

Lobo Language Acquisition Digest

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Who we are

The Lobo Language Acquisition Digest is produced by the Lobo Language Acquisition Lab at the University of New Mexico's Department of Linguistics. We aim to foster synergy among researchers and community members who have a vested interest in child language development and multilingualism.
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Did you know?

Bilingualism aids children's cognitive skills

by Karina Schenk

"Apples grow on noses!"

An analysis of silly sentences like this one through the eyes of 5-to-9-year-old children has informed research on some of the cognitive benefits of bilingualism.

Cognition is how we learn, think, and understand the world around us. One aspect of cognition is known as **metalinguistic awareness**, which is the ability to think about language that we're engaging with. Metalinguistic awareness is at play when we are able to determine that the sentence "Apples grow on noses" is completely grammatical but is silly because it's not what happens in the real world.

Experimental research has shown that bilingual children tend to do better than their monolingual peers on tasks that require high metalinguistic awareness. This heightened awareness has also been found to benefit other, non-language skills as well, such as abstract reasoning and problem-solving.

There has been a great deal of recent research on how human experiences, especially **language experience**, affect the plasticity of the brain. We now know that the observable impacts of bilingual language experience are especially advantageous to cognitive processes that are affected by the frontal lobe of the brain, which is responsible for executive function.

Executive function is like the manager of the brain and is in charge of many important functions.

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Just like an executive of a company is in charge of making important decisions, setting goals, and overseeing other operations in the company, you can think of cognitive executive functioning similarly. It helps with making decisions (self-regulation) and setting goals (goal-directed behavior). Some other executive functions include working memory, cognitive flexibility, and inhibitory control. Both cognitive flexibility and inhibitory control show up in the silly sentence experiment. It was found that bilinguals are able to adapt to unexpected information (**flexibility**) and selectively attend to specific information about whether or not the sentence is grammatical or meaningful by disregarding (**inhibiting**) less relevant information.

Studies on bilingualism and cognition highlight how children's cognitive skills are strengthened by bilingual language environments at various stages of language acquisition and throughout their lifespan. Did you know that bilingual language environments could impact executive control before a child has acquired the ability to produce language at all? One early function of executive control is object permanence,

the understanding that objects continue to exist even when they are out of sight. In one experiment, bilingual babies show earlier object permanence than monolingual babies. Since object permanence is related to the ability to override a habitual response by executing a different response, this study shows an early bilingual advantage related to executive control. Bilingual language exposure enriches executive functioning abilities in babies even before they can speak!

The impacts of bilingualism on cognitive function are apparent at every stage of child development, before and during language acquisition, and these enhanced cognitive skills provide lifelong benefits.

References & Further Reading:

To learn about the history of public understanding of bilingualism, check out: Bialystok, Ellen. (2010). Bilingualism. *WIREs Cognitive Science*, 1, 559- 572.

For a summary of cognitive benefits of bilingualism in childhood, read: Paradis, Johanne, Fred Genesee & Martha B. Crago (2021). *Dual language development & disorders*, 3rd Edition, 70-76.

To access the study involving "Apples grow on noses!", check out: Bialystok, Ellen (1986). Factors in the growth of linguistic awareness. *Society for Research in Child Development*, 57(2), 498-510.

For the complete study on executive function in bilingual infants, read: Kovács, Ágnes and Jacques Mehler (2009). Cognitive gains in 7-month-old bilingual infants. *Proceedings of the National Academy of Sciences (PNAS)*, 106(16), 6556-6560.

Look out for this!

Forthcoming publication

Following productive discussions at the 2024 Child Language Acquisition Symposium for Indigenous Communities, several child language acquisition and indigenous child language scholars came together to answer common questions about child language acquisition. The resulting article is written

specifically for families and communities interested or participating in a language nest.

A **language nest** is a home or childcare environment in which babies and young children are immersed in a minority language (usually an endangered Indigenous language) to become speakers of the language.

The article "Child language development: Questions and answers for Indigenous language nests" is expected to be out soon!



Indigenous child language

Directed by Dr. Melvatha Chee, the Indigenous Child Language Research Center focuses research on language revitalization.

The Shiyázhí Yáłti' project is based on audio recordings of child speech production, collected from children ages 4-11. Current work revolves around coding and analyzing these recordings. Future work will concern child-directed speech as well.

The Indigenous Child Language Research Center has also collaborated with Saad K'idilyé, a Navajo language nest located in the city of Albuquerque. As a community-oriented project with the goal of developing a better understanding of childhood acquisition of Diné Bizaad, it investigates the speech of adults talking to children in the nest, as well as the first words and gestural communication of those same children.

Our ethos

The LLA Lab was founded on core principles that guide our research programs and the products we aim to create for our community. The first is that all forms of language are variable, adapting to the environments in which they occur. Moreover, **all varieties of language are valid**, with no one variety being "clearer" or superior than any other. Nevertheless, our society at large nevertheless privileges certain types of language, and so we aim to **combat linguistic biases**. The second principle is that bilingual children acquire the language varieties present in their environment and are thus influenced by various factors related to the languages they experience. Additionally, bilingual children's language use has unique properties as a result of their bilingual interactions.

Ongoing research at LLA

Bilingualism and cognition

LLA Lab is taking part in an exciting three-year experimental research project titled "Addressee effects in demonstrative systems across bilingual communities". Led by Dr. Naomi Shin and Dr. Rosa Vallejos-Yopán of UNM and Dr. Amalia Skilton of the University of Edinburgh, this research is funded by a National Science Foundation grant.

Data are being collected from three bilingual communities. These include Secoya-Spanish and Ticuna-Spanish bilinguals in the Amazon, and Spanish-English bilinguals in New Mexico. The study seeks to find out how bilinguals' cognition is affected by their dual linguistic systems by looking at how speakers use demonstratives (such as "this" and "that" in English) in different contexts and in both of their languages. All languages have demonstratives, but they vary in how many exist and how they are used.

Pueblo Hand Talk

Dr. Jill Morford and her team received a 2024-2025 Community-Based Research Award from the Center for Regional Studies to support their project Incorporating Hand Talk (North American Indigenous Sign Language) into Language Revitalization for Signers and Speakers. Dr. Morford works with lab members Evelyn Johnson, Melanie Kirk-Lente, Wil MacNeil, and Kayleigh Russell and signers from the Zia Pueblo to document Indigenous ways of signing that predate ASL.



Interview with a scholar
Sarah Lease
PhD student
University of New Mexico
by Akasha Khalsa

*This interview is edited for length and clarity.
Could you tell me about your research?*

I focus on language use. Basically, how often and in which contexts we use words shapes how we say those words. Such usage patterns explain how linguistic structures emerge and are represented in our minds. For my research, studying child language acquisition is really crucial because it's a way to investigate how linguistic structures emerge and evolve with language use.

When we use language, we retain information in our memory about what are called **usage events**. Every sentence or word we produce or experience is a usage event. The idea is that with every usage event, we build up our memory of language. This kind of repetition facilitates the emergence of **linguistic structure**, which includes things like words, grammatical patterns, or syllables.

Depending on how often we add new usage events to our memories, the structures and what they look like will be more or less strongly represented in our minds. When something is strongly represented, we say it is **entrenched**. The strength and nature of representations tend to correlate with how we pronounce words.

In my research, I look at how the sounds in words vary in their pronunciation, and how that variation correlates with different measures of language use. We can measure **language use** in terms of how often you speak in a particular language if you're bilingual, or how often you produce a certain word.

What I'm interested in is how linguistic structure evolves over time, so in my research I look at children of different ages. I can see how a 5-year-old produces a word differently than a 15-year-old, and watching that arc of change helps us understand more about how linguistic structures emerge during child language development.

So, the effect of language use on linguistic structure varies not only between words, but also between languages for bilinguals?

It could. That's one of the things we need to look at. How does the amount that you speak a language versus how much you say

words within one language contribute to variation? Does it just depend on how often you use words? While bilingual children's language may look different from that of monolingual children, it's still driven by the same factors. Words that bilingual and monolingual children say frequently might vary in similar ways.

What groups of people have you been working with as participants?

I mostly work with Spanish-English bilingual speakers living in the southwestern United States, primarily New Mexico. Because New Mexico is probably one of the most linguistically diverse states, there are lots of opportunities to consider how acquiring a minority language happens. There's also different varieties of Spanish. We have New Mexican Spanish, varieties of Mexican Spanish, among other well-represented communities. And, in New Mexico we have really long-standing bilingual communities, so the interplay and switching between Spanish and English is part of daily life. These factors allow for a close examination of how bilingualism interacts with language variation.

Okay, what have you been working on that you're most excited about?

Currently I am most excited about my Ph.D. dissertation research. Like any dissertation, it's a very big project. It has two parts. The first is how language experience shapes bilingual children's acquisition of a set of Spanish sounds. These are the sounds like the "b" in the word *bote* ('boat'), the "d" in the word *día* ('day'), and the "g" in the word *gato* ('cat'). This set of sounds can be pronounced in different ways. For instance, the "d" of *día* could be produced like the "d" in English *dough* or like the "th" in English *though* depending on the context in which it's used. In *el día*, the most likely pronunciation is the "d" of English *dough*. But, if we say *ese día*, then we'll likely say the "th" sound of English *though*.

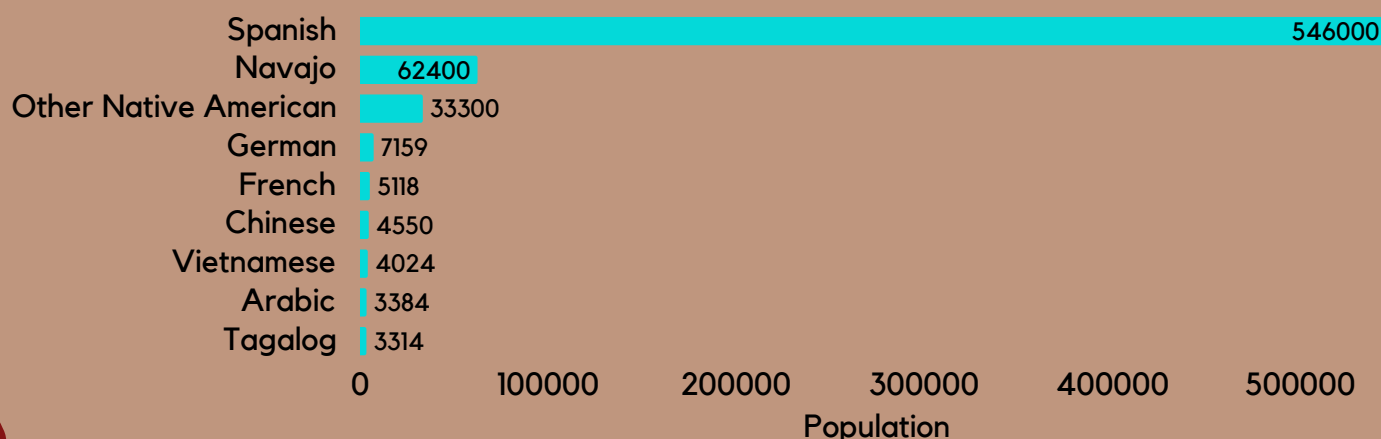
My research indicates that children need abundant experience to know how to do this. Most of the time when they're very young, they say the *dough*-type sounds, even when we would expect the softer *though* sound



Sarah Lease

Linguistic Diversity in New Mexico: Language Spoken at Home

Data from *Statistical Atlas*



that an adult would produce. But clearly at some point children figure out how to do this, right? So, my research focuses on the question of how much and what kind of experience facilitates their acquisition.

Some questions I ask are: do children produce the softer *though*-type sounds earlier in words that they use more often, and do children who speak Spanish more often than English produce those sounds earlier?

The second part of the project is how bilingual children's accrued experience with learning to pronounce softer *though*-type sounds contributes to variation in how words are produced.

So, for some background, research on adults shows that for these sounds, how often they occur in contexts that favor the *dough* or *though* sound influences their pronunciation outside of these contexts.

Take the word *dice*, which means 'he or she says'. If speakers often say *dice* in a context that favors the *though* sound and not in a context that favors the *dough* sound, what happens is that even when you expect the *dough* sound because of the context it's in, the speaker will produce *dice* with the *though* sound instead because of how frequently they produce *dice* this way. So, the more that you say something a certain way, the more likely you're going to say it that way even when it's not in a context where you expect it to be pronounced that way.

This shows us that speakers have the ability to remember how words are produced. This goes back to the whole idea that a lot of information from usage events is stored in memory, and we use those stored memories to make **projections** about how we're going to talk in the future. We don't consciously

make these projections. Also, they require a lot of experience. So the question is when do children have enough experience? And is that impacted by how often they use a particular word and when they learned that word?

That is a very big idea.

It is, but the experiment I designed to test these ideas all boils down to me playing games with children. It's a fun way to do it. We play card games, and the words that they say in those games have been selected carefully.

The focus on bilingual children is really important for this dissertation because what it does is introduce variability in the children's overall amount of experience with their languages.

It's different from monolingual children where you can't separate experience with the language from the age of the child. But with bilinguals we can look at how age is a separate variable from how much experience children have with a language, which is really nice.

How does this work contribute to our understanding of language acquisition and human language in general?

This research helps identify factors that facilitate children's acquisition, beyond just the influence of the input they're getting. And it shows the impact that growing up bilingual has on developmental pathways. Also, it's important for very large debates in language acquisition and linguistic theory in general because it shows that linguistic systems are built from language use and shaped by experience.

Does this work have any implications for society and for those who work on language acquisition in communities?

This research demonstrates that how bilingual children produce language can be attributed to how words are used in discourse, just as we find in monolingual children. It helps to refute ideas that bilingual children have incomplete grammars, which they don't. Another really useful thing is that we can take what we find in this research and bring it to teachers.



Let's say a child is really struggling with some particular sound or grammatical pattern. We can suggest to teachers to maybe focus on or give a lot of examples of words that the child hears frequently or would use frequently, and get them to first latch on to the pattern in that way before they practice it with less common words.

And then also, going more into the speech language pathology side of things, another important part of this research is that it demonstrates the ways that language can vary, which can hopefully inform diagnostic tools that are used for bilingual children. Because sometimes we use measures that are standardized for monolingual children, but acquisition timelines may differ between bilingual and monolingual children, and it's important to know that to correctly diagnose children.

That's super important. So how did you become interested in studying language acquisition?

Child language acquisition is really concerned with how linguistic systems emerge and how they evolve over time, so coming from phonology, where we try to understand how sound patterns are represented in the mind and how sound systems emerge, child language

acquisition is just the perfect tool for this goal. As I got more into it, I realized that there were opportunities to interact with other disciplines like education and speech language pathology. I think that creates a way for my research to benefit communities, which is another reason why I continued to get into it.

What's next for you and your research?

I'm definitely looking forward to finishing the dissertation and hopefully somewhere in the world, having a postdoc or a faculty position. In the Ph.D., I've mostly been concerned with how sounds are expressed depending on characteristics of individual words, but as I move on beyond the Ph.D., I'm excited to look at the relationship between sounds and larger units of speech, like phrases or particular grammatical constructions. Also, keeping in line with what I said at the beginning about New Mexico, it's the perfect place to consider questions that arise in situations of long-standing bilingual communities, so I'm interested in looking more into the impact of bilingual discourse practices like code switching on how sounds are produced.

And then in my spare time, I guess I would really like to consider or describe in more detail the input that children are exposed to, because I think there's a lot of variability that we haven't really described yet. Sometimes for very young children, we use very set phrases for words, but then the words start to be used in more contexts. I'm really interested in how the amount of variability of input changes over time, because I think that can help tell us more about how children acquire language.

Further Reading:

Lease, S. (2024). Contextual frequency effects in children's phonetic variation: The case of Spanish word-initial /d/. *Language Variation and Change*, 1-24.

Lease, S. & M. Marchesi. (2022). A sociophonetic approach to the acquisition of Spanish rhotics in a bilingual community. *Proceedings of the Linguistic Society of America* 7(1), 5231.

Lease, S., N. Shin, & E. Bird-Brown. (2022). Community norms and lexical frequency shape U.S. bilingual children's subject pronoun expression. *Heritage Language Journal* 19(1), 1-29.

LSA condemns US designation of English as official language

by Akasha Khalsa

On March 1, 2025, the White House released Executive Order (EO) 14224, titled "Designating English as the Official Language of The United States". In response, the Linguistic Society of America (LSA) has released a statement strongly condemning this move. The LSA statement addresses each of the justifications listed in the executive order. The EO asserts: "From the founding of our Republic, English has been used as our national language. Our Nation's historic governing documents...have all been written in English". The LSA responds that the United States has always been multilingual, citing data from 1664 to 2019, and noting that many documents during the revolution were translated, especially into German. The statement also notes that the EO makes no mention of signed languages, including American Sign Language.

"The executive order appears to take no consideration of signed languages. American Sign Language (ASL) is the primary linguistic system for approximately 500,000 Americans—their first language. ASL is not based upon English: it is a complete, complex separate language."

Replying to the EO assertion that "A nationally designated language is at the core of a unified and cohesive society", the LSA notes that similar attempts have been made in history, and that evidence points to the contrary. In fact, efforts to enforce a national language or standard variety can be

expected to be more divisive than unifying.

The EO also declares that "Speaking English not only opens doors economically, but it helps newcomers engage in their communities, participate in national traditions, and give back to our society". The LSA counters with evidence that immigrants place prime importance on learning English and ensuring that their children do, too.

The LSA statement emphasizes the value of multilingualism and language variation, as well as its historical reality in the United States since its inception.

"There was even a time in American history when citizens' multilingualism was key to national security. In World Wars I and II, service members from Native American communities served as 'Code Talkers' – their own languages became the basis for an essentially unbreakable code"

The LSA concludes with a call to action, urging "anyone concerned about the fallacies and exclusionary rhetoric found in the March 1 Executive Order to continue to support, protect, and promote multilingualism and linguistic diversity in the United States." Many other linguistic and academic organizations have endorsed the LSA statement, including the Association of University Presses and the Modern Language Association.

Other organizations concerned with the societal impacts of the EO have followed suit in condemning it. Six associations of interpreters and translators released a joint statement strongly opposing it. Similarly, ACTFL, a national organization of language education professionals, released their own response condemning the EO, co-signed by 23 additional organizations.

Look out for this!

Events happening soon

Dual language education summer institutes

Two institutes will be hosted this summer by Dual Language education of New Mexico (DLeNM), both in Las Cruces, NM.
GLAD/AIM4S3 Institute - June 10-11
Translanguaging Institute - June 12-13

Free Quechua workshops at UNM

The Latin American & Iberian Institute will be hosting two workshops by native Quechua speaker and educator Doris Loayza on April 16 from 1-2pm and 3:30-4:30pm

Indigenous language regional workshops

The Indigenous Language Institute will hold regional workshops this spring and summer.
Albuquerque, NM – April 23-25
Buffalo, NY - July 9-11
Albuquerque, NM – August 6-8

Summer course offering

SHS 490/539: Intensive Clinical Phonetics will be offered on Fridays from 10:20-12:00am

Workshop on Interaction and Multimodality in Language Acquisition

WIMLA will be held by Universidad Nacional Autónoma de México, Cd. de México on June 23-25 as a hybrid event.

Interview with a community partner **Michael Rodríguez,** Executive Director Dual Language education of NM *by Akasha Khalsa*

This interview has been edited for length and clarity. Could you tell me about DLeNM's work?

Sure, so it was officially started in 2001. Our executive director at the time, along with others, started getting



Michael Rodríguez

together to see how they could support each other in developing dual language programs.

There are three main things that have come from that. We provide professional learning around the country for dual language and multilingual learner programs, for program structure as well as instructional frameworks, strategies, methodologies, and practices. For many years, we faced pressure to become a national organization and rebrand, but we've always wanted to make sure that New Mexico remains our focus.

In addition to that professional learning, we also hold the country's largest dual language education conference, La Cosecha. We bring together people from all over the country, including teachers, administrators, state leaders, and researchers. We even have a student and parent institute during the conference as well. It's about advocating for the best practices and how dual language can be an effective way of meeting the needs of multilingual learners while not requiring them to compromise their language and culture.

The other part of our advocacy is doing things for the field. We publish books with Doctors Collier and Thomas, who are well-known researchers in the field. We also do a quarterly newsletter, which LLA has provided articles for, and a podcast, which you've participated in too.

Two years ago at La Cosecha, we brought back our research convocation and brought together 40 dual language education researchers from around the country to talk about the big topics. What are the needs? Where are there gaps in research that need

to be filled? This past year, we had a follow-up meeting. We're partnering with the Multilingual Learning Research Center out of the University of Wisconsin. They're helping us put together a database of researchers, and we're hoping that it'll create some collaborations and that we can help them to find additional funding to continue research.

Also, in 2018 we copyrighted the National Dual Language Teacher Preparation Education Standards, also known as the "Emma Standards," which are being utilized as a guide for higher education.

Those are the main areas we focus on as an organization. We're a staff of about 21 people, but we're in many different areas and New Mexico has always been our focus. Our board ensures that everything we do is for the benefit of New Mexico. Even for La Cosecha, we have special New Mexico pricing on all of our sessions of professional developments, just to help our state however we can.

New Mexico is a highly linguistically diverse State. Which language community or communities do you primarily serve?

With the majority of the bilingual programs being English-Spanish, we do a lot of work in different communities around their Spanish bilingual programs, but we've also had the opportunity to partner with the W.K. Kellogg Foundation since 2016 to support tribal communities as well. We have some long-standing relationships with several schools in different tribes. Just last year, with some funding through Senator Heinrich's office, we've been able to start developing an Indigenous language instructional framework with support from teachers in the different Pueblos and tribes as the experts, as well as university experts who are known for their work in Indigenous languages.

How did you get involved in this area of advocacy?

I was a middle and high school special education teacher, and when I went back to get my Master's degree in administration and educational leadership, I found myself in an elementary school where the staff had already been talking about dual language as an option. Then, the following year, we actually brought DLeNM into the school and had them do a new language 101 training with us, and I really got interested in it because it just made sense. It's such an effective model.

Personally, I'm from Pecos, New Mexico, and when my parents were growing up, they were punished for speaking Spanish. They

were hit with rulers, my dad was held back a grade, and so they purposely didn't teach us Spanish. But it was when I got to UNM as a student that I realized that part of my own identity was missing. So that's what got me into education. And then, when I had the opportunity to get into a dual language school, I ended up helping start two additional dual language programs, one at Salazar Elementary School and then I was the founding director at Cien Aguas International School here in Albuquerque. I was there for the first six years before transitioning to DLeNM. It's something that I wanted for my own kids too – to have that piece of their identity.

What's the most exciting project that you're currently involved in?

The most exciting thing I'm able to do as the Executive Director is advocacy. We all have the common goal of students being successful, and we work with like-minded organizations. Our communities have different definitions of what success means, and it's not always just academic. It's about self-awareness and identity, and growing up to be good people. It's important for us to know that we're not alone, and we can come together as a strong voice to do what we know is best, based on research, for our kids.

Would you be willing to comment on the recent designation of English as the official language of the United States?

The designation was really a symbolic move. We know that on Inauguration Day, all of the Spanish resources on the White House website were pulled. It's really undermining multilingualism and the fundamental fabric of our nation, all the assets that we know are so valuable, and all the people it represents. The designation could have an impact on how the federal government and agencies support non-English speakers. Our organization opposes the designation.

The United States didn't begin with English. There's so many other languages and cultures that this current designation devalues, including Native American languages and communities.

But the designation hasn't changed our work. We still support students to have an educational experience that is representative of their traditions, their cultures, and their languages. Federal law still provides protections for non-English speakers in schools. So even though there's this designation, students still have the right to a public education, one that ensures that they



understand the content and acquire English. One of the things about dual language bilingual education programs is they don't require students to check their language and culture at the door in order to access a quality education.

Before the Executive Order, there were already over 30 states that had designated English as an official language. New Mexico is not one of those states. New Mexico really does a good job of valuing our students and our communities, and even bringing that lens to the legislature. New Mexico is different, and it's good to be part of something that recognizes that.

So, it doesn't change who we are as an organization. It doesn't change the fact that we still have our immigrant communities, our Native American communities, our multi-lingual, multicultural communities. They still exist, and they're thriving. All of us want our students to be successful and make sure that they retain their own identities in the process.

How can people get involved if they are interested?

The biggest thing people can do is to stay informed. We're living in some uncertain times, and we have to be united in our voice and our stance regarding what we know is right for our students and our communities.

People really should understand the research on how dual language bilingual education can support students. Yes, we want students to acquire English, but we don't want them to sacrifice their whole language and culture in the process.

Working with partners both locally and nationally, we're trying to see how it's going to play out. We're going to continue to provide whatever information we can to communities, it's important that communities understand what their rights are, and what the rights of their children are in schools.