

# Understanding Language

Language, Literacy, and Learning  
in the Content Areas

Challenges and Opportunities for Language Learning in the Context of Common Core  
State Standards and Next Generation Science Standards

Conference Overview Paper  
Stanford University

April 2012

## **Goals of the Conference**

### **To Deepen and Amplify Our Understanding of the Relationship between Language and Content**

The Common Core State Standards now adopted by most states, and the Next Generation Science Standards currently under development, are intended to improve the culture of learning in classrooms across the country. As *Understanding Language* initiative leaders Kenji Hakuta and María Santos summarize it, they “raise the bar for learning, call for increased language capacities in combination with increased content sophistication, and call for a high level of discourse in classrooms across all subject areas.”

The primary goals of the Understanding Language initiative are:

1. to examine and explain how and why language matters in the context of these new Standards;
2. to exemplify language-rich ways to support learning, with particular attention to the needs of English language learners (ELLs);
3. to expand and extend the work across the spectrum of the new Standards through working with school districts and in partnerships with support organizations during the implementation phase of these new Standards; and
4. to explore policy issues aimed at effectively educating ELLs in light of the new Standards and emerging approaches to second language acquisition and subject matter pedagogy.

The project commissioned the papers presented at this conference as a way to begin this work on all four fronts. Conference attendees included paper authors and others invited to comment and to represent the perspectives ranging from research to teaching and administration at the district, state, and partnership level. As multiple authors of conference papers emphasize, these standards provide both new challenges and new opportunities for English language learners. As Hakuta and Santos note, “ELLs have a right to appropriate education... grounded in sound theory [of content learning and language learning]... and implemented in ways that address their needs systematically, through coordinated support linking teachers, materials, formative assessments, tests and accountability systems, and technology.” The conference explored the issues implicit in this statement.

Instruction based on sound theory of language learning was the topic of papers presented by van Lier and Walqui and by Walqui and Heritage, and the theme of the conference summary talk by Guadalupe Valdés. It also appeared as a common thread in papers on assessment and the three subject area papers on Standards and ELLs. The common message is that three parallel shifts in perspective on how language is learned are needed: From an individual process to a more socially engaged process; from a linear building of structures and vocabulary aimed at correctness and fluency to a non-linear and complex developmental process aimed at comprehension and

communication; and from teaching language *per se* to supporting participation in activity that simultaneously develops conceptual understanding and language use.

The conference explored the implications of these shifts for classroom support of language learners (papers 1-6, 9, 10, 11), for language proficiency standards and supports for ELLs in subject-area, standards-based assessments (papers 7, 8), and for policies related to the support of language learners (papers 10, 11, 12). The conference ended with three summary talks, from three perspectives: understanding language learning (Guadalupe Valdés); understanding language challenges and opportunities and the needs of disciplinary teachers implementing new standards (Phil Daro); and understanding language challenges and opportunities from a strategic perspective at the district, state and national levels (Jennifer O’Day).

### **Conceptualizations of Language and Language Acquisition**

Complementary perspectives on the acquisition of language and literacy were presented throughout the conference, yet common themes emerged. Most salient among those included recommendations that we:

1. Move away from defining language primarily as form or even as function, and toward a redefinition of language as a complex adaptive system of communicative actions to realize key purposes.
2. Recognize that language learning occurs more effectively through indirect intervention where learners can acquire language experientially rather than through a structural syllabus of language forms. Language development occurs in subject area classrooms when teachers carefully scaffold language and content learning, and where students work and talk together. ELLs learn language as they engage in meaningful content-rich activities (projects, presentations, investigations) that encourage language growth through perception, interaction, planning, research, discussion, argument, and co-construction of academic products. Acceptance of “flawed” language supports growth in communication and participation in disciplinary learning.
3. Broaden the conception of literacy and learning and see them as not only being about the development of particular kinds of print-based skills but as “participation in a range of valued meaning-making practices” both in and out of school.

The conference summary by Guadalupe Valdés highlighted the changing views of language learning, both the process and the desired outcomes. She stated “where we are right now in the field is that we are beginning to talk about language as a complex adaptive system—indeed that is a term that comes out of chaos and complexity theory. The suggestion from this perspective is that language isn’t linear, that it self-adapts in ways that are not predictable.” She stressed that language instruction and language proficiency assessments have been based on a different view, of structures acquired in a particular order and of a steady progression toward a more “native speaker” standard of usage. She suggested “the native speaker norm [as a goal] is increasingly being questioned in the fields of applied linguistics and sociolinguistics.” She noted the common theme of the new Standards to require student participation in classroom activity and discourse that reflects the practices of the discipline, so that students can

develop discourse skills within a community of practice. Thus, viewing language as a social practice, she asked, “what do most of our [ELL] students need to do to be able to [thrive in] these rich content classrooms?” answering that the first requirement is language comprehension sufficient to obtain information in this context. She then articulated a progression of what students at various levels of English language proficiency might demonstrate as evidence of having “obtained information.” This example suggests an entirely different set of organizers for language proficiency standards, around practices emphasized by the new standards within the disciplines, instead of the usual “content-free” tasks found on most language tests assessing the ability to speak, listen, read, and write and emphasizing accuracy, complexity, and fluency. She challenged content assessment experts to develop ways to assess students’ ability to participate in the classroom discourse and practices suggested by the new Standards, and their ability to learn content through that participation. She stressed also the value of students’ self-assessing their language progress and language development needs. Finally, she turned to the issue of language instruction. She questioned the value of what is too often done in the name of teaching language, when its primary stress is on grammar and sentence structure, at the expense of pragmatic participatory competence. Furthermore, she noted that time devoted to explicit and direct language instruction tends to isolate ELLs from opportunities to learn subject content and to hear and learn language more naturally from examples of content- and age-appropriate language produced by other students and by teachers in content-rich and discourse-rich subject-area classrooms. She reiterated the comment of Hakuta and Santos that, in the context of these new Standards, we will need to “have these rich language environments and it will have implications for everything else that we do.”

### **Challenges and Opportunities from New Standards**

The common theme of the three papers devoted to particular disciplines, as well as those on instruction, was that the new Standards for language arts and mathematics and Next Generation Science Standards all require shifts in classroom practice. In particular these shifts increase the fraction of time students spend interacting and talking with one another around content. The challenge is then to ensure that ELLs become full participants in this discourse. This creates content-rich and language-rich learning opportunities, environments in which language is acquired through participation in meaningful activities. Students are provided with opportunities for developing their comprehension of the language used by teachers and peers in the classroom. Students use their emerging English to engage in the learning of science, mathematics, social studies and language arts.

We next summarize the critical shifts and opportunities discipline by discipline for the three areas for which common standards exist or are forthcoming in the near future: English language arts, mathematics, and science. Social studies is not separately discussed because new standards for this discipline have yet to emerge, but the ELA paper does address the Common Core State Standards for Literacy in History/Social Studies, Science, and Technical Subjects. These standards specifically state that (a) the language and literacy development of ELLs is a shared responsibility among English

teachers, English language development (ELD) teachers, and other content-area teachers and (b) the use of language and literacy varies with regard to different audiences and purposes within and across the disciplines.

### **Shifts in English Language Arts/Literacy:**

The major shifts in the ELA/Literacy Standards are articulated in terms of what students must do in various domains:

1. Reading: Students read and comprehend literature and informational texts of increasing complexity to build knowledge.
2. Writing: Students use evidence to inform, argue and analyze for varied audiences/purposes and present knowledge gained through research.
3. Speaking and Listening: Students work collaboratively, understand multiple perspectives and present ideas.
4. Language: Students use language and conventions to achieve particular functions, purposes and rhetorical effects.

### **Leveraging Opportunities for ELLs in English Language Arts/Literacy:**

The following teaching practices provide students with opportunities to work towards standards attainment in the domains of reading, writing, speaking and listening:

1. Reading: Instruction leverages background knowledge, builds strategic competence and provides supports to allow access to complex texts rather than simplifying or “pre-empting” the text.
2. Writing: Instruction draws upon students’ home languages and background strengths to develop content for writing and scaffold writing itself; provides ELs with meaningful engagement with mentor texts, including opportunities to focus on language and text structure; and ensures that writing is meaningful communication.
3. Speaking and Listening: Instruction provides opportunities for extended discourse and engagement with academic texts; supports different kinds of participant structures (whole class, small group, one on one); develops meaningful collaborative tasks that allow students to use their full linguistic/cultural resources; and teaches ELs strategies to engage with text in multiple ways.

### **Shifts in Mathematics:**

Two primary shifts characterize the new standards in mathematics:

1. A focus on practices: The eight mathematical practices described in the standards provide opportunities for students to engage in posing and solving problems, explaining concepts and making connections, understanding multiple representations of mathematical concepts and models, communicating their thought processes through procedures, justifying reasoning, and making arguments.
2. The importance of discussion: Instruction as envisioned in the standards should support mathematical discussions and use a variety of participation structures

(teacher led, small group, pairs, student presentations, etc.) that allow students to use multiple representations (diagrams, charts, symbols, models, etc.) in communicating about mathematical content and engaging in mathematical practices.

### **Leveraging Opportunities for ELLs in Mathematics:**

The following teaching practices provide students with opportunities to work towards developing language competence in the context of mathematics:

1. Focus on students' mathematical reasoning, not accuracy in using language.
2. Shift to a focus on mathematical discourse practices, moving away from simplified views of language such as those that focus only on vocabulary.
3. Recognize the complexity of language in mathematics classrooms and support students in engaging with this complexity: (a) multiple modes (oral, written, receptive, expressive, etc.), (b) multiple representations (including objects, pictures, words, symbols, tables, graphs, etc.), (c) different types of written texts (textbooks, word problems, student explanations, teacher explanations, etc.), (d) different types of talk (exploratory and expository), and (e) different audiences (presentations to the teacher, to peers, by the teacher, by peers, etc.).
4. Treat everyday language and experiences as resources, not as obstacles.

### **Shifts in Science:**

Major shifts in the science standards consist of the following:

1. Inquiry is redefined as a set of eight science and engineering practices. These include four sense-making practices that are particularly language intensive<sup>1</sup> and parallel to similar demands in math and ELA.
2. Instruction focuses on a limited set of core concepts in order to build a coherent understanding of science over multiple years of school.

### **Leveraging Opportunities for ELLs in Science:**

The following teaching practices provide students with opportunities to work towards developing language competence in the context of science:

1. Immerse students in science content through observation, investigation, and discourse.
2. Use models and visual representations of information as a resource and bridge for ELLs to grasp content.
3. Call attention to the language challenges inherent in science texts and discourse as a way of supporting science learning and language development for all students.

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<sup>1</sup> Practice 2: Developing and using models; Practice 6: Constructing explanations (for science) and developing designs (for engineering); Practice 7: Engaging in argument from evidence; and Practice 8: Obtaining, evaluating and communicating information.

## **Instruction and Teacher Professional Development**

The shifts highlighted above place new demands on teacher capabilities. In this context, schools and districts implementing new curricula to match these standards are already beginning to see the need for professional development in the ways of teaching that embrace these shifts. Santos and Darling-Hammond noted that teacher attention to student language proficiency and home language in the context of a discourse-rich classroom needs to be integral to the skills they are learning at this transitional time. Heritage and Walqui stressed the need for teachers “to get good at contingent assessment” so that their instruction can respond both to the content learning and the language learning needs of their students.

The following goals for ELL instruction emerged from conversations by members of the Understanding Language Steering Committee shortly after the meeting. These goals are meant to guide district administrators, curriculum leaders, principals, coaches, ELL specialists and content-area teachers as they work together to ensure that instruction aligned with the standards is appropriate for the diverse needs of ELLs. Each of these is a target for professional development as well as for instruction:

1. Instruction includes supports and enhancements to meet the diverse needs of ELLs as they learn language and content simultaneously.
2. Instruction engages ELLs in meaningful activities designed to advance students’ language development and ability to comprehend and produce academic discourse.
3. Instruction addresses the needs of students with various levels of English proficiency and with a variety of prior school experiences.
4. Instruction supports ELLs in building the skills they need to read, comprehend, write and discuss rigorous disciplinary texts and tasks independently.
5. Instruction leverages ELLs’ prior knowledge, their native linguistic and cultural resources as well as their emerging English language skills.
6. Instruction incorporates effective diagnostic and formative assessment practices to determine whether any gaps in understanding are due to difficulty with concepts or with language and, in turn, guide instructional practice.

The concluding remarks by Phil Daro addressed the needs of teachers in the context of these new Standards. He began his remarks with the observation that schools and teachers are asking for very concrete help, both on how to implement the new Standards in their classroom, and on how to support ELLs in that context. He noted that the theme “it doesn’t have to be perfect,” invoked often during the conference to describe student language use in classroom discourse, can also be applied to teacher practice in developing the discourse-rich classroom environment. Daro went on to argue that “there is a new relationship between language and content that is quite explicit in the Standards” and that “knowledge, cognition, [and] language, these are all threads of a single fabric of learning.”

One implication of this interconnection between language and content is that classrooms will need to evolve to devote much more time to student discourse. This

change could have either dangerous or positive ramifications for English learners: if an increased focus on language is done carelessly or lazily, ELLs will be left out yet again, unsupported in engaging with rigorous content; however, if the additional discourse time is implemented with attention to participation and inclusion, it will be an excellent opportunity for ELLs to grapple with content regardless of their language skills. Daro stresses that both content learning and language learning require the classroom to “slow down for learning, thinking, and language.” He notes that, in classrooms in Singapore, when “a child starts a sentence, everyone waits until it is finished. And if the thought is incomplete, there is a follow-up question [to urge that student or others] to complete the thought.” He notes that slowing down will require a trade-off: teachers will be able to ‘cover’ fewer topics, but will be offering students the chance to make deeper sense of the content they do work with. Learning is best served with a more minute-to-minute feedback and decision cycle about what each student needs next, requiring teachers to listen and respond to student thinking, and to support students in “learning how to assess their own sense-making.”

### **English Language Learners in Bilingual Programs**

While the majority of talks in the conference focused on ELLs in classrooms where English is the dominant language of instruction, discussion around the paper on bilingual classrooms from Brisk and Proctor revealed that there was substantial agreement that bilingual education is an important path to language and subject-area competence, and can succeed provided that the teachers are themselves highly proficient in both the language of classroom instruction and the subject-area content they teach. The paper points out further advantages of the bilingual approach, with which there was little argument. This option appears to be limited both by policy in some states and by the availability of qualified teachers.

### **Policy Challenges and Opportunities**

The heightened expectations around language in the new Standards pose major challenges for all students who engage with rich academic content, especially English language learners (ELLs). Authors Delia Pompa and Kenji Hakuta offer a set of recommendations for policy makers to consider as states and school systems are implementing the new Standards. Authors Jamal Abedi, Robert Linqunti, Alison Bailey and Mikyung Kim Wolf discuss issues related to English language proficiency standards and the role of the language assessments in the context of the new Standards.

1. Ensure **alignment of all key components of the state system with the new Standards**. Curriculum, instructional materials, teacher preparation and professional development systems, and assessments used to measure student performance must be aligned with the Standards to ensure that students are not only taught to higher expectations, but also appropriately assessed for their learning.
2. **Develop and implement valid and reliable assessments** for all students that reflect the expanded language demands inherent in the new Standards. Policymakers need to move toward an assessment and accountability system that weighs and includes performance on English language proficiency and academic assessments. Assessment systems based on the new Standards (including the

systems being developed by the Partnership for Assessment of Readiness for College and Careers, the Smarter Balanced Assessment Consortium, as well as the state English language proficiency assessments) must validly measure the language demands that accompany the new Standards.

3. Ensure **professional development** that allows for greater **collaboration** among practitioners to support these common practices both at the student and teacher levels. Some core areas of professional development for all teachers (pre-service, in-service, and bilingual) include:
  - A. Examine the Common Core State Standards and Next Generation Science Standards for the kinds of tasks students will be expected to undertake;
  - B. Develop a foundational understanding of content pedagogy that incorporates an understanding of the language of the discipline(s);
  - C. Develop foundational understanding of language development and strategies for ELLs, with applications *within* the discipline(s);
  - D. Support approaches that build bridges between students' native language knowledge and cultural assets and their evolving acquisition of English in an academic context.
4. Implement effective **parent and community engagement strategies**.

Discussion of English language proficiency (ELP) standards raised the issue of what it means to align or coordinate these standards with the new subject area standards. A variety of opinions were expressed. While the new Standards express the need to attend to ELLs in terms of both language learning and content learning, there are varied views on how best to achieve this, and what role ELP standards play to ensure it. Conference participants generally agreed that English language proficiency standards should be viewed as articulated progressions to help educators understand and attend to ELL students' language development needs, and not as separate, watered-down content standards. Some presenters referred to a "threshold level" of language proficiency, below which explicit language instruction would be necessary to ensure ELLs develop the foundational language skills to meaningfully participate in language-rich content classrooms. Yet there was no agreement on where or how that threshold might be set, and other participants expressed concern about assuming content area teachers by themselves can develop ELL students' language capacities solely through content instruction. Others noted that suggestions to curtail ELP standards and assessments to a "threshold level" might require changes in current federal and state statute, and wondered if such a move could be viewed as undercutting ELLs' protected-class status under current civil rights law. Further complicating the issue is that current language assessments are built from a view of language learning as learning structure and form, rather than as learning to interpret, interact and present in the content areas, uses identified as critical during most of the conference discussions. As we reported above, in her concluding remarks Guadalupe Valdés challenged assessment experts to envision a new approach to defining and measuring language proficiency aligned with this perspective on language development.

The paper by Bailey and Wolf points out some of the challenges of identifying and defining the language knowledge and skills that students need in order to achieve

proficiency on the new Standards and the variety of ways these might be interpreted. They also noted the need for schools to be able to link student scores on ELP and content-area assessments to investigate correlated problems and respond to them across English-language instruction and content-area teaching. In their paper, Abedi and Linquanti suggest that a framework for ELP standards development is needed that carefully delineates the breadth, depth and complexity of target language uses reflected in new Standards. They also advocate for the collaboration of content, language and assessment experts on key measurement challenges for ELL students as assessments of the new Standards are designed. For example, they call for particular attention to limiting “construct-irrelevant” language burden in both content *and* language assessment items and tasks.

Both assessment papers argued for greater use of formative assessment practices and tools within the larger assessment *and instructional* systems, in order to provide more timely feedback and guidance to both teachers and students.

### **Cross-cutting Themes:**

Jennifer O’Day reflected on the conference by selecting three words that emerged over and over again throughout the discussions of the papers. The first of these was ***practice***. Conference participants discussed practice in many contexts: the disciplinary practices expected of students as highlighted in the Standards; instructional practices that teachers will need in order to support and include all students, and the requisite professional development for such practices; practice as a way of developing skills and as building upon prior knowledge, both for teachers, and for students; and the tacit understanding that language and disciplinary learning can only develop through such practice. A second theme was ***language*** and the opportunities for language learning that exist in content-area classrooms. O’Day pointed out that language is both the path to content and part of the content itself. Making the language demands and practices of the content-area classroom explicit for teachers and students can help teachers support language learning in the service of content-area learning. Teachers need to be able to “help students notice [language] and unpack it as needed for the students to enter into the content, develop their understanding, achieve their goals and carry out the actions that they want to carry out with that content. This is important for all kids, but it is especially important for language learners.” Finally, O’Day noted that almost every paper and speaker discussed ***opportunity***: opportunities for language learners in changes to classroom practices, opportunities for improving policies and assessments for ELLs, and the particular opportunity provided at this moment by the adoption of new and broadly shared Standards in many states. She ended with a challenge to all participants to find specific and strategic entry points to support needed changes and to turn these opportunities into the reality of “implementation [of the new Standards] that includes ELLs as full participants and full beneficiaries.”

## **Acknowledgements**

Compiled by Helen Quinn (lead author), Tina Cheuk and Martha Castellón with support and contributions from the following individuals:

George Bunch, Phil Daro, Kenji Hakuta, Andrés Henriquez, Margaret Heritage, Angelica Infante, Amanda Kibler, Okhee Lee, Robert Linqanti, Chris Minnich, Judit Moschkovich, Jennifer O'Day, Susan Pimentel, Delia Pompa, Judith Rizzo, Sharon Sáez, María Santos, Lydia Stack, Gabriela Uro, Guadalupe Valdés, Aída Walqui

The Understanding Language Initiative would like to thank the Carnegie Corporation of New York and the Bill and Melinda Gates Foundation for making this work possible.

For more information about this paper, please contact [UnderstandingLanguage@stanford.edu](mailto:UnderstandingLanguage@stanford.edu).

Understanding Language Stanford University School of Education  
485 Lasuen Mall Stanford, CA 94305-3096

[ell.stanford.edu](http://ell.stanford.edu)