

TRANSCRIPT

Getting to the Core of the Language Demands in the Common Core is Essential for English Learners

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EVENT TITLE Collaborating for Success: Implementing the Common Core State Standards in California

EVENT DATE 08/15/12

KENJI HAKUTA So what I want to talk about today is just the framing of how to think about English language learners in the context of the implementation of the Common Core. And the Common Core is something like a big wave coming through the education reform community. And so I like to talk through photos sometimes, and this one actually was given to me by a guy who has a really cool job, far cooler than anything—I know you have really great jobs but this guy's job is he's the—Jeff Johnson is the surfing photographer for Patagonia. So he gets to go around California coast, Oregon coast in a van that says Patagonia and photograph surfers. And so he is also a really good climber; he's a great rock climber, which is how I know him. I do a little bit of rock climbing. And so my son thinks he's just the coolest guy; you know, he has his rock climbing gear and his surf board, and he goes around and takes photos and makes a living doing that. So I was telling Jeff about some of the work that I do and saying, you know, this Common Core is like this big wave and sometimes I like to talk about the big waves and could he share some photos that I could use. And so he sent me this.

So this isn't me. I can barely swim but that's kind of how, one thing you can—one image of what the Common Core is. And if you are in the reform business, like it or not—and whether you might have certain quibbles with this or that about the Common Core—it's here and it's really affecting the landscape in a major way. And so it's really figuring out, you know, if you are a surfer you don't actually create the waves, but you do pick the waves and you sort of figure out how to work with energy that's contained in the wave. And as a linguist basically, which is, I am what's called a psycholinguist, somebody who looks at the relationship between language and mind, this is a particularly interesting wave because it contains a lot of energy that brings together language and academic content.

And so that's really the basic takeaway message from my talk this morning, which is—oh, I was told not to wander away from here. Is that okay, Katherine?

Anyway so that—there's a lot of energy about, around sort of, the way in which content is expressed through language is resident in many aspects of the Common Core. And it's true for all students, not just English language learners, but it's particularly critical for English language learners but it's particularly critical for English language learner for us as educators to pay attention to that. And so, one can back to history. Already we referred *Lau versus Nichols*, and Jennifer referred to the fact that she and I have been working on various aspect of English language learners and educational reform for a long time, since the early 90s even late 80s, I think. And to get a historical perspective of where we are, the—we're really in standards three. All right, the Common Core is really standard-base reform three. One was what was generated by *A Nation at Risk* that resulted in this thing some of you will remember: the Goals 2000, National Education Goals Panel, hosting around creating standards. Voluntary National Test. This is digging pretty deep into your memory. But all of that was kind of the reform energy created by *A Nation at Risk*, which resulted in Improving America's Schools Act, which was in the early years of the Clinton administration. And already at that point there was kind of—this is how Jennifer and I started getting involved in this is to say how do you engage English language learners in a context, as we were shifting away from the federal government funding specific projects through Title VII programs in school districts. And shifting from that into thinking about more systemic approaches to addressing the needs of English language learners, especially as states were encouraged to develop standards and English language learners were expected to be included in some way in that system of assessment and accountability. That was all set up in that standards one.

At that point I think most of us in the ELL community felt the train was—had already left the station quite a while ago as we were trying to get engaged in this. So we were sort of a little late, but there were some things that could be done. This is standards two, was No Child Left Behind. And in standards two under Bush two some of the issues that came up here—I going to just throw a few words that show up in the legislation there—around sort of the inclusion of English language learners under Title I. Accountability was a big piece of that, with accommodations and assessment and so forth. Disaggregation requirement coming in, which really brought attention to English language learners because of the subgroup disaggregated requirement. And then under Title III, that's when California had CELDT before this; it was the only state, but in the rest of the nation it was No Child Left Behind that created assessments in English language proficiency that were sort of available at the state level. Plus this sort of small but significant piece of accountability under Title III so the AMA 01, 2, and 3. And that was kind of introduced under Title III and in standards two. And this word *aligned* with academic content shows up in that legislation as well. So that that Title III assessment, so you know in California that would be CELDT, has to be aligned in some fashion, with no one

really understanding what aligned might mean—but still it's a good word to have—to say that English language proficiency assessment has to be aligned to the content standard. Right? So there has to be some nonrandomness to the relationship between them.

And so that was kind of set a motion under Title III. And then the Common Core comes along, so you've got sort of the common adoption across 48 states of the content standards. And so what does that do? Well, one of the things about the Common Core—so I, like everybody else, have spent a lot of time looking at the Common Core. I was actually on the validation committee for it, so I take some responsibility for all the pretty and ugly parts of it. But the Common Core—as I said, as a linguist I think of it as bringing out many of the features of language, where really the term that we've been using recently is *construct-relevant language*. So if you're in the assessment world, you worry a lot about assessments having construct-irrelevant language. Right, so you have a math item that has a lot of language that's unnecessary and might confuse the student and move you away from the construct that you are trying to test in math. But in content areas you also have a lot of construct-relevant language that is part of the academic content. And the Common Core really brings it out in a really—profiles it in a distinctive way.

So this picture I use because it's nice; I like camels. And but it's a picture of camels by National Geographic photographer George Steinmetz. And but the nice thing about this picture is that it's really not a picture of camels; what you see are not the camels themselves but the shadows of the camels. And so the actual camels are the little white things that look like if you were to—I am hoping I'll persuade an undergraduate to Photoshop me one of these pictures without the shadows—the camel on them and then what you'll see are just like crocodiles or something walking across the desert. You wouldn't see the humps on the camels. So if you were looking at this at high noon, you wouldn't see the camels, right? And you only see the shadow because of the perspective of the sun relative to the camels.

And so it's a bit like, you know—here's another sort of metaphor—if you are looking at mountains at midday, you don't see the features of the mountains nearly as well as you do at early morning or late afternoon, which is why photographers get up early in the morning because you can really see the features. And so that's just my metaphorical way of saying that the Common Core has a lot of ways of expressing content through language. And that's really what we are trying to capture, understand, try to kind of have—create a shared understanding across educators and that the more we do that, better we'll serve English language learners' needs both in learning content as well as in advancing their English language development.

And so this group that's loosely called Understanding Language, which is now growing—Jennifer is now—we've got Jennifer involved in it as well—is a group that I co-lead with Maria Santos. I don't know if Oakland is here today. Are they here? No, Oakland's not here. Anyway, Maria is my kind of co-chair of this group and one of the—and our rough mission is to promote national dialogue around this intersection of language and content around the Common Core for the advancement of English language learners And one of the things—and George Bunch will be doing the that sort demonstration or the one the units that we're developing on English language arts in support of English language learners, and so he's doing that session and you'll see him right in the middle of that picture. But one of the characteristics of this group—Phil Daro spoke here today, and Phil is very actively involved with our group, as is Susan Pimentel, who was one of the lead writers of the English language arts Common Core.

And we also are paying attention to science and the next-generation science standards. And Helen Quinn, who was the—the next-generation science standards was based on a framework that the National Academy of Sciences developed for K-12 science education. And Helen Quinn, who chaired that is also very actively involved with us. Helen's actually an incredible asset for our field. She's a theoretical particle physicist who's worked at SLAC (Stanford Linear Accelerator Center) over the years. And some of you have probably read about the Higgs Boson, this last particle that was discovered. When that article came out, I sort of googled Higgs Boson and read a little bit about it. And her book on the Standard Theory of Matter is one of the standard references around this Higgs Boson thing, so she actually understands this stuff. And we all like to talk about it. She actually understands what it is and why it's important, and if you ever talk to her you'll realize that she's a little bit smarter than most people that you've run across.

Anyway, so it's great to have a kind of a real scientist working with us. And so that's one of our characteristics is we have these people working from the content perspective and then we have people like George, Judit Moskovich at UC Santa Cruz, Oki Lee from New York University, who are content people who have been involved with English language from the perspective of English language learners. And so that's kind of a key feature of our group in addition to many of the folks such as Aida Walqui from WestEd or Lydia Stack who used to work for—retired San Francisco Unified—who have worked in ESL, English language learner support issues. And then a bunch of other sort of policy-type people. And so that's our group, and we're the core. And what we really want to do and have been working on is engaging state level, district level around the country in these hopefully meaningful conversations about the language content of the Common Core. And so we've written papers and, I don't know if the thumb drive ever got the papers in them, yes? Okay that's great.

So we wrote papers, like academics do, and hopefully they are useful. And I'll tell you little bit about some of them, but the basic idea there is that there are some papers on English language arts, math, and science as well as sort of on sort of basic understandings about what is language, issues of literacy, as well as support—ways and that the infrastructure could support English language learners such as through teacher professional development needs. There's a paper in there that Maria Santos wrote, with Linda Darling-Hammond who was here yesterday, around some of the professional development need in the area. And so hopefully that's just once set of resources. And if you lose that thumb drive, there is a website with this—it looks like coasters, but there's some cards on your table that say Understanding Language, and there's a website on there; you could download it from there.

What the papers collectively reinforce is that the new standards, Common Core and the next-generation science standards give us this fresh opportunity to reinforce different things that we as a field, I think, have to come to learn over the years about sort of the ability of English language learners with support to participate in classroom discourse focused on rich and exciting academic content. And this sort of engagement through discourse. Discourse is an important part of language, and that's part of our key understanding is to say language is not just having to correct past tense marking on your verb. That language is about what you do with it in engaging and exchanging ideas, which is one of the things that the Common Core tries to reinforce. It has implications such as that ESL is necessary but not sufficient, or ELD; that English learners learn language best when they are engaged with content, which of course has huge implication in terms of how staff collaborate in schools between ELD support and content support; and that focusing on both text and discourse gives ELLs opportunities for extended engagement with complex ideas and that's really the only way in which you can get the complex ideas is through this exchange rather than the teacher standing in front of the classroom and delivering on it. They reinforced the idea that new standards raise the bar for learning, they raise the demand for language, and they call for a high level of classroom discourse across all subject areas. And I think it's really important to—this is the way I have been trying to explain it to various audiences, is the Common Core is not just about raising the bar. Raising the bar has this kind of metaphor that it just, you do the same thing, but you just do higher; you know, you just jump higher or something. But it's really that rigor; the way you get to rigor is through engagement across students using language. So if you take things like the mathematical practices that's contained in the Common Core around understanding the reasoning of others, that really requires students to listen to the language of not just the teacher but of other students and trying to understand and articulate what is it that even a mathematical misconception might entail. And that involves language, and it's that kind of language that's important.

So the ELA and the math standards contain things around constructing the effective arguments in ELA or making conjectures or building logical progressions of statements to explore the truth of the conjectures and so forth. So that really is—are all skills that involve language.

(INFORMAL TALK)

I'll share with you an interesting anecdote which, I think the Common Core. through sort of focusing on things like understanding the reasoning of other and using language, has—hopefully will having implications for the following observation I made at Fairfield. I was in a math classroom in which the teacher was introducing irrational numbers, which is in Common Core eighth-grade, I think, math. And the teacher wrote “irrational numbers—today we'll talk about irrational numbers.” And one of the students said, in the back said, “It contains the word *ratio*,” and, which was sort of—and then the teacher sort of said, “Okay,” and then kind of moved on, right. And of course the teacher was being observed; I was there with, with the principal and the district math person, so probably the teacher probably felt on the spot there a little bit. But there's a really good teachable moment because an irrational number is a number that cannot be expressed in a ratio of integers. So it's where A to B, where A and B are not integers, okay? And so ratio does play a role in irrational numbers, although until that moment actually I had never thought about that myself. But when you think about it, the word *ratio* really does have a meaningful component to that mathematical understanding of *irrational*. And there is an important linguistic piece there, too, which is that the ratio is contained in a word, *irrational*, where the irrational is not rational, right? It actually feels like it should be *irrationable*, right? I am sure some etymologist would say why it's not irrationable, but it's irrational. And ratio has to do with the Latin word. Anyway so, but one could go on and on about this, and if you're a linguist you get really excited about it. But if you're, even you're a math teacher, this is a moment at which sort of language and the main core content—why is it important that integers are the ratio and that that resolution when—so it really leads to why integers are also—the concept of integers is important within number theory and so forth. So it's a—so if one were positioned as a teacher to think about sort of what's the reasoning of others? What is the reasoning of that child who said, “Oh, it contains the word *ratio*”? What was that student asking? So anyway that's hopefully—with full good implementation of the Common Core—that's that kind of learning opportunity in which language and content come together and you could sort of have productive understanding advanced in that instructional context. So this is just to say—you can't read this—but science has a lot of language as well.

So here's another sort of pictorial to tell you what—how we're trying to express the difference between the old paradigm and the new paradigm. The old paradigm thought of language and content overlapping as mainly around

vocabulary and grammar. So this, then, gets expressed in textbooks, for example, for ELL support as highlighting of key vocabulary, right? Or listing of glossaries and so forth. Or possibly if you look at SIOP implementation support, or it's the Sheltered Instruction Observation Protocol, as sort of a language objective where you say, okay, question structures or some sort of grammatical structure that you might focus on in that lesson. So if that's the old paradigm, the interesting thing from the linguist's point of view is that it brings in lots of other more high-level complex aspects of language, like discourse, complex text, explanation, argumentation, the purpose of a text. Okay, so a difference between a political speech versus a scientific explanation. And the purpose of the speech as well as the structure of the text even the five-paragraph essay, that sort of thing, sentence structure, vocabulary, and so forth. And so they are there, but they are layered along with a whole bunch of other aspects of language. And that's really what's different about the Common Core is that you can almost go through it and highlight the parts of it that really require this kind of new ways of thinking about discourse. And what makes it complicated is that the disciplines of math, ways in which math is a discipline has created its sort of ways of explanation, and ways in which science works around explanation, and ways language arts, social studies, and so forth all sort of have their own particularities. I mean, we can focus on their commonalities as well, and there's a lot of commonalities. And that's important, much as, say, at the level of vocabulary we talk about academic, academic words. The Academic Word List is good; it's important. So words like *explain*, *analyze*, and so forth appear across different, different disciplinary texts. But then so do discipline-particular words. But it also turns out that different ways of explanation show up in text.

I have a student who was just sharing with me his results yesterday. He's analyzing social studies and science textbook texts, and this question—science, it turns out, has this particularly very common form that shows up in textbooks that starts with the question and then provides the answer, okay? Which doesn't show up hardly in social studies texts. And so there is this sort of other structural, higher-level structures that show up that are peculiar to ways in which arguments and explanations are constructed in the disciplines. And paying attention to that is, well, is good for you. And it's good for the students. So and you have already talked about some of the shifts in the disciplines and in Understanding Language we pay attention especially to sort of the language-related kinds of shift in English language arts, math, and science.

And I'd like to kind of leave enough time for questions; I am going to just speed through some of this because it's not my style that's to throw a lot of words on PowerPoints. And I've got a little bit of text-heavy slides here, and I'd rather have time to engage in some questions.

So let some of this be a teaser. The paper on English language arts, for example, that you'll find there, and George can show you some of the instantiation of practice through an English language arts unit that we've been developing in Understanding Language that he'll show you at his breakout session. There are principles around English language learners, that they should not be removed from the challenges set out in the standards, but rather supported and meeting them with English learners and meeting them, building on background knowledge, meaning making and language and literacy. So there is this paper focuses on reading and engaging with complex text to build knowledge. I am just going to go through these because I would like to hear your comments and thoughts about the challenges at the district level of bringing together language and content in the context of the Common Core.

Analyzing, using evidence to inform, argue, and analyze in writing, speaking, and listening; working collaboratively; understanding multiple perspectives; and presenting ideas. And sort of some of the demands of language. So this part about language is the aspect of language that often looks more traditional to what you associate with ELD, but it's also—the Common Core requires students to choose language and conventions to achieve particular functions and rhetorical effects. Again, it's not just sort of grammar for grammar's sake. Which we pretty much know that grammar instruction—I mean, I think many of us in foreign language classes that have used that approach are really good exemplars of why that method doesn't work very well. Like if you'd been instructed that way, you probably wouldn't have understood what Richard said this morning. And so, but using forms in order to achieve particular functions and rhetorical effect is an important part of the standards, like grammar in order to achieve certain functions.

Also this is just to say that in mathematics, engaging students in mathematical practices without excessively focusing on correctness of form is another component. So I am going to move through this in order to—and all this just to say that there is sort of science, we're also paying attention to science, so this is a placeholder. And apologies for flying through this, but a lot of the elaboration of this you'll find in the papers available, available to you.

And the challenge for us, I think, as sort of educational leaders is the problem of this, the multiple layers in which these—this insight about the high level of construct-relevant language that's contained as we implement the Common Core kind of manifests itself at these, all of these layers, right? Students, teachers, district leaders, and what state leaders are trying to make sense of, what Mike and Bill are trying to figure out, what the state can do, what various preservice and in-service providers are trying to figure out, and as well as that as the test makers, publishers, and federal leaders. And each of them at—these layers don't talk very well to each other. Yet at each level we're trying to figure out at these various kinds of grain sizes—this is the picture I

use to talk about the grain-size problem of education, that you've got sort of the individuals and instruction going on at the bottom level and high-level deliberations at school boards and Congress going on. And at each of them we need to kind of really shift, direct all of that energy to shift the, fundamentally, the practice as students at the Common Core are challenged to do all this with language: engage in productive oral and written group work with peers, explain/demonstrate knowledge using emerging complex language and other communicative strategies and different settings, and extracting meaning from complex written texts. And so, the challenge is really kind of systemic, and none of this would happen if you couldn't get—break out of the silo mentality of serving English language learners: this is the ELD piece, this the content piece. And the Common Core really raises that.

The challenge is, you know, here's—I just want to sort of the give you just one data slide to tell you, show you what the reality looks like here. And one version of reality is this is a dissertation by Karen Thompson, one of my students. And she—LA is not here today, right? Is LA not here? Courtesy of LA, who's wonderfully open about sharing their data. She did this longitudinal analysis of English language learners as they go through LA Unified, beginning in kindergarten. So this is after, at the end of first grade. And what this shows is this is a survival plot, basically, survival analysis, which tells you students as—what percentage of students, as they go through school, meet various criteria. And this is what a lot of people pay attention to, which is reclassification. Okay, so reclassification for LA is—so this tells you that at the end of eighth grade about 70% of students have been reclassified, okay? Which also means that it's 30% long-term English learners. And then this shows the oral part of CELDT. So after one or two years—this is actually the sense in which you know Mr. Uns was—that's where Mr. Uns was focused during two through seven, that kids will develop the sort of, the oral part of English pretty quickly; irritatingly, these kids, though, continued to be tested in that year after year. And they're annoyed by this, as you know, if you talk to long-term English learners in middle school. And then you've got all these other pieces in here; you don't need to know what each of this particular ones are, but these include the CELDT reading, the CELDT writing, and the CST ELA. And there are kind of, they fall in a jumble basically. But these are the drivers of reclassification, right? But it really does take about 5-6 years and this is with our current standards.

Now we're going to shift; the content standards are going to be the Smarter Balanced in the case of California, and then we're as a state in the process of revising the ELD standards that are aligned to the ELA. And so the CELDT will change also in 2015, and that's going to contain—if we can project from what the current draft is and so forth—is going to be contain significant aspects of language that are aligned to the Common Core kinds of language, the higher

language functions. And so the bar is going to be raised in both senses using a lot of the ability of students to engage with language in ways that we haven't really demanded up until now. And so we've got sort—this is with current standards. It's going to be—the bar is going to be raised, you know, lots of great exciting challenges going on. Nationally, the picture is there's PARCC and Smarter Balanced, both of those assessment consortia are now kind of waking up—partly because we are sort of sounding the bell—to the reality that there's—they should be focusing as much on the content-relevant language portions of the assessments. So Smarter Balanced is taking steps to look at all the items that they've developed for their computer-adaptive testing, 14,000 items, and looking at the language demands that are inherent in them. And so if all goes well, then that will give you useful information about sort of how all students are doing around the language in the Common Core.

And then states are all kind of trying to shift their English language development or English language proficiency standards to correspond to the Common Core in some meaningful way, and one way that that's been—that that work is proceeding is by taking the language demands that are contained in the Common Core and embedding them directly in the ELD standards, in the ELD assessments without making them sort of assessing all of the content areas. So anyway I think alignment is going to continue to kind of proceed. I don't think things will be perfect the first round, like anything where you know, but we'll—in the way in which the Common Core will be implemented and the English language proficiency assessments will be implemented in this round will be. I think, a little bit more aligned than it's been in the past. So maybe standards four will really kind of get things right.

So there is—I know you have, I hope we have a few minutes for questions. If you go to ell.stanford.edu that's our Understanding Language website. Please share thoughts with us. How we're proceeding from here is we're going to try to create a very active online community engagement around this with districts. We've got districts like Denver, New York City, Charlotte Mecklenburg, others kind of quite involved with us. So we hope to have this be part of a national dialogue, but of course California is home to us. We hope to engage with as many districts in California as possible. So I've allowed about 15 minutes, I think, for Q and A, thoughts. Yes.

PARTICIPANT 1 Here in California, I feel we've done a good job of improving our focus on serving our EL population. However, when we start talking about content-relevant language, and when you just showed the one chart, you know, depending on your district, five, six, seven years in. We've reclassified many of our students. What research can you cite or maybe direct us to regarding serving our RFEP students. I mean, I feel that maybe that's the big question. We start talking about content-relevant language. Has there been any research done on that demographic? Again, I'm coming from a high school's

perspective. I almost feel that if we're truly going to enclose the achievement gap, many of our student—when you start disaggregating scores, when you start looking at some of the RFEP kids, they really struggle because they have no support, less dollars attached to them. I am just speaking maybe from own district; I don't know what everyone else is doing. So if you could maybe just talk a little bit about your recommendations or what the research shows on serving those reclassified students who maybe don't have access to all the Title III and resources.

HAKUTA Thanks. I don't think I can point to any research. I mean, people are focused on the long-term ELs, right? And assume that the RFEP students are done. They are the successful students, and indeed if you look at the data, yes, they will often be doing as well or better than English-only students. But now we're raising the bar as well, and we need to really support them. You know, one of the issues around RFEP students is that those students who sort of were the early redesignated students looked quite different from the later redesignated students because those who were reclassified in elementary school often are more academically gifted students. And so that's why if you look at the state data just kind of cross-sessionally, in the elementary grades the RFEPs are doing quite a bit better than the English-only kids. And then the RFEP subgroup kind of drops until they more less meet the line of the English-only students.

I think one of the challenges will be—well, two things I think I can say about RFEP students. You know, one is sort of their ability to access high-level content courses, including AP courses and so forth, and being given the challenges that they have and to kind of—I'm not sure that districts have monitored, for example, course access ability very systemically for the RFEP students. I know that Fresno has done some really good work in that area. The other is I don't think we're leveraging enough their inherent gifts that they have as bilinguals. I mean, their you know—I think support programs that really take what they have already as bilinguals and this kind of builds on the basic research there is about the advantages of bilingualism. Right? That Ellen Bialystok at New York University—one of my coauthors actually of a book that I wrote once—has done work showing various sort of advantages in the area of what's called executive function, which is kind of related to 21st century skill kind of things, for bilinguals over monolinguals. Those of you in the higher age ranges would be interested in knowing that there is a four-year difference in onset of dementia between bilinguals and monolinguals, so—

(INAUDIBLE COMMENT FROM AUDIENCE)

That's right, this is not an ad for Rosetta Stone. But and also that brain scan evidence is really fascinating, which is that you can—basically, bilinguals with dementia who have smaller brain function areas can do just as much as monolinguals with larger brain mass. Bilinguals are doing more with less, even

as they go through dementia. So it's all kind of interesting, but that's a bit of a diversion from these kids who are far from having dementia. But they do have the advantages of bilingualism and really leveraging that because part of, you know—and being able to do some of these Common Core-type engaged language activities in both languages. And so I would think that, for example, this should have implications for how you—the kind of curriculum that you might think about in your foreign language classes, in your Spanish or your French or other foreign languages classes, around sort of the foreign language engaging with the content areas. So anyway, thank you. Other questions?

PARTICIPANT 2 Can you talk about the teaching resources piece that you all are developing and sort of what the process is for that and timeframe and all of that information?

HAKUTA Sure, thanks. So what we've done with our teams—so we're committed to not build out the Common Core but at least provide some exemplars of what in the English language arts, math, and science could be done around taking the content of the Common Core and really supporting English language learners' access to it, and sharing that with districts and engaging with districts. So with the ELA unit—this sounds like an advertisement for George's session—but with the unit that we've developed, which is the furthest along in English language arts; math is still coming along. What we'll be sharing very soon on our website is this quite elaborate unit around persuasion and persuasive speeches, and that leads up to the Gettysburg Address, which is one of the texts that's used in the Common Core and how to support English language learners.

So we worked with Aida Walqui and her team at WestEd, but also but really managed by George Bunch and our English language art teams, to develop a pretty large unit on persuasion for middle school, which we want to present as an exemplar of how this might be done. And during this summer what we did was we had a fair number of school districts around the country get their teachers involved in reviewing and giving us feedback. And we're in the process of taking that feedback and modifying it. And then at that point, several districts have committed to trying to implement them during this coming year. And what we are hoping to do is to capture the productive struggle, basically, of implementation and to share that as sort of a really show that we would share with other districts. Because, I mean, I think a lot of this is not going to work very well the first time. I mean, it's going to take a lot of work to implement because we're really expecting large shifts in practice. And so for every district that gets engaged with the Common Core and comes to a meeting like this—you have got lots of districts for whom the Common Core is still something off in the distant horizon. And the smaller district, typically, the less capacity there is to pay attention to things in the future.

So anyway there is going to take a lot of work and sharing of the productive struggles of implementation, both the level of teachers and site-level

leadership and district leadership. So and we're going to do the same for math. And math we won't be doing instructional practices but more sort of strategies and tools around professional development. And science is of sort of more coming along, slightly further behind. And so that's kind of our strategy is—we're not going to be offering professional development or anything of that sort, but just sort of offering resources that could be used and then sharing the efforts by districts to try to implement.