is oral or unwritten, as in the case of Alaskan natives, “the State or political subdivision is only required to furnish oral instructions, assistance, or other information relating to registration and voting.”

Although the emphasis is on the ballot, voting materials covered under Section 203 include:

- Voting notices (including information about opportunities to register, registration deadlines, time/places/locations of polling places, and absentee voting)
- Voting materials provided by mail
- All election forms
- Polling place activities and materials
- Instructions
- Publicity
- Ballots
- Other materials or information relating to the electoral process
- Live assistance and personalized response to voters’ inquiries

Various studies have pointed to the significant effect of language coverage on voting across different groups (Jones-Correa, 2005, 2013). In practice, each jurisdiction has unique needs and constraints that affect how language assistance is implemented “on the ground.” In the absence of clear guidelines and principles, decisions on how to offer assistance can vary vastly and lead to inconsistent practices that affect the quality of language access support. Implementation of assistance differs based on:

- **The legal context** — the laws and culture in which language assistance is offered
- **Election administration** — how language assistance is administered and monitored in jurisdictions covered by Section 203.
- **Voting systems** — the materials and processes that support language assistance)

The legal context of language assistance

What is the history of language assistance in the Voting Rights Act?

Like disability, language assistance is a legal right, in this case, under the Voting Rights Act. The VRA has three language assistance provisions.

- In 1965, Section 4(e) introduced a permanent provision requiring that Spanish-speaking voters from Puerto Rico be provided language assistance and materials in Spanish. Under this rule, no person who completed sixth grade education in a school in the United States “in which the predominant classroom language was other than English, shall be denied the right to vote in any Federal, State, or local election because of his inability to read, write, understand, or interpret any matter in the English language⁴.”
- In 1975⁵, the VRA explicitly acknowledged structural discrimination to language minority group citizens “related to the unequal educational opportunities afforded them, resulting in high illiteracy and low voter participation.” As a result, Section 4(f)(4) and Section 203 added temporary language assistance coverage triggered by a formula that considers the population and illiteracy rate of single language groups within a jurisdiction. For a group whose language is historically unwritten, the jurisdiction must provide oral instructions or any other type of assistance in the covered language.
- In 1982, the VRA was amended to include Section 203 which permitted any person requiring assistance because of blindness, disability or language constraints to be given assistance in the voting booth by a person of the voter’s choice⁶.

Under the VRA, a trigger for language access occurs when LEP voting-age citizens in a single language group either: (1) number more than 10,000 or (2) comprise more than five percent of all voting-age citizens or (3) comprise more than five percent of all American Indians or Alaska Native (AIAN) voting-age citizens of a single language group residing on an Indian reservation. In addition, the single language group must have an illiteracy rate⁷ demonstrably higher than

⁴ 42 U.S.C. § 1973b(e)(2)

⁵ In 1970, the VRA was amended to explicitly remove language “test or device” as a prerequisite for voting in an American election. This meant that a voting-age citizen of the United States no longer had to demonstrate an ability to read, write or interpret English, demonstrate any particular level of educational qualification, possess “good moral character” or prove his qualifications to others (Public Law 89-110, Title III § 4(c).

⁶ Assistance may not be provided by a voter’s employer, an agent of the employer or a member of the voter’s union.

⁷ Here, illiteracy means the failure to complete fifth grade.

the national illiteracy rate. Jurisdictions must provide language assistance when the two criteria – population plus literacy rate – are met.

The Director of the U.S. Census Bureau is responsible for issuing new language determinations. This was originally done following each 10-year census cycle. In 2006, Congress extended the term duration of Section 203 to the year 2032 and shortened the schedule for making determinations to every 5 years. To do this, coverage was linked to the annual American Community Survey (ACS) data collected by the Census Bureau so that language assistance could accurately respond to demographic changes and language needs across the country in a timely fashion.

In addition to internal migration, overseas immigrants entering the country may or may not settle in existing minority language enclaves, creating new language communities in the process (Hall, 2003). As of 2015, Mexico is the largest source of foreign-born residents in the U.S., followed by India, China, Philippines, and El Salvador (Migration Policy Institute, 2015) (see Appendix I). The 2016 determinations for language coverage have resulted in 15 new political subdivisions getting coverage under Section 203, bringing the total number to 263 independently covered political subdivisions⁸ (see Appendix II:1).

Implications for election administration

With coverage determinations every 5 years, requirements for language coverage may change within the expected life of a voting system.

Robust functions for supporting alternative languages should be a consideration in any voting system design or purchase.

What are the main languages we should pay attention to?

Language assistance under the VRA applies to four language groups, affecting millions of Low English Proficiency (LEP) voters:

- American Indian
- Alaska Natives
- Asian American
- Persons of Spanish heritage

⁸ This number does not include all counties under statewide coverage for Spanish in California, Florida and Texas. If included, then language assistance applies to a total of 514 political subdivisions.

There are almost 69 million eligible voting-age citizens in the covered jurisdictions, or 31.3% of the total U.S. citizen voting-age population. Of this, approximately 22 million eligible voting-age citizens are subject to language assistance under Section 203 of which 76% are Hispanics, 22% are Asian, and the remaining 2% are AIAN voting-age citizens (see Appendix I:3). Since the 2011 determinations, there has been an increase of 13% in the number of voting-age citizens requiring language assistance.

Of the four minority language groups covered under Section 203, Spanish and American Indian languages have seen the least increase in coverage (an overall addition of 2 new political subdivisions) from 2011 to 2016. Asian American languages come in next (an overall addition of 5 new political subdivisions), while Alaska Native languages have seen the greatest increase in coverage, an overall addition of 8 new political subdivisions.

Table 1. Change in language coverage, 2016

Minority language group	Coverage in 2011	Coverage in 2016	Change in coverage
Spanish	212	214	+2
American Indian	33	35	+2
Asian American	22	27	+5
Alaska Native	7	15	+8

*These numbers include jurisdictions that are covered for more than one language (AAAJ, NARF, and NALEO, 2016).

Spanish

As of 2016, California, Texas, and Florida continue to have state-wide coverage for Spanish. This means, all political subdivisions within these three states need to provide election materials and other assistance in Spanish to their LEP voting-age citizens.

Compared to the 2011 determination of coverage, jurisdictions in six states lost Spanish coverage while certain jurisdictions in four states – Georgia, Idaho, Iowa and Oklahoma gained coverage (see Appendix II:2). Census data also shows that some states, such as Arizona, are reaching a tipping point where its non-Hispanic population might become the majority (Tucker pers. comm., Apr 8, 2017).

American Indian and Alaska Native (AIAN)

As of 2016, four American Indian languages are no longer covered – Hopi, Tohono O’Odham, Yaqui and Yuma. Alaska Native coverage has doubled in Alaska, possibly due to corrections from under-sampling issues present in the 2011 determinations (AAAJ, NARF, and NALEO, 2016). Those political subdivisions in California, Colorado, and Iowa that were previously covered for American Indian continue to be covered (see Appendix II:3). Individually, Navajo has the greatest coverage while Aleut has the least.

2016 determinations have led to expanded coverage for both written and oral languages, which require good translations in relevant dialects.

Table 2. American Indian language coverage

Language	Political subdivisions covered	Affected states
Navajo	11	AZ, NM, UT
Choctaw	10	MS
Yup’ik (Alaska Native)	9	AK
Inupiat (Alaska Native)	6	AK
American Indian (all other AI Tribes)	5	CA, CT, IA, TX
Apache	5	AZ, NM
Ute	4	CO, NM, UT
Alaska Athabascan (Alaska Native)	3	AK
Pueblo	3	NM, TX
Aleut	1	AK

(AAAJ, NARF, and NALEO, 2016)

Asian American

As of 2016, Chinese, Vietnamese, Cambodian, Korean, Bangladeshi, Filipino, Japanese and Asian-Indian speakers have language assistance of which coverage for Chinese and Vietnamese has increased by two political subdivisions each and Cambodian by one (AAAJ, NARF, and NALEO, 2016). In 2016, coverage for Japanese, previously required in two political subdivisions in California and Hawaii was dropped (see Appendix II:4).

Table 3. Asian American language coverage

Language	Number of political subdivisions covered	Affected states
Chinese	18	CA, HI, IL, MA, NY, TX, WA
Vietnamese	9	CA, TX, VA, WA
Filipino	8	AK, CA, HI, NV
Korean	4	CA, NJ, NY
Asian Indian	3	IL, NJ, NY
Cambodian	2	CA, MA
Bangladeshi	1	MI

(AAAJ, NARF, and NALEO, 2016)

James Tucker, former trial attorney at the Department of Justice Civil Rights Division, Voting Section has spent decades defending election and voting rights cases for language minority groups. In our conversation with him, he outlined a few language trends for the future (Tucker pers. comm., Apr 8, 2017):

- In Los Angeles County, he expects to see continued increase in Filipino/Tagalog.
- Hmong will also come to the fore in the near future
- In the Northeast, Korean and Vietnamese will be important languages to look for
- Languages that have not been covered before are being added to the list as new national groups immigrate to the United States. For example, Khmer and Bengali speakers make up a growing portion of the population in places like Hamtramck, Michigan (near Detroit)

Currently, coverage for Asian-Indian does not differentiate between Hindi and Punjabi languages, and Chinese requirements do not specify whether to use traditional or simplified characters, or one of the languages such as Mandarin or Cantonese.

When there are dialect differences or more than one language in a category, the individual jurisdictions must decide which to use to meet their legal requirements.

Implications for voting systems

Voting systems must support western and non-western characters, especially in places that have growing populations of language groups other than Spanish speakers.

To support non-written languages, voting systems need audio output that is usable by voters who can see the screen. Audio can also be useful for voters who may not have experience with digital interfaces or who have low literacy.

How do local statutes shape language assistance?

State and local laws can expand coverage of language. Local election administrations may also voluntarily add translations of some election materials to support voters in their communities.

Additional coverage under state law

Local jurisdictions might be subject to state laws above and beyond census determinations for language assistance. For example, California has a 3% trigger (compared to the 5% VRA trigger) in determining language assistance or if citizens or organizations can offer “sufficient reason”⁹ for needing a facsimile ballot in a non-English language. The Secretary of State makes language determinations in California.

Assistance under state law is generally less comprehensive than the VRA. In California, state law requires translated facsimile ballots with ballot measures and instructions to be posted in polling places, as well as requiring county elections offices to make “reasonable efforts” to recruit bilingual poll workers as necessary (Asian Americans Advancing Justice, 2017).

Some states have resisted expansion of language assistance beyond Section 203 requirements. Others have made it more difficult for LEP voters to get assistance on voting day. Iowa, for example, forbids distribution of voting materials in any language but English. States like Colorado, Florida, Illinois and Kentucky have similar provisions of requiring LEP voters to sign an oath affirming their inability to read English before they can get language assistance in the polling place.

⁹ California legislative law, Division 14, Article 1 enacted by Stats. 1994, Ch. 920, Sec. 2.

Voluntary coverage

Some cities or metropolitan areas offer voluntary language support to meet the needs of their voters. This additional support might be a multilingual election website, a translated sample ballot in polling places, or translations of other selected election materials. It can also take the form of community outreach.

- San Diego County, Boston and Santa Clara County provide language assistance in Vietnamese outside of the federal mandate.
- In 2008, Connecticut undertook a voter outreach campaign and registered 21,000 Latinos as a result.
- Maryland and California offer telephone assistance in multiple languages.

The most extensive language requirements in the country are in Los Angeles County. It has the capacity to handle sixteen languages.

6 languages under Section 203

3 additional languages under California law
(for online translated voting materials as well as poll worker support)¹¹

7 additional languages offered voluntarily
(for polling place support, based on the needs of the community)¹²

Election administration deadlines

Both federal and state requirements for the election calendar further constrain the administration of language assistance.

In many states, election administrators have a mere two weeks for ballot design between content certification and absentee voting deadlines. This can leave little time to accurately translate, design, and present bilingual ballots.

Implications for election administration

Election management systems can reduce the time and effort required to meet state and federal requirements in an election cycle by incorporating support for languages into ballot specifications.

¹¹ The nine languages are Spanish, Chinese, Tagalog, Hindi, Japanese, Khmer, Korean, Thai, and Vietnamese.

¹² The seven languages are Bengali, Gujarati, Russian, Armenian, Punjabi, Urdu, and Farsi.

Implementing language assistance

There are multiple stakeholders involved in the implementation of language assistance. Citizens, community organizations, and election administrators together determine the success of language assistance within a jurisdiction.

However, election administrators are responsible for implementing language assistance, so this section focuses on their challenges.

One challenge for election administrators is the selection of the exact languages to support. Each jurisdiction is responsible for determining the *appropriate* type of language coverage. If a covered jurisdiction has a written language spoken in 2 or 3 different dialects, that jurisdiction must identify the dominant dialect and provide information in that dialect.

In its handbook targeting the Asian American community, the Asian American Center for Advancing Justice (2012) focuses on three aspects of implementation from an election administration perspective:

- Outreach to the community
- Translation of materials
- Training for election officials and poll workers

The following sections expand on the role and impact of each of these on the implementation of language assistance.

Election Administration: Community outreach

Making language assistance a success requires more than simply translating materials. The first step to implementing language assistance is gauging the scope of assistance required in a community, and the challenges that existing LEP voters face in accessing government services. This can be done in collaboration with different government and community stakeholders.

Then there is the issue of trust. LEP voters are likely to come from different cultural backgrounds that can affect how they respond and adapt to voting systems in this country. Implementing changes requires community buy-in, especially within historically disenfranchised communities.

Some of cultural barriers LEP voters might face are:

- Not knowing how to vote, so needing additional time to review and complete a (bilingual) ballot
- Lack of information in the community about language services offered to them
- Needing additional time to plan when to vote, especially if they are bringing a translator with them
- Trust in the voting system or feeling confident that the translated information presented to them is accurate and does not disenfranchise them in any way
- Digital illiteracy
- Not being comfortable using audio technology for language support while voting

In a 2010 study conducted with 113 voters in Los Angeles County, voters with disabilities, Latinos, and Asians put greater emphasis on being sure a future voting system was “easy to use”, than other groups surveyed (Logan, 2010). A focus group participant commented:

“Like you go to welfare office, they have a computer that shows a file, and you can access whatever you want to. English, Korean, Spanish. If you go to poll center, they should have a screen there, and like having the headphone, Korean, press the Korean button. So we can just vote using Korean.”

How does community outreach help with language assistance?

Community engagement is vital because:

- Voters may not be aware of legislative changes to their rights under Section 203. Community outreach can help build awareness
- Poll workers, especially bilingual poll workers, often belong to the same communities supported by language assistance. Strong community ties encourage participation as poll workers.

Outreach coordinators

An outreach coordinator can serve as the liaison between community and election departments. This person can also be responsible for monitoring language access services within the community (Maryland Department of Human Resources, 2014) and suggest changes to strengthen support to LEP voters. Rural areas and middle America are less likely to have coordinators than larger covered jurisdictions like Los Angeles or New York City.

Community stakeholders

Poll worker recruitment is easier and more sustainable in covered jurisdictions that actively engage with community stakeholders. Youth involvement can be a catalyst in encouraging younger voters to participate in elections and assist with language access. It also enfranchises the community to come out and vote in spite of language hurdles.

The U.S. Census and the California Secretary of State currently bundle Punjabi with “Other Indic” languages even though Punjabi speakers make up majority of this group. Election administrators don’t always understand what that “Indic” language category means or how to meet the needs of different speakers in the group.

In 2016, the Jakara Movement (a community-based organization focused on Punjabi youth) started an outreach campaign in seven counties in California – Kern, Fresno, Merced, Stanislaus, Sacramento, Sutter, Santa Clara, and Alameda — to encourage political participation among Punjabi speakers in the run-up to the 2016 November elections. High school and college students including 35 poll monitors from four counties led the initiative that included educational workshops and distributing “Know Your Voting Rights” materials in Punjabi and English. This initiative led by Punjabi youth encouraged new voters to register and made community members confident and eager to be part of the political process. It drew attention to the language needs of the Punjabi speaking community that is largely spread around central California and has over 100,000 speakers across the state.

Multilingual websites

Local election offices can also build credibility and engagement through their online services. Having a multilingual website where different language groups can access materials in their own language can go a long way in creating an image of inclusiveness and openness (Department of Canadian Heritage, 2014). See section, “Election Administration: Voting Information” for best practices on voter interaction and presentation of a multilingual website.



Implications for election administration

Community outreach contributes to the experience voters have when they get to the voting system. Awareness of language access is an important factor in whether LEP voters show up.

Election Administration: Translation and Transliteration

Under Section 203, covered jurisdictions must offer translated voting materials in the language of the covered minority group as well as in English.

Translation conveys the meaning of a word in another language. For languages (like many AIAN languages) that do not have translatable words, translators can sometimes interpret and translate the concept instead of the actual word in that language (O'Malley, 2014).

Transliteration focuses on the pronunciation of a word in another language. It changes the letters in one language or alphabet into similar-sounding characters of another alphabet. Transliteration does not convey meaning. Transliteration is often used to convert nouns/names in another language.

What practices are important for translation?

Language assistance can be deficient in the quality or accuracy of translations and transliterations (Shelly & Forbes, 2013).

Translation involves a basic two-step process:

1. Finalizing the English ballot
2. Translating the English ballot to the desired language

From an election administration perspective, translation and transliterations require additional time to produce. This can cut sharply into election deadlines. For language equity advocates, this gives English speakers the unfair advantage of accessing their voting materials sooner than LEP voters.

The Election Assistance Commission (EAC) recommends that covered jurisdictions invest in

- an expert on simple language who can “edit final English-language content for low-literacy voters”
- a human translator (rather than translation software)
- an alternative language/cultural expert who can review the translations for cultural accuracy and relevance (Election Assistance Commission, 2007b).

Plain language

The quality of the English version of a ballot can have a direct impact on the quality of the translation. When the original is complex or uses obscure terminology, translations will be equally hard to read.

Research funded by the National Institute of Standards and Technology (NIST) and the EAC's Accessible Voting Technology Initiative supports these

recommendations. For covered jurisdictions, ballots written in plain language have a better chance at serving the needs of all voters.

- Early research that led to the plain language requirements in the Voluntary Voting System Guidelines (VVSG 1.0 and 1.1) showed that traditional English ballots by themselves are hard to understand and can lead to difficult and complicated translations (Redish, Chisnell, Newby, Laskowski, & Lowry, 2009).
- A study by the Georgia Tech Research Institute repeated the original plain language study and reported that the advantages of plain language apply across languages. They tested ballots with English, Spanish, and Chinese LEP voters who showed an overall preference for ballots written in plain language in their own native language because the language was simpler, and the numbering of tasks and use of paragraphs made instructions easier to follow. Overall, the study showed that voters using the plain language ballot made fewer errors in undervotes, write-ins, and overvotes compared to the traditional language ballot (Communication of Rights Group, 2016; Kline et al., 2013).
- In a study conducted at the University of Baltimore, Summers and Langford (2015) noted that plain language in electronic ballots improves the experience of all voters but especially low-literacy voters, many of whom are also LEP voters. Plain language is useful for understanding not only the ballot but also instructions, feedback from the voting system, and any other relevant text related to voting.

Many jurisdictions attempt to specify easier-to-read language on ballots and other election materials by using grade level as a measure, usually specifying 6th or 8th grade reading levels¹³.

However, even 6th grade may be too high a level for written English for LEP voters. One reason for this is that the demand for English-as-a-Second-Language (ESL) classes exceeds the supply. Furthermore, most ESL classes focus on conversational English, far below the language required to understand the ballot and elections.

¹³ Despite the popularity of grade levels as a way of evaluating materials, plain language expert Ginny Redish suggests that readability formulas are not effective in determining whether information is in plain language and usable, especially in documents like ballots. The limited focus of the two most popular readability measures – the Dale-Chall formula and the Flesch Reading Ease Scale – on sentence length and “acceptable” words have not been tested for usability with different LEP groups and do not account for layout and design that could impact readability (Redish, 2000).

In 2006, Congress examined substantial evidence of discrimination against Alaskan Natives that were collectively called “first generation” barriers to voting. These included English-only voting materials, unequal voter assistance, and unequal voting opportunities. It was noted during this time that untranslated English used on some ballots was written at levels of 12th grade or higher, and were impossible to understand by many Alaskan Natives in Yup’ik-speaking areas. This was especially problematic because in these areas, the illiteracy rate was already at least 16 times or more higher than the national average (Tucker & Landreth, 2013).

In the 2007 case *Nick et al versus City of Bethel et al*, James Tucker of the Native American Rights Fund noted that almost 30% of the Alaskan state translators for elections reported less than a high school education, yet they were expected to translate ballot questions written at a college graduate (or 16th grade) level (Tucker, 2009).

Election glossaries

For languages that do not translate well from English, a standardized glossary of election terms can introduce LEP voters to election language unique to the American context (Communication of Rights Group, 2016). The EAC currently maintains election glossaries that are publicly available on its website. Glossaries of election terminology are offered in six languages – Chinese, Spanish, Japanese, Korean, Tagalog and Vietnamese. Commonly used election phrases are offered in the above six languages plus three additional languages — Hindi, Bengali, and Khmer (U.S. Election Assistance Commission, 2017).

As of the 2012 National Asian American Survey, 79% of Asian American and Pacific Islander voters who have low English proficiency said they would make use of in-language election materials if they are made available (Lee, 2013).

Transliteration

Transliteration of candidate names depends on state and local statutes – some states do not require transliteration. Although it is not specifically mentioned in the Voting Rights Act, the EAC guidance recommends it.

When information is transliterated, the EAC recommends that a language expert review the information for accuracy. It also suggests transliteration use only the most standard characters and that it avoid too negative or positive meanings in the characters chosen to represent the sounds of the name (Election Assistance Commission, 2007b).

There are many ways of transliterating names in a single language. In Chinese, transliterations can depend on geographical differences. In the November 2016 primary elections, New York transliterated Hillary Clinton’s first name according to its use in Taiwanese media while other jurisdictions used a transliterated version that is popular in mainland Chinese media. There were similar variations in transliterations for “Donald Trump” – New York used a more formal-sounding transliteration compared to California (Sonnad, 2016).

Dialectical differences

Dialectical differences in translations can unintentionally alter meanings of words, disenfranchising voters who depend on accurate translations to vote. In a comprehensive study of electoral design, the EAC noted that voters were more likely to prioritize security (of optical scan ballots) and accuracy of translations over usability when interacting with single-language presentations (Election Assistance Commission, 2007a). In Alaska, the variation in dialects of a single language is so significant that Walkie Charles, a native Yup’ik speaker and professor of language at the University of Alaska, Fairbanks suggests that sample ballots offering AIAN translations include footnotes to identify dialectical differences (cited in O’Malley, 2014).

Computer-generated translations

Many covered jurisdictions face the reality of having little to no translated materials available online. This is a product of cost, time, and initiative – in some instances, online election resources are either only available in English or pages rely on Google translations that are subpar (Tucker pers. comm., Apr 8, 2017).

Implications for election administration

Having a database of election terms in supported languages can ensure consistency in how voter education and ballots are translated.

Research gaps

Are there any situations in which computer-generated translations are acceptable?

When transliteration is offered, what kinds of quality control can check for accuracy and consistency, especially within short timelines?

Election Administration: Polling places and vote centers

Good interaction between voters and poll workers not only creates a pleasant voting experience but also increases the likelihood of LEP voters getting the language assistance they need on the day of voting. Bilingual poll workers must be easily and quickly identifiable on voting day. They must also have access to and awareness of relevant voting materials for LEP voters. In an ideal situation, they would have the support of additional personnel to assist voters when demand is high.

What challenges do LEP voters encounter on election day?

LEP voters face unique challenges in polling place and vote centers, including not having a way to ask for help, that can prevent them from voting as they intend.

Availability and visibility of in-language materials

Visibility of information as well as poll worker support play an important role in LEP voters getting the help they need. In large precincts, for example, large trifold standing bulletin boards can easily display election materials in a variety of languages (Asian Americans Advancing Justice, 2013). Repetitive placement of informational signs is useful to all voters. On the other hand, long text documents like a state's Voter Bill of Rights, have more use at a table or in a binder than on the wall (Election Assistance Commission, 2007a).

In some jurisdictions, access to and visibility of in-language materials reflect greater compliance with federal laws over state laws on language access. In 2017, the Asian Americans for Advancing Justice (AAAJ) (2017) released a poll monitoring report based on data collected during the November 2016 elections in California. The report shows that while California election officials did a commendable job offering translated ballots and bilingual poll worker support for Section 203 covered languages, they performed worse in offering LEP voter support for languages covered under state law — twenty five percent of facsimile ballots required under state law were missing in covered jurisdictions. In some cases, this number reached 40% (see Appendix III:2). Bilingual poll workers who spoke state-covered and not federally-covered languages were present in only 38% of polling places (see Appendix III:3). In many instances, poll workers confided in AAAJ that they didn't know what facsimile ballots are or what to do with them. This speaks to a larger issue of poll worker training and bilingual poll worker support.

In May 2016, Yolo County, California's Registrar of Voters, Jesse Salinas, worked closely with AAAJ to improve language assistance in his jurisdiction. Before the November primaries, Salinas reached out to the large Russian community in West

Sacramento by appealing to the local church to help with quality check of translated ballots. This built confidence within the community about the work Salinas was doing. Through this collaboration, he could recruit Russian-speaking poll workers, make the church a polling place, and have a successful voter registration drive.

On election day, multiple copies of language posters and banners were laminated and placed on the registration table so LEP voters could easily find the materials they were looking for on the table instead of the wall. If they wanted, voters could take materials with them to the polling booth. Together with good quality translations, this created a pleasurable voting experience for all affected voters.

Interactions with poll workers

Poll workers play a critical role in assisting voters with voting materials, accessing the right ballot, and assisting inside the voting booth. For this to happen, poll workers require adequate training and support (Shelly and Forbes 2013). The EAC reports that even in locations where voting materials were available in more than one language, voters preferred person-to-person communication at the polling place (Election Assistance Commission, 2007a).

Poll workers may simply not have the ability or time to undergo additional training for language assistance. Typically, a four-hour training session has a handful of minutes dedicated to language assistance. Training should explain LEP voter rights under the law, and provide poll workers with all the relevant voting materials helpful to LEP voters. In an ideal situation, a polling place would also have a “master poll worker” to supervise and maintain quality control of poll worker support (Election Assistance Commission, 2013).

Bilingual poll workers

Bilingual poll workers can serve two language groups – English and the covered language. Recruiting bilingual poll workers helps election departments cast a wider net of support for certain language minority groups even if they are not covered by federal or state law.

There can be several reasons why polling places do not have enough poll workers who speak the covered languages. Elections offices might:

- not have the financial resources to hire, train and equip the bilingual poll workers needed.
- have difficulty recruiting enough qualified people because of poor community outreach.
- be unaware of the language needs of their own constituents (Núñez & Sánchez, 2008).

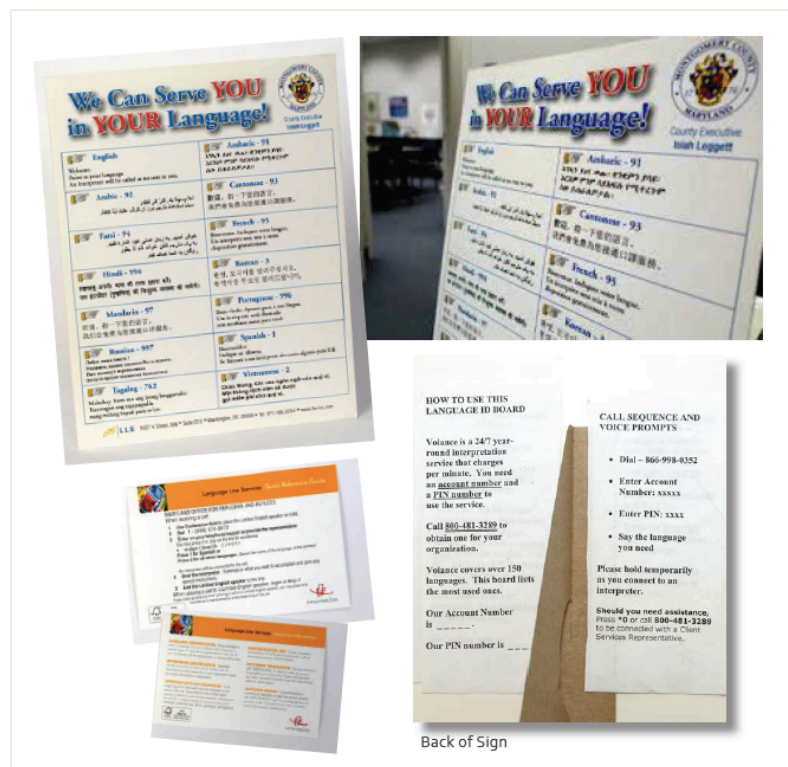
Section 203 requires that covered jurisdictions provide bilingual poll workers or “helpers” to support LEP voter needs, but it does not offer guidelines for effective poll worker training or clarity on how many bilingual poll workers are adequate for a particular population size.

In 2008, the Border Poll Crew project was formed under the guidance of the Center for Civic Engagement, University of Texas, El Paso to study LEP voter experiences across jurisdictions in the county. In one instance, the study noted that the precinct judge in the Westside, El Paso neighborhood had wrongly assumed all residents in the area were middle-class English-speaking residents. Based on the perceived affluence of the area, Spanish-speaking poll workers were not recruited to help with the elections. One young poll worker from this project noted that “during early voting none of the precinct workers spoke Spanish. (He) was the only one placed at this site because of the Border Poll Crew project (Núñez & Sánchez, 2008).” This was a big problem because 81% of voters in El Paso are Mexican and Mexican-Americans, many of who are monolingual speakers.

On the other hand, even if bilingual poll workers are present, it can be difficult for voters to identify poll workers who speak their language. Quick fixes can ease some of these pressures. “I-speak” cards can be placed at strategic places to inform voters that bilingual services are available. Simple posters around election offices can remind staff of the needs of LEP voters in their community (Maryland Department of Human Resources, 2014) (see Appendix IV).

Information on language services offered needs to be easily visible in locations frequented by voters on election day. This information should be provided in the native language offered.

(Maryland Department of Human Resources, 2014)



In an AAJ study (2013) conducted on Election Day in 2012, bilingual poll workers were completely missing from almost 25% of monitored polling sites in 15 jurisdictions across 8 states. Additionally, 43% of polling sites had bilingual poll workers with no identification badges. Alameda County had the highest rate of missing bilingual poll workers – 45% of its precincts requiring bilingual poll workers were missing at least one poll worker. On the other hand, King County, WA was among the top performers, with poll workers who spoke either Chinese or Vietnamese available at each monitored accessible voting center.

How can vote centers offer language assistance?

Vote centers provide election administrators and voters with flexibility, but because any voter in the county can go to any vote center, they also make it more difficult to target language assistance in polling places in specific neighborhoods.

Vote centers are already in use in 23 states and the District of Columbia and are the norm, replacing traditional neighborhood polling places in many states or counties, including Colorado and (starting in 2018), California (National Conference of State Legislatures, 2017).

There are three options for providing ballots in different languages in vote centers:

- Digital voting systems, programmed with all languages supported in the county (discussed above)
- Ballot-on-demand systems, programmed to print all ballot types in all languages required
- Stocking paper ballots that include all language options

Ballot-on-demand systems allow poll workers to print a custom ballot for each ballot so they get the correct ballot type (that is, the correct combination of contests). Ballot-on-demand systems can also be used to produce ballots in the voter's language.

In Clark County, Nevada, voters are given activation cards to insert into the touchscreen voting machines found at every polling place. These key cards come pre-programmed with ballots specific to different precincts. After the card is inserted in the voting system, the ballot-on-demand voting machine is activated to show the ballot for a specific precinct. Voters can also select between English and Spanish, and get audio support on these machines. After a voter finalizes her choices, the printer prints out her completed ballot, and the voter can cast her final ballot (Clark County Nevada, 2015).

Stocking paper ballots is more difficult because it does not allow for targeting specific neighborhoods. Targeting can significantly reduce costs of printing and allow jurisdictions to focus their attention toward LEP communities. It also encourages hiring of bilingual poll workers who can serve the needs of the entire populace in the area. Targeting is a workaround existing voting machines – instead of creating and printing bilingual materials, jurisdictions can offer sample ballots in minority languages at the polling booth (Tucker, 2006). Targeting works best in precinct-based voting with few language needs. It gets more difficult and costly for vote centers that potentially serve many language groups at once.

Implications for election administration

Poll worker training needs to include bilingual poll worker support for language access.

Implications for voting systems

VVSG guidelines include a requirement for poll worker usability. Although vote centers use the same equipment as other physical voting locations, the larger numbers of ballot types add complexity for poll workers.

Voting Systems

Discussions of voting systems often focus narrowly on the systems that voters use in a polling place to mark and cast their ballots. They include:

- Ballot marking devices
- “Direct recording electronic” (DRE) systems
- Electronic systems with voter verified audit information
- Scanners used to read paper ballots
- Paper ballots

A new approach to defining a “voting system” expands the scope to include other systems that affect the voting experience, including those that poll workers use to interact with voters. These systems might include:

- Electronic poll books that voters use to “sign in” at the polling place
- Ballots and related information for remote voting, including vote-by-mail and ballots for overseas (UOCAVA) voters.

Under the Help America Vote Act of 2002, the EAC is responsible for certifying voting systems to a federal standard, the Voluntary Voting System Guidelines (VVSG). States may require federal certification, require testing to federal standards, adopt all or parts of the VVSG in state certification, or make no mention of federal standards or testing in the state administration. The most recent version of the federal standard is VVSG 1.1, adopted in 2015.

The current requirements for alternative languages in VVSG 1.1 Section 3.2.7 include:

- The capability to present the “ballot, contest choices, review screens, vote verification records, and voting instructions,” in all languages the system supports.
- Allowing the voter to “select among the available languages throughout the voting session while preserving the current votes.”
- Presenting language choices using the “native name of each language.”
- Presenting all vote records (which may include only the final voting choice) in English to support auditing by poll workers and others.

Starting in 2016, the EAC began a process of updating the VVSG, working with their advisory committees, the National Institute of Standards and Technology (NIST), and members of Public Working Groups.

During this process, the EAC has proposed a definition of “voting system” as a system that provides 17 core functions from establishing the contents of the ballot to displaying the final results (Macias, 2017).

Language assistance touches many of these functions across the voter journey, both in election administration functions and in systems voters and poll worker interact with:

- Functions 1-4: Ballot definition
- Functions 5-7: Ballot display to the voter
- Functions 8-12: Marking, reviewing, and casting paper or digital ballots
- Function 17: Tracking ballots, including vote-by-mail or provisional ballots

This sections that follow explore issues in language access as they affect ballots and other parts of the system that voters and poll workers use.

Research gaps

What core requirements from VVSG apply to ballots and associated information about voting used by LEP voters?

How can systems used in polling places and vote centers offer a consistent experience for LEP voters from beginning to end of the voting experience (for example, transferring language preferences across devices)?

Voting Systems: Paper ballots

There is scant research on how to best design a paper ballot to provide language access. The guidance that does exist is primarily based on common election administration practice, although there is some research evidence.

We have not been able to find general guidelines for using design elements like color and graphics for bilingual/multilingual ballots.

How many languages should be used on paper ballots?

There are three options for offering paper ballots in multiple languages

- All ballots are monolingual in English or a covered language¹⁴
- All ballots are designed with English + 1 additional language
- More than two languages on a ballot

Considerations in making this decision include:

- The number of languages a jurisdiction supports
- The cost of printing ballots in the different combinations
- The need to also provide large-print ballots for accessibility
- The usability of the design for voters

The 2007 EAC-funded study, *Effective Designs for the Administration of Federal Elections* (Election Assistance Commission, 2007b), provides some of the most robust evidence-based designs for language access. This study recommended English + 1 additional language (or “no more than two languages simultaneously”) on printed materials.

An important advantage of English + 1 is that every ballot can be used by English-speaking voters, reducing the number of extra ballots that need to be printed. This design also helps meet the requirement that all ballots be auditable in English.

In 2010 when New York State switched to paper ballots, some advocates suggested that Chinese and Korean languages appear together on the ballot along with English. This was because poll workers who did not speak either non-English language had a difficult time differentiating between Korean and Chinese voters. Having both covered languages on the same ballot meant voters speaking either language could be handed the same ballot. On the flip side, three languages on a single ballot adds to clutter and is not recommended under EAC best practices (CCD pers. comm., October 2010).

In a study involving Arabic, Chinese, and Vietnamese translations for one-language and two-language optical scan ballots, rolling DRE ballot screens and

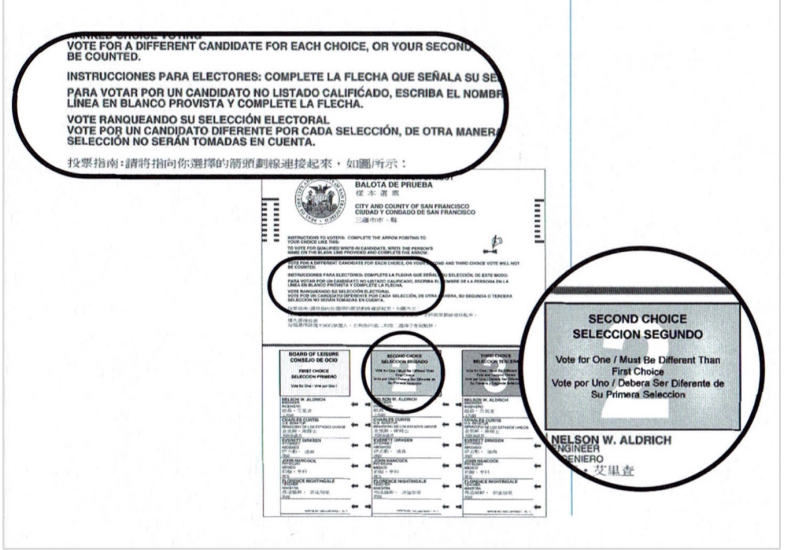
¹⁴ It is more likely for a sample ballot to be printed in a monolingual, non-English language. Actual ballots always include English and one or more covered languages.

voter information materials, the EAC concluded that their design templates could reasonably handle all three languages in single-language and dual-language combinations in spite of the variation in alphabet scripts (EAC 2007: Nine research events). The disadvantage is that each contest takes up extra room on the ballot, requiring smaller fonts or longer paper that could make it harder to navigate.

This example shows inconsistent use of languages on a San Francisco ballot sample, with:

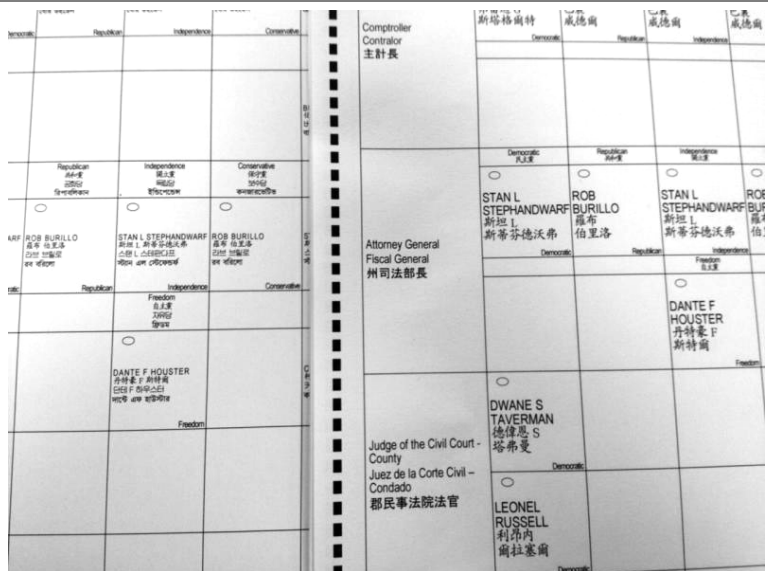
- Chinese used alongside English and Spanish on most of the ballot
- Chinese omitted from rank heading information for lack of space

(Lausen, 2007)



In 2013, the general election ballot in New York City had up to five languages that were fitted using six-point typeface. Now the Election Board has determined that New York City can have no more than three languages on a single ballot, which takes the font size up to 10 points.

(Katz, 2014)



How can language hierarchy be communicated?

Using more than one language on a ballot raises concerns of language equity. From a voting system perspective, ballot presentation and design can determine which language is seen as primary, especially when two languages share the same alphabet.

Consistency can mitigate some concerns about language hierarchy. Within a particular covered jurisdiction, election materials must follow the same design guidelines across languages. This creates a smooth, familiar voting experience for LEP voters to find their own language quickly and consistently on a bilingual or multilingual ballot. For example, font sizes can be made “equal” by using the absolute and not point size value to increase readability and equality of both languages (Election Administration Commission, 2015).

Layout and language hierarchy

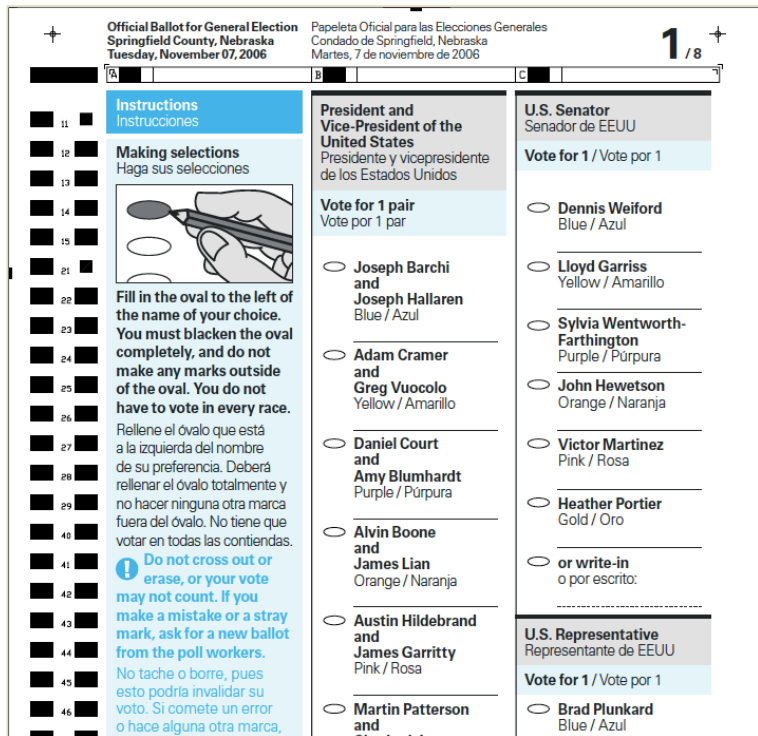
In its guidelines for bilingual optical scan ballots, the EAC suggests that designers (2007b):

- Place election information above the left column of the face of every ballot page, with the second language to the right of the first, in line with the second column. This election information should be clearly outside the main interaction of the voter with the ballot
- For ballot instructions, navigation and contest questions, not put additional space between languages
- For candidate information, contest and ballot measure instructions, use a forward slash to separate languages only if both fit on a single line
- In the case of using Asian languages, transliterate candidate names and political party names

This sample ballot follows EAC recommendations, with:

- Election information in two languages at the top of the page
- Translations separated with a forward slash (/)

(Election Assistance Commission, 2007b)



The same report however noted discrepancies in how election administrators, literacy experts and voters viewed the ballot design. For example, one consulting expert suggested stacking two languages horizontally but literacy experts preferred a side-by-side display.

When testing voter information materials, some participants preferred information that was aggregated by language rather than topic. In ballot design testing, majority of the participants favored the idea of having multiple languages on a ballot but preferred single-language displays because they were quicker to read (Election Assistance Commission, 2007a).

The EAC recommends bolding one language to make it stand apart from the other when two languages share a common alphabet (Election Assistance Commission, 2007b). Although it does not require that English be the first in the sequence on a ballot, this has raised concerns among election administrators, language experts, and vendors about language hierarchy.

How do languages and typography affect design choices?

The typography of non-English languages, or how the text wraps and lines break can also affect how voters read and understand the material presented to them

(Election Assistance Commission, 2007a). For example, Asian character fonts do not generally have a way to make text bold. If the English text is presented in a bold font, how can the meaning intended in this typography be presented equivalently in the Asian language?

Understanding how to use typography to present languages in an equivalent way can require usability testing to be sure that the design preserves the meaning and intent of translated materials.

A range of sources include recommendations and guidelines for making multi-language ballots usable by the widest range of voters. In addition, poll workers need indicators for the languages on ballots. The guidelines below cover layout, typeface, use of color, and instructions for marking the ballot.

Reading order

In election materials, languages that are traditionally vertical or right-to-left have been normalized to read left-to-right.

We have not been able to find any guidelines or research findings on how voters interact with these materials or their expectations.

Typeface, imagery and color

The EAC recommends simplicity and compatibility with a single font family such as Univers. However, when testing with Arabic, Chinese and Vietnamese samples, recommended font families had to be purchased to ensure legibility across languages (Election Assistance Commission, 2007a). VVSG 1.1 guidelines further suggest using font sizes measured in millimeters, not points, to maintain legibility across alphabet scripts (Election Administration Commission, 2015).

The Voting Systems Assessment Project (VSAP) study in Los Angeles County recommends supplementing English with graphic elements on a bilingual ballot, or expanding the overall text size and layout spacing for better readability. The EAC agrees that “imagery may aid in candidate recognition if quality of photos and reproduction are both of high quality” (Election Assistance Commission, 2007b) but the tradeoff is icons and images might increase the length and complexity of the ballots.

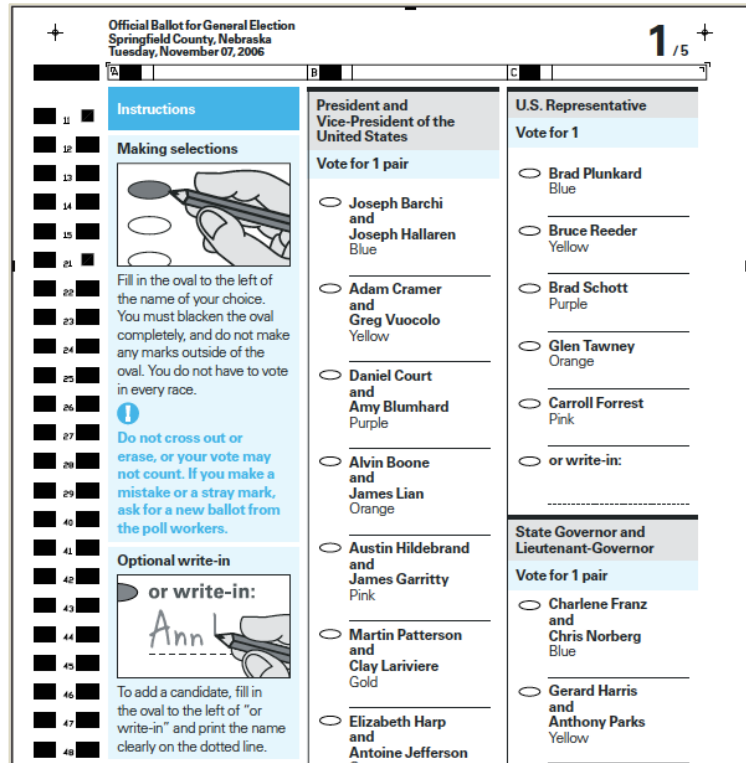
For making distinctions as well as for accessibility purposes, the use of color must be accompanied by another distinguishing element such the shape, an icon, text style and other design elements (Election Assistance Commission, 2007b).

On ballots, shading can be used to make information and headings distinct from ballot choices, without conveying any additional meaning.

Nebraska ballot sample with shading and illustrations for instructions.

Visual instructions help all low literacy voters but might be especially important for LEP voters.

(Election Assistance Commission, 2007b)



Poll worker support

The EAC recommends having a language identifier at the bottom right hand corner of a non-English monolingual ballot so that poll workers can quickly identify the language of the ballot. This is especially applicable when using languages that have a different alphabet than English (Election Assistance Commission, 2007b).

Implications for voting systems

VVSG requirements might include several EAC recommendations:

A requirement that the languages on a ballot be identified, in both English and the language, on the ballot, in a consistent location that poll workers can use.

Specifying the allowable size difference between the primary and secondary language text.

Research gaps

What is the best layout for ballot measures that have long text?

Voting Systems: Digital ballots

Digital ballots, unlike paper ballots, offer LEP voters the chance to select their language on their own at the beginning of the voting session.

Digital interfaces outside of voting systems commonly display only one language at a time, using a “toggle” to switch from one language to another, instead of a single bilingual display.

What interaction patterns help voters select their language

Paying attention to digital literacy is important for language access because low literacy often goes along with digital illiteracy. Simply relying on digital voting systems for language access and translation may not be an acceptable solution.

For voters of all literacy levels, plain interaction is key – voters should be able to easily understand the information they see and read, know what actions are expected of them, and what the results of their actions will be (Summers & Langford, 2015).

In some jurisdictions, accessible voting systems cater to both digital literacy and language assistance needs of LEP voters. For example, in Cook County voters with accessibility needs can use DRE ballots to vote. These ballot machines are also equipped to offer language assistance in the three covered languages under Section 203 – Spanish, Hindi, and Chinese (Orr, 2009).

Choosing a language on the first screen

The EAC recommends one language at a time for rolling DRE ballots (Election Assistance Commission, 2007c). The language section options must also use the native name of each language (Election Administration Commission, 2015; Election Assistance Commission, 2007a).

After selecting a language, all screens are then displayed in that language, including all interface buttons, instructions, and ballot text.

The choice of language is the first screen on entering a digital ballot interface.

Languages are displayed in-language for easier recognition by voters.

(Center for Civic Design, 2017a; Election Assistance Commission, 2007c)



Toggleing between languages

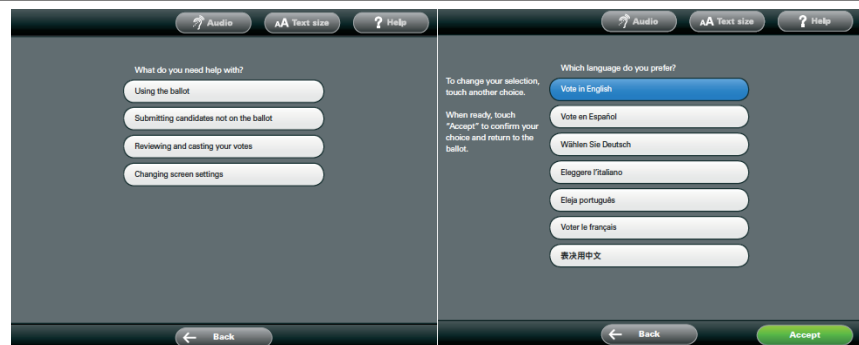
At any point during voting, the voter should be able to change their language choice, preserving all voting choices already made. This is called “toggleing” between languages, which continues to display only one language at a time on the screen. This has both design and accessibility benefits:

- A single language display is visually simpler to follow, especially for monolingual non-English users
- Repeating the same information on a screen in two languages creates an accessibility problem for people relying on audio to navigate

In most current voting systems, the option to toggle is included in a “Help” or “Settings” button visible on each page. Settings may also include other display preferences for accessibility.

In the EAC prototype, language choices are part of the help options, although Audio and Text Size have separate buttons visible on each screen.

(Election Assistance Commission, 2007c)



For full-face DRE ballots in more than one language, interaction becomes more complicated. We have found no recommendations on effective design for two languages on a single screen that also supports audio for accessibility.

The Interactive Sample Ballot (ISB) was created and designed out of Los Angeles County's Voting Systems Assessment Project (VSAP) in 2010. ISB provides a tool for voters to view and mark up a sample ballot in the comfort of their homes. This prototype was created to help voters who need more time and a comfortable space to review and mark a ballot correctly. This could be especially useful for LEP voters who would have time to study the choices on their ballot and be more confident in their votes (Los Angeles County Registrar-Recorder/County Clerk, 2017).

Implications and research gaps for voting systems

VVSG guidelines could include a requirement that the control to change language be visible on each ballot page of a digital ballot, not hidden in a "help" or "settings" feature.

The most common designs for selecting languages assume that a selection is made once, at the start of the voting session. The option to change languages at any time – from English to an alternative language or from an alternative language to English – must be designed in a way that is easy for LEP voters to find and use at any time

Research gaps

Mixing languages on a screen adds complexity to digital interfaces both for audio output and for the usability of the interface. Should there be a specific requirement that digital interfaces be designed to switch (toggle) between languages rather than mixing them on the screen?

How are English names pronounced when they are on a screen with another language? Is recorded speech more successful at mixing languages?

Voting Systems: Vote-by-mail and remote voting

What design issues are unique to vote-by-mail?

Voters who opt to vote by mail do not have the advantage of asking a poll worker for clarifications if they do not understand instructions or information on the materials they received. Information on vote-by-mail materials must stand on its own.

For election administrators, designing vote-by-mail materials means having to work with limited space on limited materials to help voters vote as they intend.

Differentiating between languages

For vote-by-mail, election departments sometimes use a combination of design elements to differentiate between different pieces of voting materials. In California, for example, color is used for several different purposes in elections that can create confusing or contradictory cues. Counties use colors to -

- Make it easy to see at a glance what language a voter guide is in
- To differentiate types of vote-by-mail envelopes
- To distinguish parties in a Primary Election (using colors defined state-wide)

In a study on vote-by-mail conducted by Los Angeles County, researchers noted that bilingual voters found languages with a similar alphabet (for example, English and Spanish) harder to read than materials with dissimilar scripts (English and Korean) (Catalani, Opsahl, Papadopoulos, & Adams, 2016).

Repeating important information in language

Election administrators and vendors face the challenge of fitting all relevant information into a packet of voting materials that are sent out to voters.

For LEP voters, all of the materials must be in their covered language. Most importantly, LEP voters must be able to identify their ballot in their language when they received it in the mail.

Instructions for marking and returning ballots must also be offered in language. These pieces of information must be short and concise to fit on the space provided as well as accurate and easy to follow so that voters can understand the information without the help of a poll worker. Sometimes this means that relevant information must be repeated in more than one place to help voters correctly mark and return their ballots.

In its research on vote-by-mail, Los Angeles County found that some communities of voters including Spanish-speakers were statistically less likely to correctly mark their selection by filling it in the circle. Placing instructions on how to correctly mark ballots on the secrecy sleeve as well as the actual ballot reduced this margin of error. This report also suggested having instructions on how not to mark a ballot (Catalani et al., 2016).

Research gaps

Can we develop tools and templates to guide election officials on best practices for vote-by-mail for multilingual ballots?

Voting Systems: Other voting materials

Best practices outlined by the EAC focus on typeface and physical placement of election artifacts at the polling place. There is little information on one-language and two-language layouts in languages using non-English alphabets.

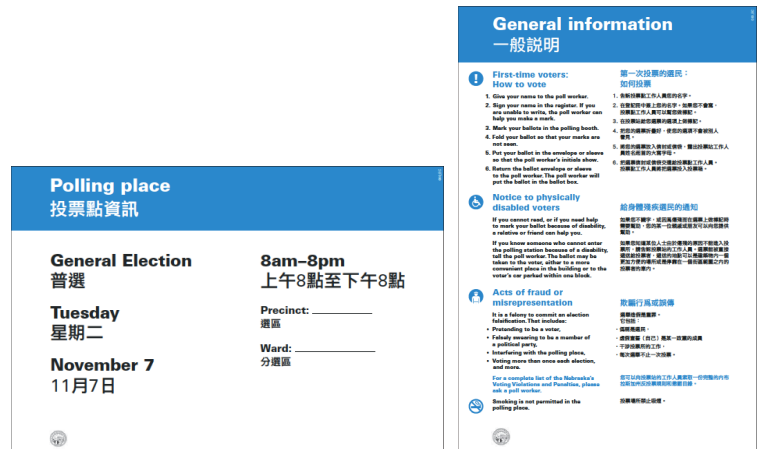
Voting materials in the polling place

EAC guidelines for one-language and two-language voting materials¹⁵ are similar to those for optical scan ballots – single language is preferred over two languages within the same document (Election Assistance Commission, 2007d).

For two-language identification banners, wayfinding posters, tabletop signs, and information and instruction print outs, the EAC suggests translations are made “based on preferred alternate language” (Election Assistance Commission, 2007d). Best practices include specific information on typeface like font type, size, as well as the height of posters, banners and other display materials.

In these EAC samples, information about the polling place, wayfinding for accessibility needs and general voting guidelines are shown in two languages in the same document.

(Election Assistance Commission, 2007d)



Voter guides

In 2014, the Department of Canadian Heritage offered a set of recommendations for formatting bilingual documents (Department of Canadian Heritage, 2014).

- The “flip-side” format of English on one side, non-English on the other conveys a bilingual message but is costly to produce because it increases the number of pages required
- Two columns side-by-side in English and non-English is a challenge to format but conveys a clear bilingual image

¹⁵ In the *Effective Designs for the Administration of Federal Elections* document, voting materials are divided into functions of identification, wayfinding, and information and instruction.

- Having two separate editions, one in English, the other non-English is cost-effective for long documents but does not convey a bilingual image of the organization
- Separate sections in the same document allows a clear focus for each language but makes it hard to compare information between languages.

The Department acknowledged that language hierarchy must be considered when designing bilingual materials. Especially for concise documents like letterheads (or ballots) the language on the top or on the left of a bilingual document inevitably gains precedence over the other (Department of Canadian Heritage, 2014).

In 2015, the Center for Civic Design (CCD) tested two versions of voter information guides in Santa Cruz, CA – alternating pages and sections in a two-language layout. Respondents were evenly split in their preference (Center for Civic Design, 2017b):

- Bilinguals tended to like the facing pages as language support
- Monolinguals tended to prefer the sections
- Some English-speakers said they liked seeing it, but they were outliers

Mary Quandt, a lead researcher on the Design for Democracy project (that ultimately produced *Effective Designs for the Administration of Federal Elections*) said trust was another factor in bilingual voters preferring the side-by-side layout – they wanted to make sure the translated text gave the same information as the English text (Quandt pers. comm., May 23, 2017).

CCD recommends that while voter guide layouts can have different ways to separate languages in the same book, certain pages must have two languages together such as the cover, the inside front cover, the back cover and any forms. Even when guides are printed in individual languages, CCD suggests having available languages listed on the cover and in that language. This lets voters know the language options available to them. (Center for Civic Design, 2017b).

In Los Angeles County, Oakland County, and San Diego for example, voter guides are printed as separate books in different languages. In other places like Yuba County, voter guides are printed with two languages in two separate sections of the booklet, divided by a sample ballot. In Monterey County, pages in their voter guide are split top and bottom in two different languages.

In Colusa County, the voter guide has two languages on the same page but divided into sections.

Other voter guides have Spanish and English in two separate sections of the book, with the sample ballot in the center.

(Center for Civic Design, 2017b)

ACCESSIBLE VOTING
At the polling site: If you vote at a polling site, to check polling site accessibility, look for the wheelchair symbol on the back cover of the book above your polling place location. In some polling sites, temporary thresholds, ramps, signage, cones, and door propp, are used to improve access to the facility.
Curbcut voting: If your polling site is not accessible, you may vote from a nearby accessible location. If you are a pollster, call 442-4424 to vote and return the voted ballot to the polling site. To request curbside voting assistance, you may call 1-877-458-0501. In advance, to coordinate a time and place, or have an assistant make the request inside the polling site for you.
Accessible voting system: Each polling site in the county has a touch screen ballot marking system with an audio option that reads the ballot to you and can display large print.
A vote by mail polling site: The Colusa County Transit provides service Monday - Friday. All elections are AVOID CONTACTS AND TRAVEL runs approximately between the hours of 7:30 am to 6:30pm. Call 455-0237 for scheduling and more information.
Ballot delivery to your home: You may designate a person to pick-up and deliver a vote-by-mail ballot from the elections office. Please call our office for details.
Voting information: Audio versions of the state voter guide are available on request. Online recordings of the state voter guide are available approximately four weeks before the election. Go to www.sos.ca.gov/voter for more information. For assistance with accessible voting call one of the numbers below.
Colusa County Clerk Registrar Registrar of Voters: 530-458-0500 or 877-458-0501
CA Secretary of State: 916-807-2146 or 800-945-6883
CA Relay: 800-735-2322
TTY/Voice: 800-945-6883

VOTACION ACCESIBLE
En el lugar de votación: Si vota en un sitio de votación, busque el símbolo de silla de ruedas localizado en la contraportada de este libro arriba de su lugar de votación, para comprobar accesibilidad. En algunos sitios de votación, utilizan rampas temporales, conos, conos, conos de señalización, conos, conos de puerta, conos para mejorar el acceso a las instalaciones.
Votación en la acera: Si su lugar de votación no es accesible, usted puede votar desde una ubicación accesible cerca, incluyendo un coche. Un trabajador electoral le ayudará para votar y entregará su boleta votada a la urna electoral. Para solicitar asistencia con votación en la acera, llame al 1-877-458-0501 con anticipación, para coordinar un tiempo y lugar o pedir que un ayudante haga la solicitud dentro del sitio de votación de su parte.
Sistema de votación accesible: Cada lugar de votación en el condado tiene un sistema con pantalla táctil para marcar su boleta. Este sistema puede leer la boleta en Español o Inglés, o magnificar las palabras en la pantalla para poder leer más fácil.
Un voto a su lugar de votación: El Transporte Condado Colusa (Colusa County Transit), ofrece servicio de Línea - Transito. Todos los vehículos cumplen con las regulaciones ADA de este proveedor con (designados) y el transporte de servicio aproximadamente entre las horas de 7:30 am a 6:30 pm. Llame 455-0237 para programación y obtener más información.
La entrega de boleta a su hogar: Usted puede designar una persona que recoja y entregue una boleta para votar por correo en la oficina de elecciones. Por favor llame a nuestra oficina para más detalles.
Información de votación: Audio versiones del guía de los votantes del estado son disponibles a pedido. Las grabaciones del guía del votante del estado están disponibles en línea aproximadamente cuatro semanas antes de la elección. Visite www.sos.ca.gov/voter para más información. Para solicitar ayuda con accesibilidad para votar llame a uno de los números arriba.

Multilingual websites

Offering language support through translated information online can help jurisdictions extend their reach to the LEP community. Good interaction on a multilingual website not only signals inclusiveness of different language needs but can be another platform where important election materials are available in different languages.

Multilingual websites must support LEP voters in getting the information they need, in the language they prefer. Like digital ballots, plain interaction is important for multilingual websites.

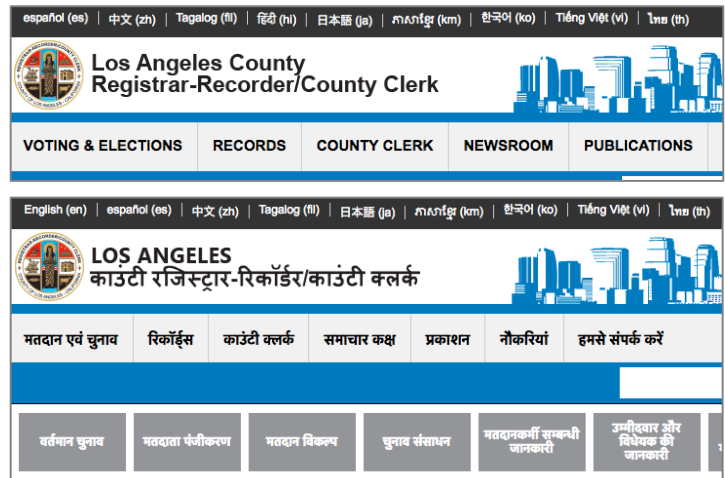
Upon visiting the home page of a multilingual election website, voters must immediately be able to find language options on the screen. The option to toggle languages must be consistently visible on each navigation page; often it is found on the top right corner of the page. The ability to toggle must also preserve the voter's place on the website. The translated website should offer a consistent look and feel to its comparable English website by having similar features across languages¹⁶ (Godfrey, Braverman, Ounes, & Martinez, n.d.).

¹⁶ For a full list of recommendations for creating a multilingual website, see <https://www.digitalgov.gov/resources/top-10-best-practices-for-multilingual-websites/>

The Los Angeles County website lavote.net is completely translated into 9 languages.

The site includes materials on voting options, voter education, and candidate and measures information. There is a prominent display of contact information for language assistance by phone.

Voters can also check their vote by mail or registration status or download related forms.



Implications for election administration

Election administrators should make language options easy to identify across all printed voting materials.

Research gaps

Are there any practices from designing printed or online voting materials that might be useful for standards or guidance for voting systems?

Voting Systems: Ballot marking devices

What designs help ballot marking devices support language access?

A ballot marking device (BMD) combines functionalities of a digital marking interface with a paper ballot. Voters can select their choices on a BMD which can be digitally communicated to a printing machine that prints out the actual ballot with the voter's selected choices on paper that is then deposited in the ballot box.

There are two language access implications on a BMD:

- In what language is the voter making her selection on a BMD?
- What language is the paper ballot printed after the selections have been made?

If the paper ballot is printed only in English, can LEP voters verify their choices on the paper ballot after making their selection on a BMD?

If the paper ballot is printed in the voter's language, can election administrators audit that ballot?

In the design for future voting systems in Los Angeles County, the paper ballot prints vote selections in the language of the voter. However, the ballot is counted using a QR code that contains coded ballot choices, reflecting the contest and candidate ID shown on the ballot. This feature allows administrators to identify information even when it is displayed in a non-English language.

Implications for voting systems

Voting machines must support bilingual ballot printing and Unicode languages. |

Voting systems must support audits in English, even if the ballot is in a language other than English.

Conclusion

Language assistance is a federal requirement under Section 203 of the Voting Rights Act. Coverage under this Act according to census data taken every five years reveals patterns in minority language groups across the country. Under the federal law, Spanish, American Indian, Alaska Native, and Asian American languages are guaranteed language assistance to vote.

Implementation of language assistance is a difficult and complex task, depending on the context of each covered jurisdiction. In some cases, state and local laws are stricter than the federally mandated VRA Section 203. The cost, time and resources required to meet language needs of LEP voters affects many aspects of the voting system, from ballot presentation and design to marking, reviewing, tracking and auditing election materials. It also involves administration of recruiting, training, and promoting services related to language assistance. Much of the existing research on language assistance has focused on coverage, as well as broad guidelines on the merits of offering language assistance. There is very little usability research on ballot design specifics, like languages that can “break” in combination or the structure of two-language electronic ballots for accessibility.

Language assistance is a fundamental part of all voter experiences and underlies how voters get access to information, how they read and interpret that information, and participate in the voting process. To successfully bring disadvantaged and new voters into the US electoral system, coverage and implementation must go hand in hand.

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Summary of implications and research gaps

Implications for election administration

Language trends

- With coverage determinations every 5 years, requirements for language coverage may change within the expected life of a voting system.
- Robust functions for supporting alternative languages should be a consideration in any voting system design or purchase.
- Election management systems can reduce the time and effort required to meet state and federal requirements in an election cycle by incorporating support for languages into ballot specifications.

Community outreach

- Community outreach contributes to the experience voters have when they get to the voting system. Awareness of language access is an important factor in whether LEP voters show up.

Translation and transliteration

- Having a database of election terms in supported languages can ensure consistency in how voter education and ballots are translated.

Polling places and vote centers

- Poll worker training needs to include bilingual poll worker support for language access.

Other voting materials

- Election administrators should make language options easy to identify across all printed voting materials.

Summary of implications for voting systems

Language trends

- Voting systems must support western and non-western characters, especially in places that have growing populations of language groups other than Spanish speakers.
- To support non-written languages, voting systems need audio output that is usable by voters who can see the screen. Audio can also be useful for voters who may not have experience with digital interfaces or who have low literacy.

Polling places and vote centers

- VVSG guidelines include a requirement for poll worker usability. Although vote centers use the same equipment as other physical voting locations, the larger numbers of ballot types add complexity for poll workers.

Paper ballots

- VVSG requirements might include several EAC recommendations:
- A requirement that the languages on a ballot be identified, in both English and the language, on the ballot, in a consistent location that poll workers can use.
- Specifying the allowable size difference between the primary and secondary language text.

Digital ballots

- VVSG guidelines could include a requirement that the control to change language be visible on each ballot page of a digital ballot, not hidden in a “help” or “settings” feature.
- The most common designs for selecting languages assume that a selection is made once, at the start of the voting session. The option to change languages at any time – from English to an alternative language or from an alternative language to English – must be designed in a way that is easy for LEP voters to find and use at any time.

Ballot marking devices

- Voting machines must support bilingual ballot printing and Unicode languages.
- Voting systems must support audits in English, even if the ballot is in a language other than English.

Summary of research gaps

Translation and transliteration

- Are there any situations in which computer-generated translations are acceptable?
- When transliteration is offered, what kinds of quality control can check for accuracy and consistency, especially within short timelines?

Voting systems

- What core requirements from VVSG apply to ballots and associated information about voting used by LEP voters?
- How can systems used in polling places and vote centers offer a consistent experience for LEP voters from beginning to end of the voting experience (for example, transferring language preferences across devices)?

Paper ballots

- What is the best layout for ballot measures that have long text?

Digital ballots

- Mixing languages on a screen adds complexity to digital interfaces both for audio output and for the usability of the interface. Should there be a specific requirement that digital interfaces be designed to switch (toggle) between languages rather than mixing them on the screen?
- How are English names pronounced when they are on a screen with another language? Is recorded speech more successful at mixing languages?

Vote-by-mail and remote voting

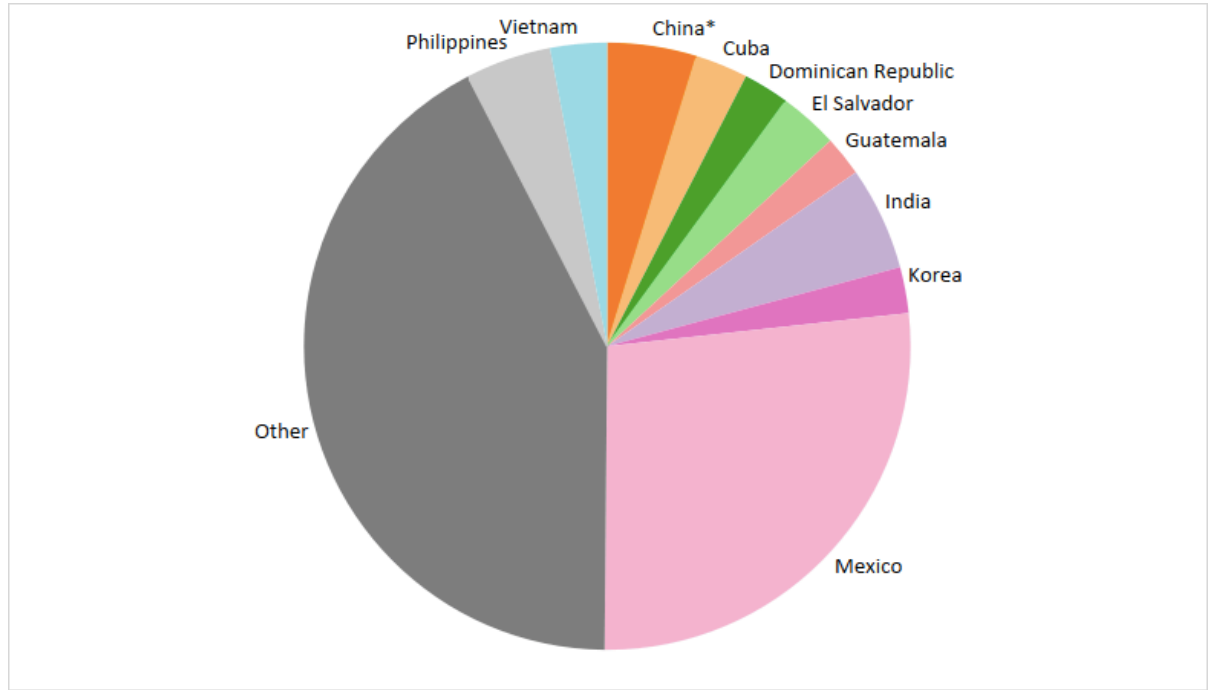
- Can we develop tools and templates to guide election officials on best practices for vote-by-mail for multilingual ballots?

Other voting materials

- Are there any practices from designing printed or online voting materials that might be useful for standards or guidance for voting systems?

Appendix I: Immigrant population trends in the US

1: Top ten largest U.S. immigrant groups, 2015



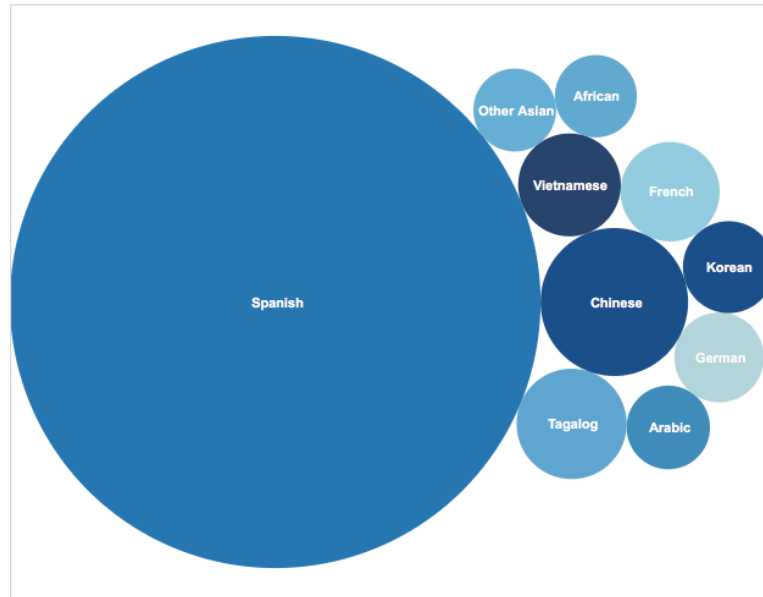
“Other” represents an aggregate of all other languages that are not the top ten.
(Migration Policy Institute, 2015)

2: Top counties with immigrant populations, 2011 — 2015

County	State	Immigrant population
Los Angeles County	California	29,300
Maricopa County	Arizona	24,900
Broward County	Florida	18,500
King County	Washington	17,600
Orange County	California	14,400
San Diego County	California	12,800
Riverside County	California	12,100
New York County	New York	11,300
Palm Beach County	Florida	11,000
Pinellas County	Florida	10,400
Oakland County	Michigan	9,900
Santa Clara County	California	9,900

(Migration Policy Institute, 2015)

3: Top ten languages spoken by LEP U.S. residents, 2009 — 2013



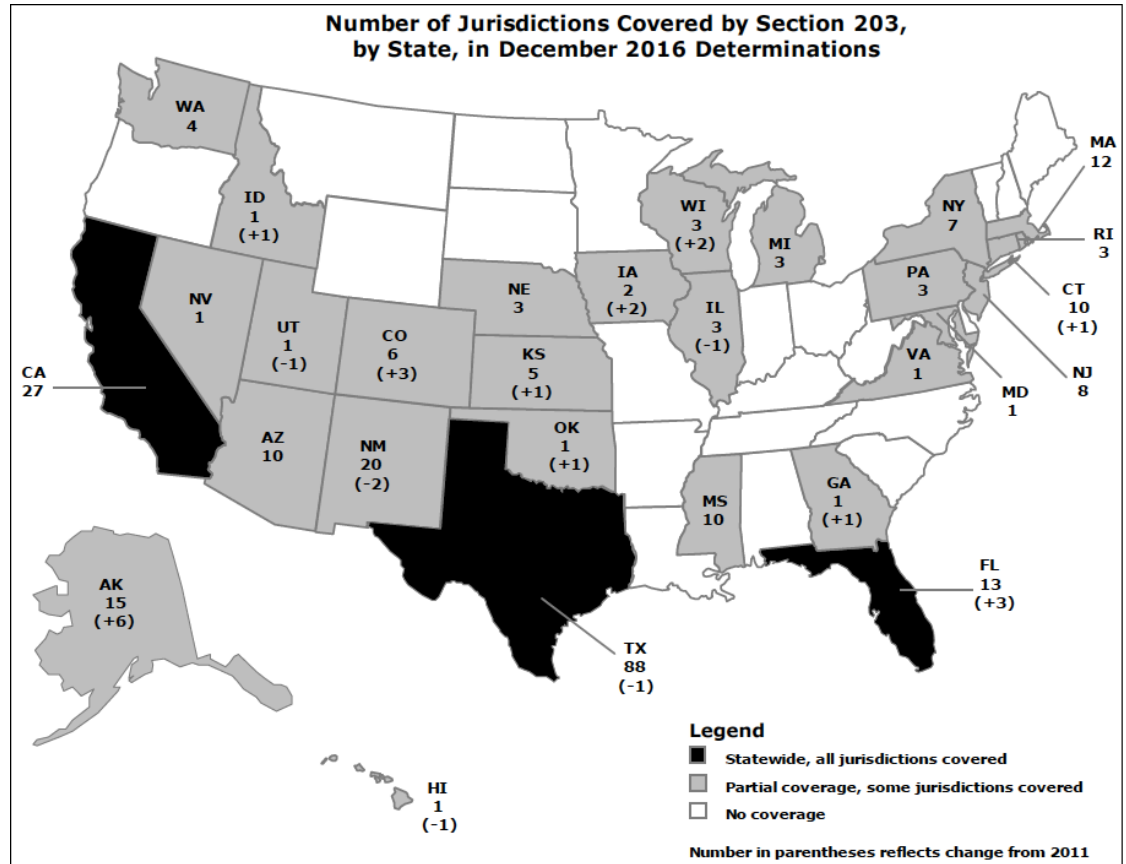
Size of the bubble represents number of language speakers. Darker the bubble, the higher the share of speakers of this language who are LEP.

Language	Share of LEP speakers
Vietnamese	60%
Korean	55%
Chinese	55%
Thai	52%
Cambodian	52%
Laotian	50%
Russian	47%
Armenian	45%
French Creole	44%
Spanish	44%

(Migration Policy Institute, 2015)

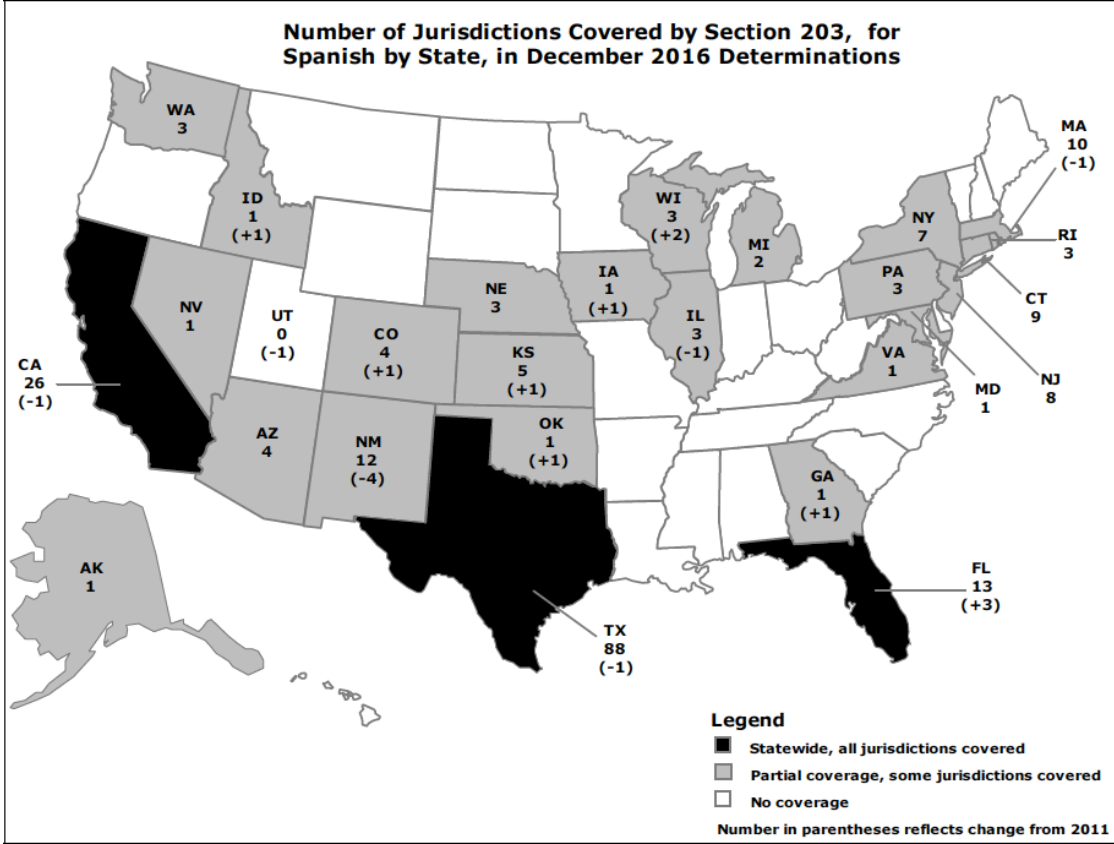
Appendix II – Maps of VRA Section 203 coverages

1: 2016 – All jurisdictions with coverage



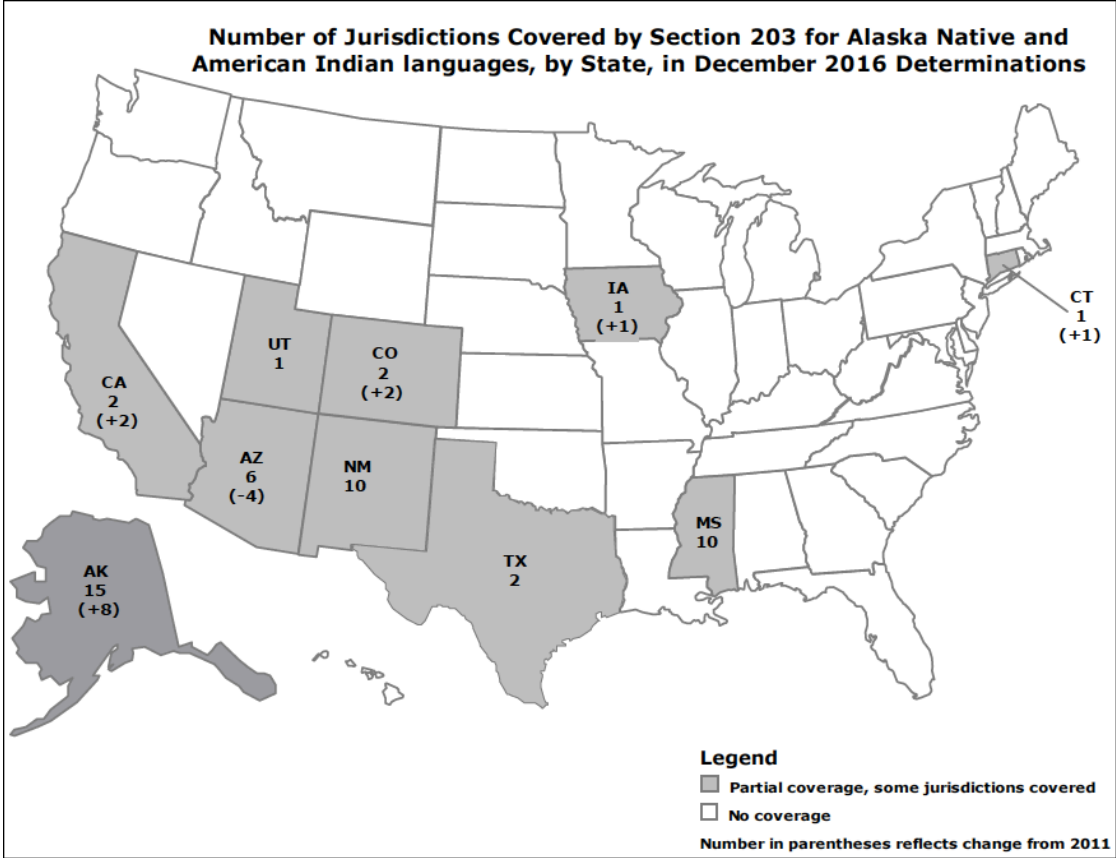
Voting Rights Act Amendments of 2006, Determinations Under Section 203, 81 Fed. Reg. 87,532 (Dec. 5, 2016) (“2016 Section 203 Determinations”).

2: Jurisdictions covered for Spanish in 2016



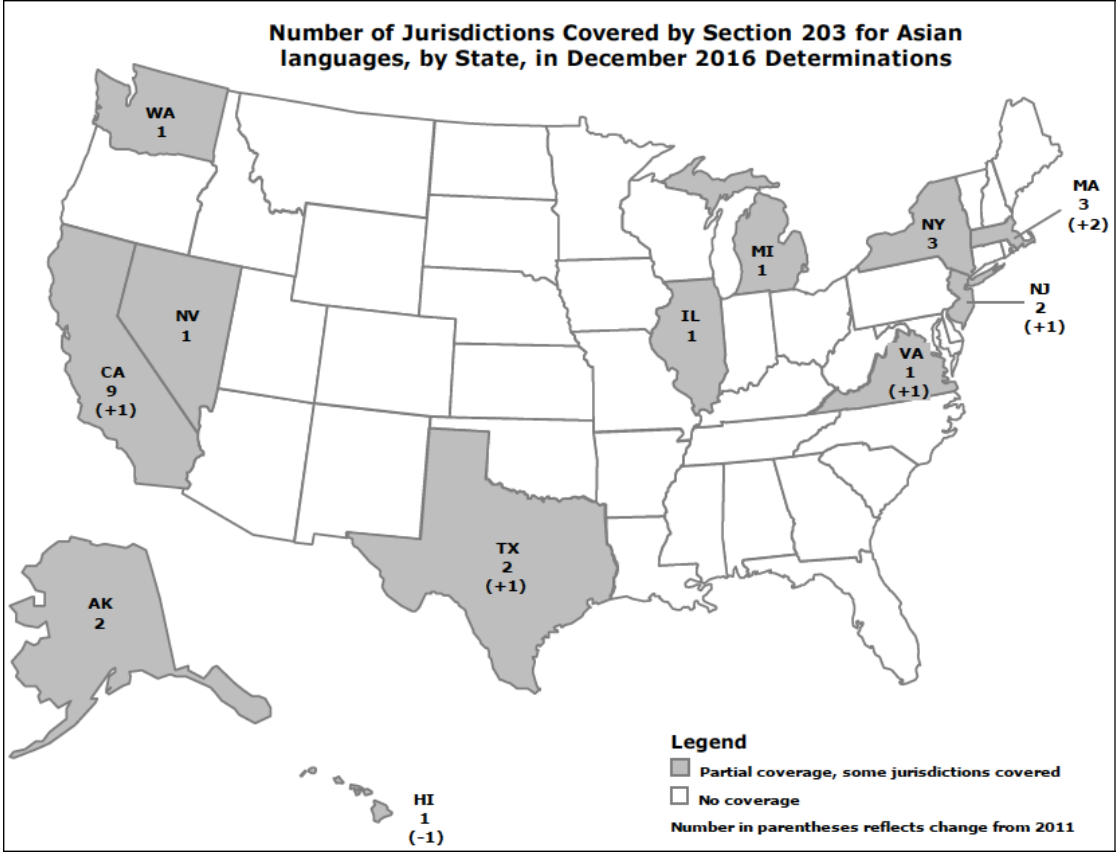
2016 Section 203 Determinations

3: Jurisdictions covered for AIAN languages in 2016



2016 Section 203 Determinations

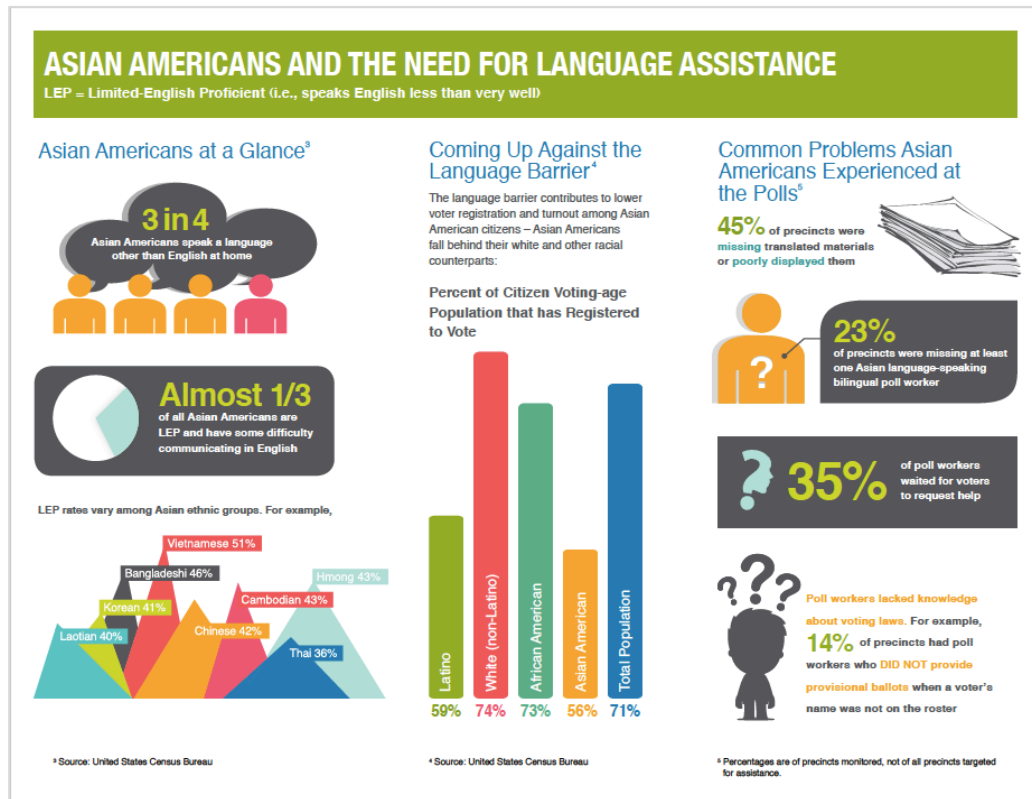
4: Jurisdictions covered for Asian languages in 2016



2016 Section 203 Determinations


Appendix III: Asian Americans in the U.S.

1: LEP trends in the Asian American community, 2013 (national study)



(Asian Americans Advancing Justice, 2013)


2: Missing facsimile ballots in California jurisdictions, 2016 (California study)

Facsimile Ballots			
	# of facsimile ballots expected	# of facsimile ballots missing upon PM arrival	% of facsimile ballots missing upon PM arrival
STATEWIDE TOTALS	948	234	24.7%
Alameda	43	4	9.3%
Contra Costa	147	57	38.8%
Fresno	54	23	42.6%
Kern	2	0	0.0%
Kings	5	1	20.0%
Marin	14	2	14.3%
Mendocino	6	2	33.3%
Merced	18	3	16.7%
Monterey	29	6	20.7%
Napa	7	1	14.3%
Riverside	19	4	21.1%
Sacramento	96	30	31.3%
San Bernardino	33	12	36.4%
San Diego	19	10	52.6%
San Francisco	237	39	16.5%
San Mateo	27	11	40.7%
Santa Cruz	14	5	35.7%
Solano	60	15	25.0%
Stanislaus	13	2	15.4%
Sutter	30	3	10.0%
Tulare	4	1	25.0%
Yolo	71	3	4.2%

(Asian Americans Advancing Justice, 2017)

3: Missing bilingual poll workers speaking state law languages in California jurisdictions, 2016 (California study)

Bilingual Poll Workers Speaking State Law Languages



	# of instances in which 3% threshold met and "reasonable efforts" to recruit bilingual poll worker required by Section 12303 (i.e. targeted # of poll workers speaking state law languages)	# of instances in which 3% threshold met and no bilingual poll worker present	% of instances in which 3% threshold met and no bilingual poll worker present
STATEWIDE TOTALS	799	496	62.1%
Alameda	42	18	42.9%
Contra Costa	147	130	88.4%
Fresno	54	10	18.5%
Ken	2	1	50.0%
Kings	5	4	80.0%
Marin	14	6	42.9%
Mendocino	6	4	66.7%
Merced	18	15	83.3%
Monterey	34	28	82.4%
Napa	5	1	20.0%
Riverside	19	16	84.2%
Sacramento	96	31	32.3%
San Bernardino	20	18	90.0%
San Diego	19	9	47.4%
San Joaquin	148	124	83.8%
San Mateo	27	8	29.6%
Santa Cruz	34	6	17.6%
Stanislaus	14	12	85.7%
Sutter	20	5	25.0%
Tulare	4	4	100.0%
Yolo	71	46	64.8%

The State of Language Access in California's Elections

(Asian Americans Advancing Justice, 2017)

Appendix IV: Multilingual voter services in LA County

1: Assistance requests from voters, June 2014 Primary

JUNE 3, 2014 STATEWIDE DIRECT PRIMARY		ASSISTED VOTERS TALLY CARD Assistance requests from voters in the precincts						
Precinct TOTALS	No requests for assistance	Bengali	Chinese	Gujarati	Hindi	Japanese	Khmer	
		2	354	4	17	31	37	
	1264	Korean	Spanish	Tagalog	Thai	Vietnamese	Other	
			597	3057	86	9	77	48
		Audio Ballot request	Wheelchairs	Blind, other	Add info / PW request			
	86	510	384	124				

(Departments of Registrar of Voters and County Recorder, 2015)

2: Multilingual hotline calls made by LEP voters, June 2014 Primary

	Chinese	Japanese	Korean	Spanish	Tagalog	Vietnamese	Cambodian/ Khmer	Farsi	Hindi	Thai
Multilingual Calls	132	7	202	925	17	24	2	1	0	2
Minutes of Service	993	67	3070	15,219	184	303	30	7	0	20

(Departments of Registrar of Voters and County Recorder, 2015)