

es del Observatorio / Observatorio's Reports  
**Informes del Observatorio / Observatorio's F**  
s del Observatorio / Observatorio's Reports  
nformes del Observatorio / Observatorio's Re  
es del Observatorio / **Observatorio's Reports**  
Inform Observatorio / Observatorio's F  
es de ervatorio / Observatorio's Reports  
Inform Observatorio / Observatorio's F



ISSN 2373-874X(online)

022-06/2016EN

# Academic languages and bilingualism in U.S. Latino students

Paola Ucelli, Emily Phillips Galloway, Gladys Aguilar & Melanie Allen

1

**Topic:** Integration of evaluation and pedagogical practices in Latino students in the United States.

**Abstract:** As part of a larger and ongoing research program, this report offers preliminary results that seek to contribute to the challenge of understanding how to expand academic language proficiency in a way that empowers U.S. Latino adolescents' voices and identities.

**Keywords:** academic language, bilingualism, evaluation, Latino, pedagogy

## Introduction

This reports aims to be key not solely for U.S. Latino students, but are also relevant for many other minoritized adolescents around the world, whose literacy

achievement continues to lag behind expectations despite years of formal schooling typically not designed to address their strengths and needs.

In the U.S., 79% of 4<sup>th</sup> grade and 8<sup>th</sup> grade Hispanic/Latino students perform below the proficiency level in reading (NAEP 2015). This is an urgent problem in need of immediate and concerted attention, not only for the wellbeing of individuals, but that of society at large. Being able to independently learn from text (be it paper or digital text) has never been more important. In our current information-based society updates on scientific knowledge, health information, civic opportunities and even social interactions are increasingly communicated through writing. Consequently career advancement and civic participation are today more reliant on individuals' literacy skills than ever before (LeVine, LeVine, Schnell-Anzola, Rowe & Dexter 2012; Levy & Murnane 2013).

2

Supporting the literacy development of early adolescents who struggle with reading cannot be limited to assessing and teaching basic reading skills (e.g., identifying letters, reading/decoding words). Extensive research suggests that one of the major challenges developing readers face during this period is understanding the language of school texts, or so-called *academic language*. Yet, despite the consensus on the importance of fostering academic language proficiencies, an empirically based construct and instrument to precisely elucidate which academic language skills are worth instructional attention and monitoring has not been available.

To address this gap, in our prior research, we have proposed a cross-disciplinary operational definition of academic language proficiency: Core Academic Language Skills (CALs). CALs refer to select high-utility school-relevant language skills that support reading comprehension across content areas, but that are infrequent in colloquial conversations. We also developed an innovative and psychometrically robust assessment, the CALs-Instrument (CALs-I). Our research conducted with English-speaking U.S. students reveals that CALs are key in predicting reading comprehension during early adolescence (grades 4-8) even when controlling for students' socio-economic characteristics, word reading fluency and vocabulary knowledge (Uccelli, Phillips Galloway, Barr, Meneses, & Dobbs 2015). These results have been replicated with Spanish-speaking students in Latin America using an instrument that was translated and culturally adapted to Spanish, the *Evaluación de Lenguaje Académico* (ELA).

3

In the present report, as part of our ongoing partnership with a dual language public school in the Northeastern U.S., we focus for the first time on capturing CALs in Latino dual language learners. This partnership had two goals: (1) to investigate the sensitivity of the Spanish and English CALs instruments to capture individual variability in Latino dual language learners' academic language proficiency in each language (grades 4-6); (2) to start to explore how to link the CALs assessment results to instruction via supportive interactions that build on dual language learners' resources.

A total of 107 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> grade students attending the same dual language school participated in two CALS assessments, one in Spanish (ELA) and one in English (CALS-I). Preliminary results revealed an upward trend from 4<sup>th</sup> to 6<sup>th</sup> grade in both ELA and CALS-I scores. On average, participants scored higher in the English CALS-I. Yet, results displayed considerable individual variability, highlighting that even within this sample of mostly Latino students, with fairly homogeneous demographic characteristics and educational histories, average trends were not representative of individual profiles. Overall, scores revealed considerable room for growth in CALS in both languages.

To address our second goal, in partnership with one middle grade educator at the same dual language school, we analyzed academic language teaching practices designed to promote students' text comprehension in four videotaped classroom sessions (total minutes = 480). Through our team's ongoing reflections, analysis of videotaped sessions, and selected transcripts of classroom events, we identified three key lessons. First, the teacher's scaffolding of students' academic language resources worked best in the classroom when supported by a sociocultural pragmatic approach that created a welcoming and safe space for students and teachers to flexibly employ a range of languages (both English and Spanish), language varieties (standard and non-standard varieties) and ways of using language (from academic to colloquial). Second, the teacher was able to serve as a master bridge builder. She regularly scaffold students to "walk" from the complex language of text to more accessible language and back, guiding

them in building their own language bridges. Finally, our team over time distinguished two pedagogical objectives to guide the design and implementation of academic language instruction: (a) the immediate goal of supporting deep understanding of text and curricular content, and (b) the long term goal of expanding students' critical rhetorical flexibility. Through illustrative examples from practice, these lessons shed initial light on a CALS-informed pedagogical vision to scaffold academic language as a way to strengthen Latino dual language learners' voices.

## Objectives

This paper seeks to contribute to furthering the field's understanding on how to expand students' academic language resources as a way to empower their voices and identities. Research-based and pragmatic answers to this question are not only relevant for Latino students in the U.S., but also for minoritized students worldwide, whose literacy achievements continue to lag behind expectations despite years of formal schooling (Clark 2014; Hemphill & Vanneman 2011; Hvistendahl & Roe 2004; Stanford CEPA). In our research over the last five years, we have proposed and tested a cross-disciplinary operational definition of academic language proficiency, referred to as *Core Academic Language Skills* or CALS (Uccelli, Barr, Dobbs, Phillips Galloway & Meneses 2015). The CALS construct includes select high-utility school-relevant language skills that support reading comprehension across content areas. By focusing on academic language

5

resources that are functional for effective communication and understanding, instruction inspired by the CALS framework departs from subtractive or prescriptive approaches (which focused on “correct” standard English) and from appropriateness-based approaches (which see academic language as categorically distinct from colloquial language and, rigidly, as the appropriate language for academic contexts).

In this paper, we share preliminary lessons from our recent and ongoing partnership between the Language for Learning research team at the Harvard Graduate School of Education and educators from a K-8 Dual Language School. We report on two specific goals that have guided this collaboration: (1) to investigate the sensitivity of the Spanish and English CALS instruments to capture individual variability in Latino dual language learners' academic language proficiency in each language; (2) to start to explore how to link the CALS assessment results to instruction via supportive interactions that build on dual language learners' resources.

A total of 107 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> grade students enrolled in the same dual language school participated in two comparable CALS assessments, one in Spanish (*Evaluación de lenguaje académico, ELA*) and one in English (*CALS-Instrument, CALS-I*). The ultimate goal of this collaboration is to generate lessons about how teachers' scaffolding of students' academic language can be supported by the CALS construct, informed in a constructive yet critical manner by CALS

assessments' results, and implemented in way that that empowers students' own voices and identities.

In the following sections, after a brief introduction to the genesis of our partnership and an overview of our prior CALS research, we describe our methods and present participants' CALS-I and ELA assessment results. Subsequently, we present our pedagogical reflections by examining selected examples from teaching implemented by our co-author, an English Language Arts and Social Studies teacher of the 5<sup>th</sup>- and 6<sup>th</sup>-grade students who participated in this study. In particular, we discuss the complexity involved in asking teachers to pay attention to language in the service of content learning, serving as bridges between the language of students and the language of text, while at the same time expanding students' critical rhetorical flexibility (Valdés 2004; Walqui 2006).<sup>1</sup>

7

## How did our partnership start?

School A, a K-8 dual language public urban Title 1 school, serves a population comprised mostly of Latino/Hispanic students (91%), with a considerable proportion of students eligible for free or reduced price lunch (76%). This school has a well-known history of excellence in leadership, a committed and well-

---

<sup>1</sup> Critical rhetorical flexibility demands enlarging the set of language resources that students have

trained teaching staff, and an engaged community of parents. Despite all these conditions for success, the School A Principal and teachers are interested in addressing the difficulties that considerable proportions of their upper elementary and middle school students are experiencing with reading and writing in both languages. Teachers report that in 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> grade, most of their students have already mastered basic decoding skills (i.e., letter word recognition), yet many struggle with comprehending school texts and with written school tasks. This pattern mirrors a national trend in which large proportions of students with adequate basic decoding skills, tend to experience difficulties in reading comprehension and writing, especially around the upper elementary school years (Biancarosa & Snow, 2004). School A Principal met the first author when she audited Ucelli's HGSE course on Bilingual Learners' Language and Literacy Development and Instruction. After a semester of getting to know each other's work, many common themes and questions emerged around the goal of improving dual language learners' language and literacy development. The subsequent year, the principal and Ucelli decided to bring together their teams to explore ways to learn from each other by engaging in practice-based reflections. This collaboration was later made possible thanks to a grant from the Observatorio of Instituto Cervantes at Harvard University.

8

## Why is academic language proficiency



## a pedagogically relevant research area?

While inspired by the needs of a local school, this project is relevant within the larger social context. In today's diverse, globalized, and information-based societies, one of the main purposes of school is to prepare students to become lifelong independent learners. One key aspect of this preparation entails supporting all students to become proficient in the language required to learn independently from texts –whether oral, written, or digital texts– and to participate in tasks that require complex communication skills (e.g., argumentation, analysis). Yet, educators' roles need to go beyond an exclusive focus on so-called academic language, the language of text or the language of schooling (Ladson-Billings 2014). Preparing students to become citizens who are able to move flexibly and successfully across distinct cultural communities and contexts ought to be also a central objective of schooling. Indeed, so-called *cultural and linguistic straddlers*, those with multiple cultural frameworks and language resources that transcend languages' or language varieties' boundaries, have the potential to communicate more effectively across groups in a diverse democracy and to navigate a variety of social and professional worlds more successfully than monolingual (or mono-dialectal) and less multicultural citizens (Carter 2006; Paris & Alim 2014)

Latino students constitute a particularly salient group in the U.S. as one of the largest and fastest growing subsets of our student population (Kena *et al.* 2014). Typically these learners enter U.S. schools with cultural and language knowledge

that differs from the assumed mainstream culture and ways of using language at school. Valuing Latino students' home culture and language resources is, first and foremost, a foundation for empathic and respectful teaching and engaged learning. Moreover, supporting students' understanding of language use as flexible across contexts is essential to support Latino students' development as the linguistic and cultural straddlers they are well positioned to become and whom the world urgently needs today (Paris & Alim 2014).

Among the multiple ways of using language that students learn as they grow older, educators and researchers have argued that the language of school texts pose significant challenges to many adolescent readers. This claim is certainly not new (see the work of Cummins 1980-1982). The language demands of academic texts and discourse in classroom settings are often different from those in other contexts, such as communicating with peers. Academic language skills have been referred to as “under the hood” skills (Compton & Pearson 2016). They constitute a frequently unaddressed component of literacy that is required for students to be successful readers and communicators in school. For the most part, however, the existence of academic language proficiency has been taken at face value or, at the most, has been empirically investigated narrowly as academic vocabulary. Beyond the well-documented contribution of vocabulary knowledge to reading comprehension, the hypothesis that students struggle with the language of texts—and that this impacts their text comprehension—has remained mostly untested quantitatively.

10

This untested hypothesis appealed to us as worth investigating empirically, particularly in light of recurrent data showing that U.S. adolescents are not performing at the expected reading achievement levels. The most recent data from the National Assessment of Educational Progress (2015) reveal that only 34% of 8<sup>th</sup> grade students performed at or above "proficient" in reading achievement in 2015. The reading achievement of Latinos is even more alarming, with only 21% of 8<sup>th</sup> grade students identified as Hispanic scoring at or above "proficient." These statistics are worrisome and continue to remind us of the U.S. educational system's long history of ill-serving students from minoritized communities. Certainly, the efforts to support Latino students' academic success require much more than attending to their school-relevant language proficiency and ought to also include efforts to contest raciolinguistic ideologies in the larger society (Flores & Rosa 2015) and to address systemic challenges that lead to unequal opportunities (Reardon 2011). That said, we believe that expanding—not replacing—students' language resources and critical language awareness in itself contributes to expanding students' power by expanding their choices to express themselves and their tools to understand and contest others.

11

To reflect on the urgent question of how best to support Latino students' literacy achievement in an increasingly diverse world marked by notable and persistent inequities in the opportunities to learn, it seems important to empirically investigate (1) whether there are indeed certain academic language skills that

ought to be fostered at school to better support students' reading comprehension; and (2) if so, how can we delineate pedagogical approaches suited to expand Latino students' language resources as part of the larger effort of empowering their voices and preparing them to be confident cultural and linguistic straddlers at school and beyond. This paper investigates these two areas with the ultimate goal of contributing to the research on how best to support Latino students' literacy achievement.

## The CALS framework

The CALS framework is based on a relatively recent operationalization of cross-disciplinary academic language proficiency. At the beginning of our research enterprise, the very first challenge we faced was the lack of an agreed-upon definition or operationalization of academic language proficiency. Our first task, thus, involved generating an operational definition of academic language proficiency situating it in a theoretical perspective, and deciding on the research methods and the educational research paradigm that would inform our work.

12

From a theoretical perspective, the CALS framework is situated within a sociocultural pragmatics-based view of language development that views language as inseparable from social context, and language learning as the result of individuals' socialization and enculturation histories (Halliday 2004; Heath 2012, 1983; Ninio & Snow 1996; Ochs 2002). Within this view, adolescent

language development entails developing “rhetorical flexibility,” i.e., the ability to use an increasing repertoire of lexico-grammatical and discourse resources appropriately and flexibly in an expanding variety of social contexts (Ferguson 1994; Ravid & Tolchinsky 2002). In other words, language learning involves expanding one's language resources to use them reflectively for a variety of communicative purposes and audiences. From a methodological perspective, the CALS framework is informed by quantitative and qualitative studies. From the start of our CALS research, besides assessing students' language and literacy skills, we have engaged in qualitative studies, listening and analyzing students' and teachers' voices to continuously learn from their insights. From an educational research paradigm, the CALS framework has emerged from working in close partnership with public schools both in the U.S. and abroad. For the past five years, we have worked collaboratively with public school students, teachers and administrators in the U.S., Chile, and Peru incorporating their insights into the design of pedagogically relevant instruments (Uccelli & Meneses 2015). These instruments have allowed us to empirically investigate whether the identified set of high-utility core academic language skills (CALS) support school reading comprehension during early adolescence.

13

CALS are defined as a constellation of high-utility language skills called upon to understand the linguistic features prevalent in academic texts across content areas, but which are typically infrequent in colloquial conversations (Uccelli *et al.* 2015a). For example, CALS include knowledge of logical connectives that are prevalent in school texts but typically rare in most informal peer-to-peer conversations, such as *nevertheless*, *consequently*; knowledge of complex structures used to pack dense information in texts across content areas, such as nominalizations (e.g., agree > agreement). Guided by extensive literature reviews and empirical studies documenting the language of academic texts, the language demands of U.S. middle school classrooms, and features of adolescent language development, as well as by our own studies, we identified seven CALS domains. Figure 1 below provides a visual representation of the CALS construct, while Figure 2 describes each of the CALS domains, while (Uccelli, Phillips Galloway, Barr, Meneses, & Dobbs 2015). These CALS domains are proposed as key but not as exhaustive. Future research might identify additional cross-disciplinary language skills to augment this initial set.

14



**Figure 1:** Visual representation of the CALS construct<sup>2</sup>

<sup>2</sup> From “Beyond Vocabulary: Exploring Cross-Disciplinary Academic-Language Proficiency and Its Association With Reading Comprehension,” by P. Uccelli, E. Phillips Galloway, C.D. Barr, A. Meneses, and C.L. Dobbs, 2015, *Reading Research Quarterly*, 50(3), p. 349. Copyright 2015 by the International Literacy Association. Reprinted with permission.

CALS DOMAIN	SKILLS MEASURED
Unpacking dense information	Skill in comprehending and using complex words and complex sentences that facilitate concise communication (e.g., nominalizations, embedded clauses, expanded noun phrases).
Connecting ideas logically	Skill in comprehending and using 'connectives' prevalent in academic texts to signal relationships between ideas (e.g., <i>consequently, on the one hand...on the other hand</i> ).
Tracking participants and ideas	Skill in identifying or producing the terms or phrases used to refer to the same participants or themes throughout an academic text (e.g., <i>Water evaporates at 100 degrees Celsius. <u>This process...</u></i> ).
Organizing analytic texts	Skill in organizing analytic texts, especially argumentative texts, according to its conventional academic structure (e.g., thesis, argument, counterargument, conclusion) and paragraph-level structures (e.g., compare/contrast; problem/solution)
Recognizing academic language	Skill in recognizing more academic language when contrasted with more colloquial language in communicative contexts where academic language use is expected (e.g., more <i>academic vs. more colloquial definitions of nouns</i> )
Understanding metalinguistic vocabulary	Skill in understanding precise meanings, in particular, in using language to make thinking and reasoning visible, known as metalinguistic vocabulary (e.g., <i>hypothesis, generalization, argument</i> )
Understanding a writer's viewpoint	Skill in understanding or using markers that signal a writer's viewpoint, especially a 'epistemic stance markers', those that signal a writer's degree of certainty in relationship to a claim (e.g., <i>Certainly, It is unlikely that</i> )

**Figure 2:** CALS domains and skills measured by the CALS Instrument

To be clear, these skills are not what some have called *academic gibberish* or unnecessarily dense and intricate structures that obscure communication (Krashen 2012). Instead, CALS include functional language resources that support precise communication and learning across school content areas. These are functional resources that educators and textbook writers often assume all middle school students have already mastered. Yet, our research shows

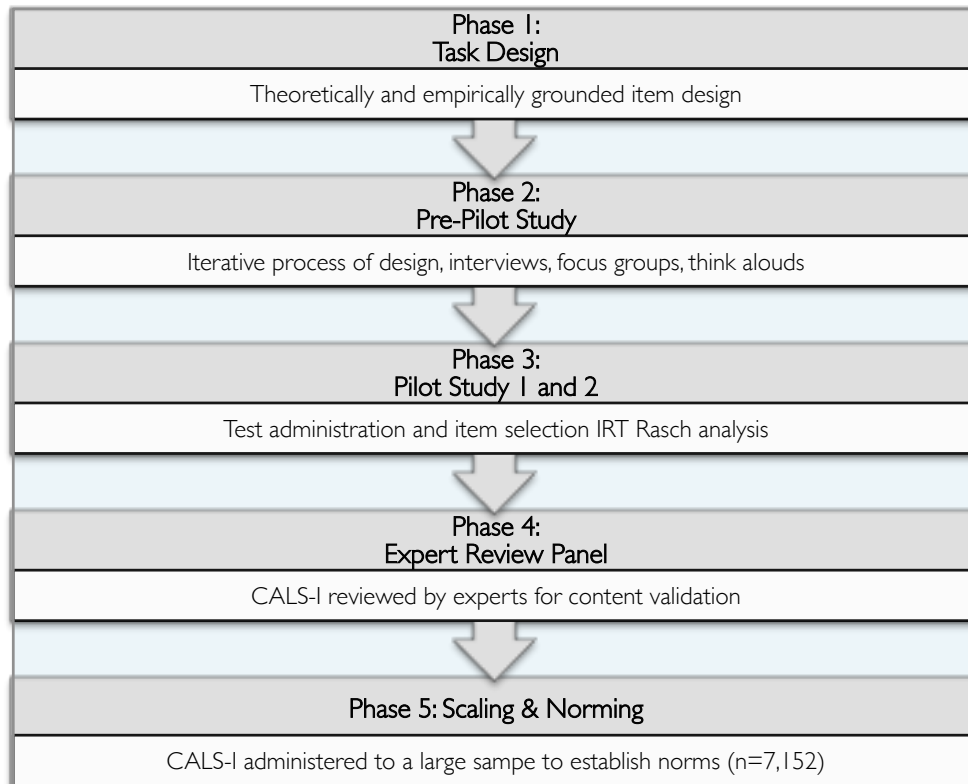


substantial individual variability in upper elementary and middle school students' CALS which significantly predicts reading comprehension, even after controlling for decoding skills and vocabulary knowledge (Uccelli, Phillips Galloway, *et al.* 2015) .

### *CALS Instruments*

In order to measure CALS, we developed a theoretically sound and psychometrically robust assessment called the *CALS Instrument (CALS-I)*. As displayed in Figure 3, the design and validation of the CALS-I followed five phases. Following an iterative item generation and pilot testing process with numerous students and teachers who offered helpful and critical feedback, we tried several task and item formats and refined instructions. After a series of rigorous qualitative and psychometric studies, a final set of items was selected. Subsequently, the CALS-I was sent to an external panel of experts on academic language and assessment to evaluate the content validity of the instrument; the experts' valuable feedback was incorporated to the extent possible (Uccelli, Barr, *et al.* 2015; Uccelli, Phillips Galloway *et al.* 2015).

17



**Figure 3:** CALS-I Design Phases

The CALS-I consists of a group-administered 50-minute paper and pencil test that includes eight tasks: *Connecting Ideas*, *Tracking Participants and ideas*, *Organizing Texts*, *Breaking Words*, *Comprehending Sentences*, *Identifying Definitions*, *Interpreting Epistemic Stance Markers*, and *Understanding Metalinguistic Vocabulary*. Tasks include a range of multiple choice, matching, or short written responses (see Table 2; for more information, see Uccelli, Barr et al. 2015; Uccelli, Phillips Galloway et al. 2015).

Inspired by the results of the CALS-I, a similar design process was followed in the subsequent design of an instrument to measure CALS in Spanish, the *Evaluación*

*de Lenguaje Académico* (ELA). Rather than translating the CALS-I, a comparable instrument that included the same tasks and item formats plus additional alternatives, was fully developed and pilot tested with a group of researchers and teachers in Santiago, Chile with Alejandra Meneses and Paola Ucelli as principal investigators. After pilot testing double the amount of items needed, tasks and items were selected for the final ELA. The ELA is a group-administered 50-minute paper-and-pencil test that includes the same eight tasks of the CALS-I. ELA tasks use the same format and item type than the CALS-I, with only one exception: the Comprehending Sentences task uses a different item format that proved more appropriate to measure Spanish academic syntax.

#### *A vision for a CALS pedagogical approach*

19

Beyond the widely contested subtractive approaches that devalue students' out-of-school language practices, even additive approaches have been recently criticized. In the effort to counteract the social and linguistically unjustified language hierarchies, additive approaches typically communicate to students that their home language is fine for home and friends, but that they need to use a different language at school. Recently, researchers have rightly suggested that these approaches run the risk of replacing the prescriptive lens of subtractive approaches with a sociolinguistically descriptive lens of appropriateness that continues to perpetuate the notion of linguistic hierarchies (Flores & Rosas 2014; Leeman 2005; Parra 2013).

In contrast, our vision for a CALS-informed pedagogical approach markedly departs from subtractive or prescriptive approaches (which focused on “correct” standard English) and from appropriateness-based approaches (which see academic language as categorically distinct from colloquial language and rigidly as the only appropriate language for academic contexts). Instead, taken a sociocultural and pragmatics-based theoretical lens, the goal in a CALS-informed pedagogical framework is to achieve *critical rhetorical flexibility*. As defined above, rhetorical flexibility refers to the ability to flexibly and effectively use an increasing repertoire of language forms and functions in an ever-expanding set of social contexts, orally and in writing (Ravid & Tolchinsky 2002). Developing *critical rhetorical flexibility* entails not only enlarging the set of language resources that students have at their disposal, but also fostering critical awareness to critically analyze language choices and to contest linguistic hierarchies. Far from replicating the hierarchical societal distinctions among ways of using language, the classroom can offer a safe space to reflect about language and context, to play, explore and expand resources, and to highlight flexible choices that respond to specific audiences and communicative purpose as key factors. Thus, the instructional goal is not to socialize students into homogeneous users of academic language, but instead to support their own voices and to help them sharpen their own meanings. This goal can be attained by equipping them with the language resources to access the knowledge encoded in text, and to use those resources reflectively and critically to communicate their own ideas precisely and understand and contest those of others.

From the beginning, our research enterprise was motivated by the ultimate goal of informing pedagogy. We listened to teachers who told us that even after they had taught their students all the relevant vocabulary in a text, their students struggled to comprehend the text. This echoed results from intervention studies, which find that research-based recommendations to expand academic vocabulary fail to satisfactorily expand students' reading comprehension (Proctor, Silverman, Harring, & Montecillo 2011; Silverman *et al.* 2014). By now, in our prior studies we have investigated CALS U.S. English-speaking students and in Spanish-speaking students from Chile, Peru, and Colombia in grades 4 to 8 (Uccelli & Meneses 2015; Uccelli, Barrera, Dryden Peterson, de Barros & Mulimbi, in preparation). In these prior and ongoing studies we so far have replicated two key findings: (a) we have found considerable within-grade and across-grade individual variability in CALS in the students tested either in English or Spanish; (b) in all three settings, we have found that CALS skills are predictive of reading comprehension even after controlling for grade, decoding skills and vocabulary knowledge. In the present paper, we are advancing our prior work by venturing into two new territories. First, for the first time we explore individual variability in both English and Spanish CALS in upper elementary dual language learners. Second, on the basis of our ongoing collaboration with this dual language school, we share the reflections from our collaborative effort—which involves both teachers and researchers—to start crafting a vision for a CALS-informed pedagogical approach. Whereas we closely aligned with Walqui's sociocultural conceptual framework of instruction (Walqui & van Lier 2010; Walqui 2006), in

this paper we focus exclusively on selected micro classroom interactions that seek to scaffold academic language in a 5<sup>th</sup> grade dual language class.

## Student's Bilingual Academic Language Profiles: Examining Assessment Data (Methods)

### *Participants*

A total of 107 Spanish/English dual language learners participated in this study. All participants attended the same Spanish-English dual language school in the northeastern US. This K-8 dual language public urban Title 1 school serves a population comprised mostly of Latino/Hispanic students, with 76% of students eligible for free or reduced price lunch. As displayed in Figures 4-6, participants in this sample were similarly distributed across 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> grade and included a slightly higher proportion of female students (65%). Aligned with the school population, most participants were Latino/Hispanic (97%) and for 79% of them Spanish was their first language; for the remaining 21% English was their first language. Sixteen percent of the participating students (n=17) were receiving special education services.

22

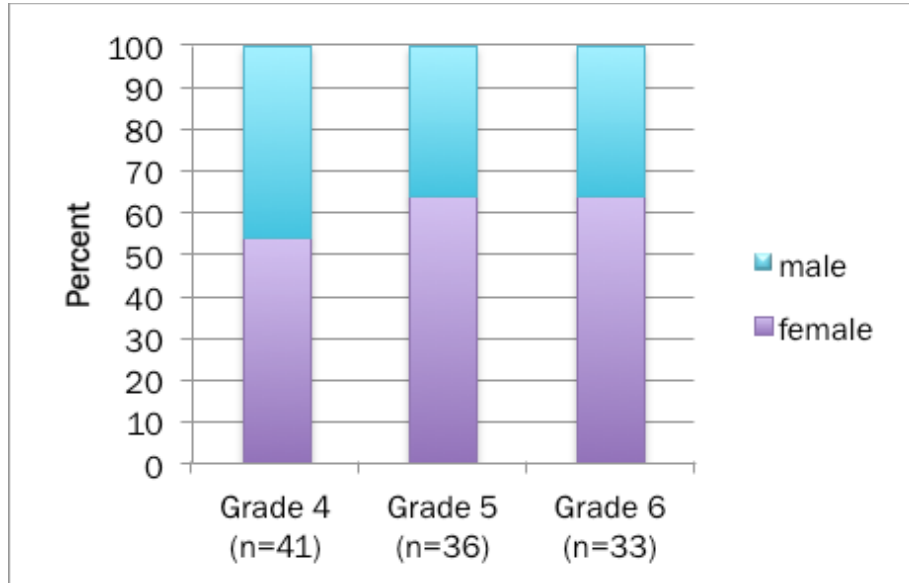


Figure 4: Gender Distribution Across Grade Levels

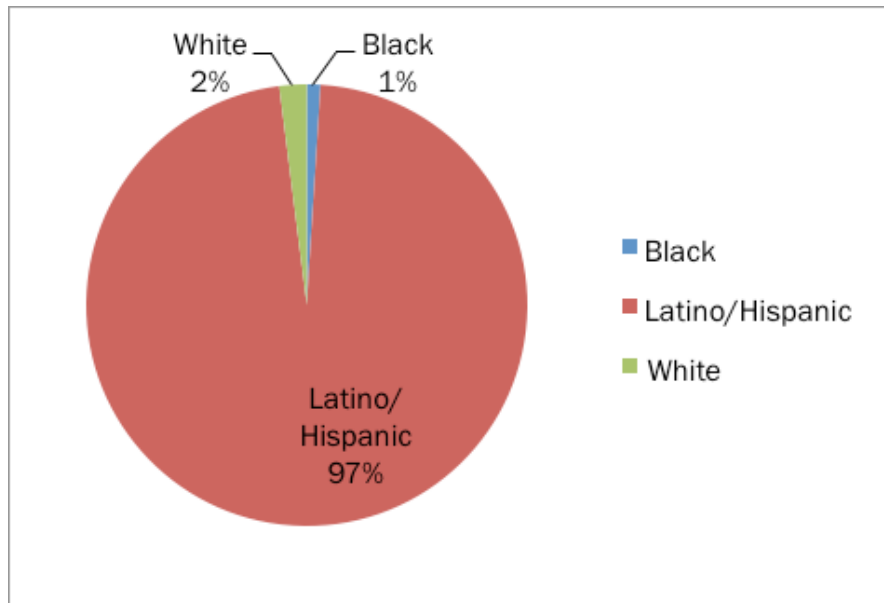
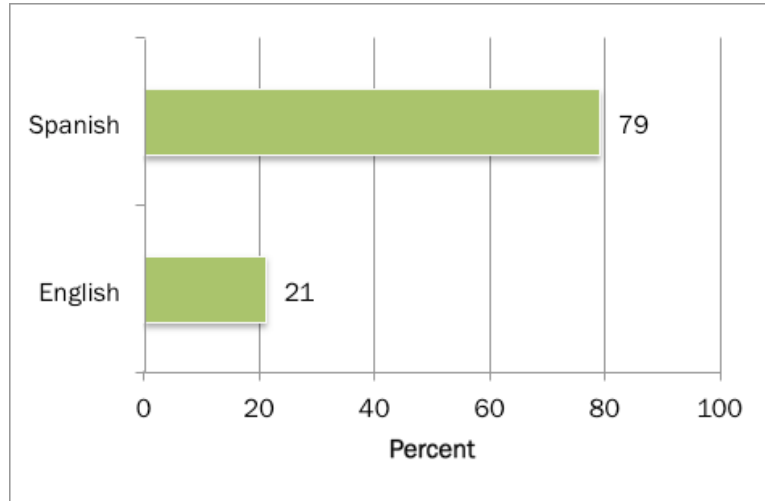


Figure 5: Student Racial/Ethnic Background



**Figure 6:** Student First Language

### *Instruments*

1. *Core Academic Language Skills Instrument (CALSI-I) - Form 1* ( $\alpha = .93$ ): paper and pencil group-administered test of high-utility academic language skills in English. A total of 49 multiple choice and short response items comprise this assessment. Percent correct scores were calculated for each participant.
2. *Evaluación de Lenguaje Académico (ELA)* ( $\alpha = .88$ ): group-administered test of high-utility academic language skills in Spanish. A total of 53 multiple choice and short response items –most of them modeled after the CALSI-I– comprise this assessment. Percent correct scores were calculated for each participant.

24



Descriptive statistics for CALS-I and ELA scores were calculated by grade. ANOVA were conducted to examine if these scores varied by grade. Subsequently, correlations between CALS-I and ELA scores were examined. Finally, CALS bilingual profiles were examined by generating graphs with individual scores for each language by grade.

## Results

Table 1 displays participants' CALS-I and ELA mean percentage correct scores (MPCS) and standard deviations (SD) by grade.

	CALS-1 (n=102)		ELA (n=104)	
	Mean	SD	Mean	SD
4 <sup>th</sup> Grade	.40	.17	.26	.11
5 <sup>th</sup> Grade	.51	.14	.33	.13
6 <sup>th</sup> Grade	.65	.13	.48	.13
TOTAL	.51	.18	.35	.15

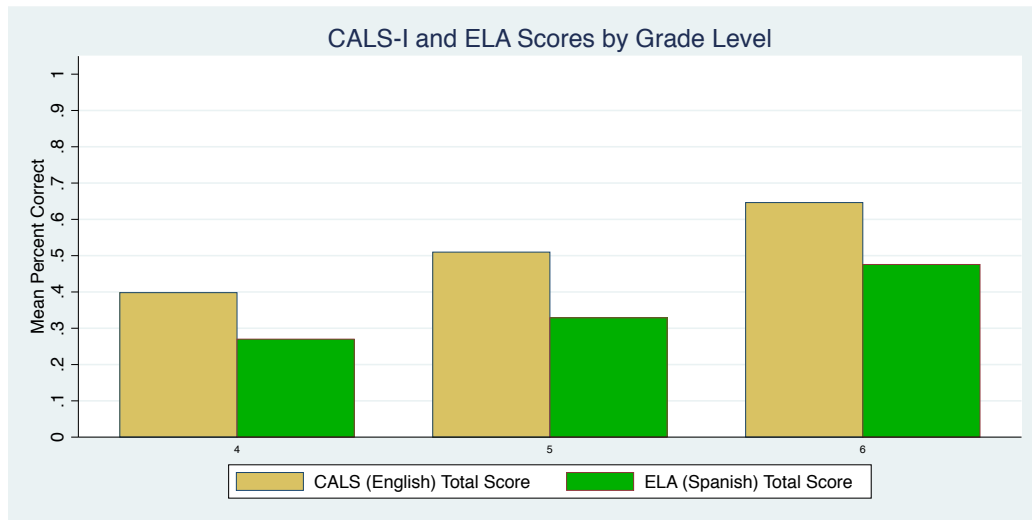
25

**Table 1:** CALS-I and ELA Percent Correct Scores by Grade

### *English academic language skills by grade*

As evidenced in Figure 7, performance in both languages improved incrementally across grade levels. Specifically, 4<sup>th</sup> graders, on average, answered 40% of the CALS-I items correctly (CALS-I MPCS= .40; SD = .17), 5<sup>th</sup> graders tended to answer close to half the items correctly (CALS-I MPCS= .51; SD = .14) and 6<sup>th</sup> graders answered, on average, 65% of the items in the CALS-I correctly (CALS-I

MPCS= .65; SD = .13). ANOVA results revealed that differences in CALS-I scores by grade level were statistically significant ( $F [2, 99] = 23.90, p < .001$ ). Furthermore, post hoc Scheffe tests revealed statistically significant differences in CALS scores between each of the grade levels.



**Figure 7:** CALS-I and ELA Mean Percent Correct Scores by Grade Level

### *Spanish academic language skills by grade*

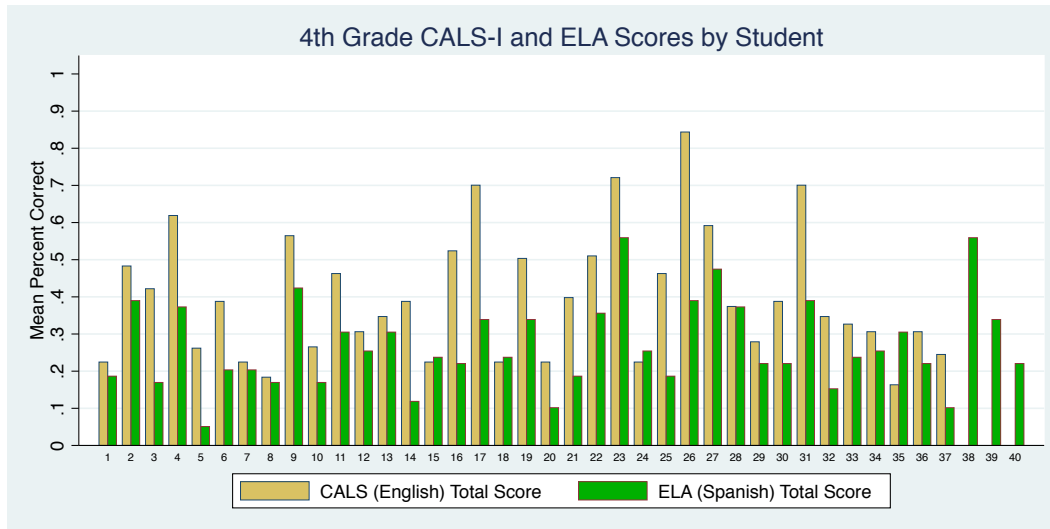
Also evidenced in Figure 7 above is a similar upward trend apparent in participants' ELA performance. Fourth graders answered, on average, close to a fourth of the ELA items correctly (ELA MPCS= .26; SD = .11), 5<sup>th</sup> graders answered about a third of the items correctly on average (ELA MPCS= .33; SD = .13) and 6<sup>th</sup> graders displayed the highest ELA mean, answering almost half of the items correctly (ELA MPCS= .48; SD = .13). ELA scores also differed significantly as a function of grade ( $F [2, 101] = 23.97, p < .001$ ). Post hoc Scheffe tests indicated that while the difference in ELA scores were not

statistically significant between 4<sup>th</sup> and 5<sup>th</sup> grade, they were statistically significant between 4<sup>th</sup> and 6<sup>th</sup> grades, as well as between 5<sup>th</sup> and 6<sup>th</sup> grades.

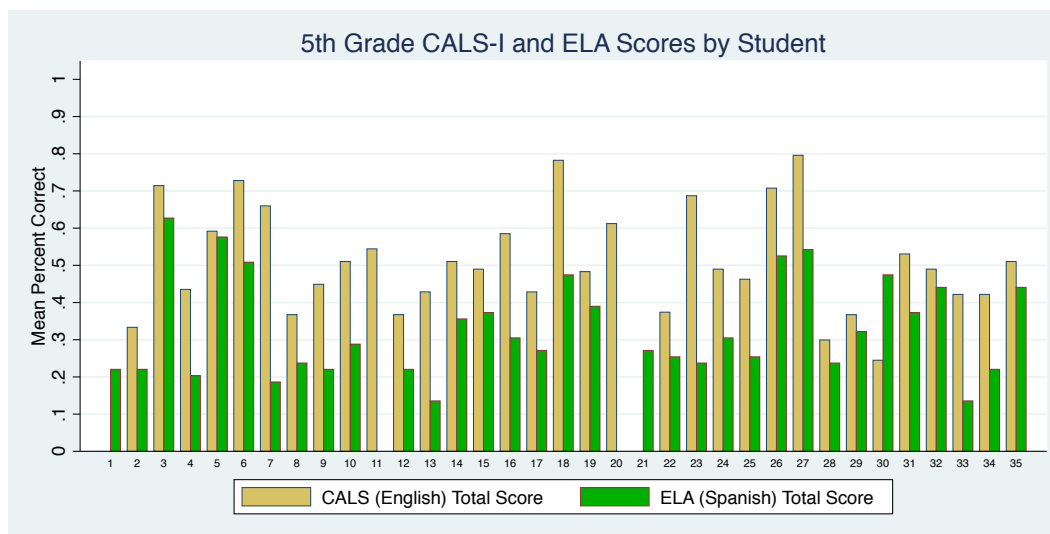
### *Dual language learners' CALS profiles*

In addition to across-grade variability, scores in both CALS-I and ELA revealed great within-grade variability (see Figures 8-10). In contrast to studies that investigate Latino students as a group, implicitly assuming that they constitute a relatively homogenous group, our findings reveal enormous individual variability even within a sample of Latino students that share demographic characteristics and educational history. A cautiously optimistic picture of these students' English academic language proficiency was also apparent. In 6<sup>th</sup> grade, two thirds of our participants displayed English CALS that were higher than those of 50% of the students in the CALS-I norming sample, which includes 7,000 monolingual and bilingual students attending English-only urban public schools in the U.S. It is interesting to observe that even though academic language skills in both languages improved across grades, participants tended to score higher on the English CALS than on the Spanish ELA. This indicates that, overall, the Spanish ELA was harder than the English CALS for these students. However, analysis to calibrate these two assessments with larger samples needs to be conducted in order to interpret these trends. Most relevant for pedagogy, though, was that participants demonstrated considerable room to grow in their core academic language skills in both languages.

27



**Figure 8:** 4th Grade CALS-I and ELA Mean Percent Correct Scores by Student



**Figure 9:** 5th Grade CALS-I and ELA Mean Percent Correct Scores by Student

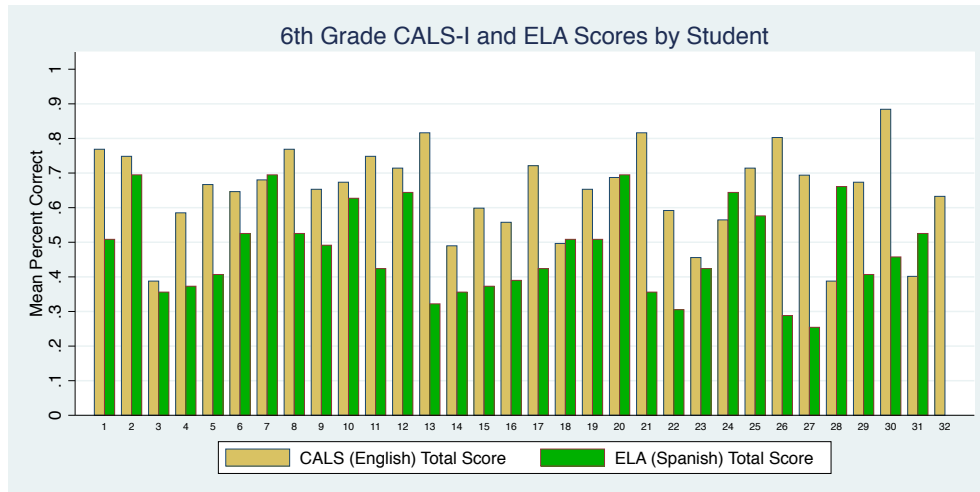


Figure 10: 6<sup>th</sup> Grade CALS-I and ELA Mean Percent Correct Scores by Student

## Towards a CALS-Informed Pedagogical Approach: Reflections from Practice

29

### *Classroom Data Collection and Analysis*

This project occurred over the course of one academic year, with the majority of the classroom data collected from December to March, when the CALS-informed lessons were designed and implemented. To design the lessons, a series of meetings involving the research team and the teacher-researcher were held and informed by student assessment results. We took notes on these sessions and kept a record of the curricular tools produced. Video recording of lessons by the teacher-researcher were supplemented by researchers' observational notes for a total of 480 minutes (four sessions). Instructional artifacts (lesson plans, student work) were also collected.

All data were collected by three researchers and the teacher-researcher. Three members of our team are current or former classroom educators working with students in grades K-8 in bilingual and English instructional settings. All have experience designing and implementing curriculum, providing professional development, and conducting literacy research. We also represent a range of ethnic and language backgrounds: two are of European descent and acquired Spanish as a second language, while two identify as Latina and acquired English as a second language; three are fluent speakers of Spanish, one having acquired the language in California as the child of Mexican parents, one in Peru, and one in Spain.

We engaged with the data collected in the teacher-researcher's classroom —the video record of instruction, the reflections generated by the teacher-researcher and the research team, and selected transcripts of classroom events— to identify key lessons relevant to guide future academic language instructional efforts.

30

## Reflections Towards a CALS-Informed Pedagogical Approach

The partnership between the School A teachers and the Language for Learning research team was established on the basis of mutual learning and mutual respect for the practice and research in which we were all engaged. The School A leadership saw the CALS framework and this partnership as one entry point to

reflect on how to improve their upper elementary students' reading comprehension, one of their pressing current concerns. For the research team, this school offered an optimal context to begin to examine how the CALS framework might inform pedagogy. In fact, we strongly believe that a CALS-informed pedagogy needs to take place, at the macro school level, in a context in which students' languages and cultures are appreciated and raciolinguistic ideologies are contested (Flores & Rosa 2014; Valdés 2001). At the more micro level, CALS lessons need to be embedded in curricular units in which students are engaged with the content through multiple means of expression, representation and engagement that lever their out-of-school resources and background knowledge.

31

#### *Implementational context*

- School context. School A has historically contested the state's devaluing of Spanish and of bilingual education. On a day-to-day basis Spanish and English are welcome by teachers and administrators orally and displayed in writing in classroom walls and school hallways, and systematically used as languages of instruction.
- Lesson context. The 5<sup>th</sup> grade curricular unit in which the CALS-informed lessons were implemented was an interdisciplinary English Language Arts and Social Studies unit focused on the American Revolution. It incorporated by design multiple ways of representation, expression, and

engagement (verbal, artistic, theatrical) and invited students to reflect on the American Revolution by making direct connections with their own lives, attending to students' funds of knowledge and taking advantage of visits to the city's historical sites. Table 2 offers the overview of the unit.

### 5<sup>TH</sup> GRADE UNIT -- THE ROAD TO THE REVOLUTION

The teacher-researcher teaches a 5<sup>th</sup> grade interdisciplinary course combining English Language Arts and Social Studies.

#### *Unit Objectives:*

Students will be able to...

- Understand a challenging text, using purposeful annotation to unlock meaning.
- Analyze a text to interpret why *this* author may have written *this* text in *this* way.
- Use the Internet to find additional information written at a level they can comprehend.
- Write and perform a persuasive argument from the perspective of a historical figure who was present at the Tea Tax Debates.

#### *Essential Questions:*

- What happens when leaders ignore the needs of the people?
- How do people fight for what they believe?
- How do people choose sides in an argument? How do they persuade others?

#### *Texts:*

- Informative texts (articles and textbook) about events leading to the American Revolution.
- Poetry from 18<sup>th</sup> century slave, poet Phillis Wheatley about events leading to the American Revolution.
- One-page biographies of Patriot and Loyalist historical figures.
- Primary source documents (journal entries, newspaper articles, letters) written by colonists in the 1770's.

#### *Student Activities:*

- Multiple readings (independent, choral, and oral) of selected poems.
- Annotation of poetry observations and analysis ("Why did this author most likely write this poem?").
- Research and writing of a one-page biography of an assigned Loyalist or Patriot who was present at the Tea Tax Debates preceding the Boston Tea Party.
- Two or three-minute persuasive speech for the Tea Tax Debates written as their assigned Loyalist or Patriot and performed as part of a reenactment of the Tea Tax Debates at Boston's Old South Meeting House (actual site of the Tea Tax Debates).
- Sketch and oil-pastel portrait of their Loyalist or Patriot (collaboration with Massachusetts Institute of Art).

\*\*All work will be displayed along with video of their reenactment at the school's annual "Young Authors Night" for parents and families in June.

**Table 2:** Unit Overview



*Key Lesson 1: Academic language learning as best supported  
by a sociocultural pragmatic approach*

Within a pragmatic approach, teachers place an emphasis on the usefulness of language for a particular communicative task, not on the appropriateness of language. Theoretically, we would anticipate that in classrooms that embrace a pragmatic approach to language learning, multiple registers, language varieties and languages might be in use to meet the diverse demands students and teachers face as communicators in the classroom. These educators acknowledge that academic language resources support precise, reflective communication and understanding of curricular contents. However, these practitioners are also aware that more-conversational resources, which allow for the expression of students' and also teachers' emotions, thoughts, and observations, might be well suited for many learning purposes. For instance, translanguaging in which English texts are discussed in emerging bilingual students' common first language supports text comprehension (García 2009; García, Kleifgen & Falchi 2008). In contrast to instruction that regards mainstream-American English and the academic register as the primary languages of teaching and learning, a pragmatic approach acknowledges that speaker/writers must learn to adjust their language flexibly in relation to the task demands and the audience.

33

To examine how a sociocultural and pragmatic approach to academic language teaching would be visible in micro classroom interactions, we examined the data for evidence of multiple language varieties, languages and registers. Our notes on

classroom interactions made clear that while the predominant language of instruction was English, both Spanish and English were occasionally used by the teacher and students to support learning. In addition, a tendency to model how language resources might be leveraged was evident across lessons. In Excerpt 1, the language objectives read by Student 1 are crafted as if students were telling a family member (*Tío=uncle*) what they learned; subsequently the teacher uses colloquial language as she explains these objectives to students:

Excerpt 1

T: *What's the focus for today?*

S1: [reading the lesson objectives from board] *Tío, I can recognize parenthetical phrases as I read to help me understand a text.*

T: *Great, the word is 'parenthetical,' actually, it's just the way it's written, we're gonna learn what the heck that means and where that word came from. It's gonna makes us better readers by the end of today.*

34

A tendency towards co-construction of understanding by drawing across a range of language resources was also apparent in lessons, where the teacher-researcher frequently demonstrated how students' various resources in Spanish were relevant to the academic language learning happening in the classroom. For instance, in one example, the teacher engaged students in brainstorming Spanish words that would be unfamiliar to others (i.e., to non Spanish speakers or to Spanish speakers of a different variety) as a way to demonstrate the utility of parentheses as a target academic language feature:

## Excerpt 2

T: Yesterday, we say that the book did not do a great job about explaining the main ideas, so we made our own text features. Today, we'll be looking at parenthetical information

...

T: ... What's interesting ...is that anytime I put information in the side, that is a kind of parenthesis, that's why our objectives said parenthetical phrases not parenthesis, because I didn't want you to think that it always uses those punctuation marks...yes?

S2: If you have a word in a sentence that you don't know that everyone will know what it means, maybe you could put the definition inside the parentheses?

T: Ok, do you have an example for me, maybe a Spanish word? Like, what's a Spanish food that you know, but that someone else might not know?

S3: bife?

T: What is that?

S3: It's like steak and we cover it in breadcrumbs.

[Using her document camera to project her writing, the teacher-researcher writes the following short sentence using a comma: 'We ate bife, steak that we cover with bread'].

T: So, here I didn't use parentheses, I just used a comma. It's like whispering [the teacher-researcher forms a cone around her mouth with her hands], like saying in case you didn't know bife is beef with bread...You could use a comma, a parenthesis or parentheses. A parentheses is more quiet, it's helpful when I don't want to interrupt my sentence. I could say, 'School A (a bilingual school founded in the 1970s) is one of the best schools in our city' [the teacher-researcher whispers the information in parenthesis while making a cone with her hands again]. You can also use a dash, I use them in my writing a lot, they are more punchy. I could say, 'Tom—my favorite colleague—asked for my help' [she writes while reading in a louder voice than before].

The curriculum as designed by the teacher researcher also embraced a range of 'sanctioned' language in the form of Phillis Wheatley's Poems, social studies texts

and textbooks as well as language which might typically be considered unsanctioned in the classroom context, such as excerpts from Lin-Manuel Miranda's hip hop ballad to Alexander Hamilton. This classroom could be characterized as filled with language. In reflecting on the collaboration, our teacher-researcher partner, noted that this movement across and between languages was something that she had always considered as valuable as a teacher in a dual language school, but that "thinking more explicitly about academic language teaching as intentional" had the effect of refocusing her on the role that oral language (whether Spanish, English, non-standard, standard, or academic) played in aiding comprehension of text. As a complement to these variety of language uses, the teacher-researcher would also engage in explicit conversations about why certain language resources would be more effective in one or another context.

36

### *Key Lesson 2: Teachers as master bridge builders*

In our prior work and aligned with other researchers' recommendations (Uccelli & Phillips Galloway 2016; van Lier & Walqui 2012; Walqui 2006), we have suggested that teachers serve as bridges between the language of texts and the language of students. In implementing this idea in practice, however, we realized the complexity of this endeavor and we learned from the teacher-researcher's implementation some insights that have clarified our vision of teachers as "bridge builders".

The recommendation ‘teachers as bridges’ is vague enough to be misinterpreted. Educators might interpret their bridge role as paraphrasing academic texts or telling students the text content, while circumventing students' struggle with complex academic language. These practices would resemble what O'Brien & Moje (1995) have called the "pedagogy of telling." The role of a bridge could also be misunderstood as teachers doing all the work. Instead, the teacher-researcher's practice illustrated a pedagogy of joint co-construction, where she explicitly supported students to consider and "walk with her" along language.

#### *Supporting text understanding and content learning*

Our teacher-researcher collaborator guided comprehension by helping students to tune in to language as a way to understand an important concept in the text. For example, she used the CALS routine Tracking participants to support students' understanding of Phillis Wheatley's poem "To the King's Most Excellent Majesty 1768," as well as to teach a key concept in this unit: "ruling by divine right." To do this, the teacher-researcher had the students use a red and green marker to track participants in Wheatley's poem in order to support their understanding of reference chains. All references to the King were underlined in red and all references to God were underlined in green. Using a document camera for the entire class activity to make the process visible to all, the teacher guided students as they engaged together in tracking the different participants with different colors. Students expressed some confusion about whether it was the king or God in an instance. The teacher-researcher skillfully used both colors

37

to underline that fragment and used it to explain the concept of "ruling by divine right". Later in the lesson, the teacher reminds students of why they are engaged in this activity and connects this learning to the final unit's product: students' speech from the perspective of one historical figure.

### *Supporting students' communicative precision*

Conversely, as students participated in discussing the how and why of events in the timeline of the American Revolution, the teacher-researcher pushed her students to express themselves with increasing precision. In the following excerpt, a student overused the pronoun *they* in her comment and the teacher-researcher kindly interrupted her and supported this student to attend to precision by showing that "they, they" leads to some confusion and by requesting a clarification.

38

#### Excerpt 3

T: *So, after the Boston massacre, they repealed, remember repeal is like cancelling, all taxes except tea, which according to our reading yesterday is the one thing that was so important to the society. "You don't have to pay taxes except the one thing you really care about," right? [Teacher's voice changes pretending she is a historical figure saying this]. ...*

[Different students provide events to complete the timeline; the teacher writes the events in a timeline projected to the class through her document camera]

T: *And then after they repealed all the taxes except for tea, we are still angry. Nobody is feeling good because they still have the tea. Now S1 you've been waiting for 1773, go ahead.*

S6: *ehm..., so what happened was that **they** went, since **they** didn't want to take the tax off tea, which **they** knew was the most important, **they***

went up to the ship where **they** were loading more ehm... fresh tea xxx that night...

T: I am sorry S6. You are saying "they they". They the British? The loyalists?

S [many students]: The colonists!

S [many students]: The British!

S6: The colonists. The colonists, they started to come and think about dumping, and dumping it into the sea

On the basis of the shared content, the teacher-researcher could have just interpreted the student's comment without pushing her further. Yet, the teacher-researcher's choose instead not to be satisfied with the student's imprecise answer and demands in a supportive way that the student be more precise in this particular area of participant tracking. Later in this session, S1 offered a more precise answer as she contested a description of the seven sellers as happy, which had been previously provided by the teacher:

39

#### Excerpt 4

S6 [talking directly to the teacher]: so how you said that, before that, they would get mad like about something. Well, actually before ehm the Tea Act, most set/set/sell/settlers, well, most of them, I heard in a little ehm in a, in a book, that most of the seven sellers were not being happy about the tea selling thingy. Because because of their money those people, the colonists, would attack them.

In Excerpt 4, the same student from Excerpt 3—a few minutes later in the same lesson—seemed to make an effort to be more precise. First, she precisely used the expression "the seven sellers" (instead of the imprecise pronoun they, that she had used before). When she said "those people," she self-corrected and added "the colonists". It is also worth noticing how comfortable this student feels

in this classroom that she can contest a prior teacher's statement seemingly knowing that her response will be respected, welcome, and incorporated into the conversation.

Through regular teacher's moves like the one in Excerpt 3, students are not only understanding the content, but they are also expanding their rhetorical flexibility and are being socialized to develop the habit of precise communication. The teacher in the above excerpts is building bridges from the complex language of text to more accessible paraphrases and back, and is regularly scaffolding students to be more precise and reflective, while showing them explicitly the positive effect of more precise understanding and communication. The goal is not to convince students that they must use precise language because it is formal or academic or misled them into thinking it is better for all situations. The goal needs to be for students to understand how being more precise often will facilitate the communication of ideas to their audience. The teacher's demands for higher precision and her guidance in fact communicate that the student's ideas are inherently worthwhile and thus worth saying in a way that someone else can clearly understand them. This focus on language as a means of self-expression to a desired audience is particularly useful in the upper elementary classroom, when students approaching adolescence increasingly desire autonomy and benefit from a supporting teacher during a phase known for substantial potential growth in language development and social perspective taking (Berman 2004). In demonstrating the benefits of precise understanding

40



and communication, the teacher is not only expanding language in the service of content learning, but she is also socializing students into long-term comprehension and expression habits. Indeed, scaffolding academic language does not only entail expanding language resources, but also socializing students into the dispositions of precise, concise and reflective expression and comprehension. And in the role of a bridge builder, the teacher is not doing all the work for the students but supporting them explicitly in constructing those bridges and understanding why more precise language choices would be more effective in certain contexts.

*Key Lesson 3: Academic language scaffolding as supporting deep understanding and critical rhetorical flexibility*

41

In our teacher-researcher partner, we found a colleague who shared the research team's view that language is fundamental to learning. The task of translating the CALS construct into practice and embedding it into an interdisciplinary English language arts and social studies curriculum required a high-level of educator engagement. While our collaboratively designed lessons initially positioned academic language activities as add-ons, later instruction gradually revealed a more skillful integration of content and language teaching. In examining the transcripts, we hoped to find instances where the CALS instruction was vital to supporting students' access content. In addition, we hoped that over time the precipitate of these activities would be students' awareness of how language is

used to contain meaning in text and the disposition to engage in precise and reflective meaning-making when reading independently.

This collaboration brought two light two distinct goals for academic language teaching and learning:

- 1) Immediate goal: supporting students' deep understanding of text and content.
- 2) Long-term goal: expanding students' critical rhetorical flexibility.

The integration of an academic language activity (e.g., tracking participants through text) with the goal of introducing students to a key concept within the unit ('ruling by divine right') occurred at the end of the collaboration (immediate goal of supporting deep understanding of text and content). Moreover, the teacher-researcher also explicitly highlighted the big idea of examining the text in detail to support not only the immediate content understanding, but also the need for linguistic precision in the service of more successful communication, as well as the larger goal of how persuasive arguments are constructed through strategic language choices (long-term goal towards students' critical rhetorical flexibility). Throughout the entire unit, the class worked on this longer-term goal explicitly.

In reflecting on her learning in the course of the partnership, our collaborating teacher noted: "I feared that focusing on language would leave something I wanted to focus on short-shrived... but, it worked and I was glad to see that..."

42

With the *Common Core*, you've got your language and reading standards, but they're not so separate as we are lead to believe, so I liked that they informed each other.”

## Conclusions

In this paper, we undertook two related goals: (1) to investigate the sensitivity of our CALS instruments to capture dual language learners' CALS in both Spanish and English; and, (2) to generate lessons to delineate a CALS-informed pedagogical vision. While our results are tentative —as more psychometric analyses for the ELA and CALS-I assessments have to be conducted for the population of Spanish/English dual language learners— this initial examination of students' academic language skills in Spanish and English offer some insights. Preliminary results revealed an upward trend from 4<sup>th</sup> to 6<sup>th</sup> grade in both ELA and CALS-I scores. Prior research has repeatedly reported Latino students' academic language underperformance, often associated with lower socio-economic status and a home language other than English. Yet, our findings reveal considerable within-grade individual variability in both English and Spanish CALS, even within a sample of Latino students fairly homogeneous in their demographic characteristics and educational histories. Our initial findings also offer a cautiously optimistic picture of these students' English academic language proficiency. Despite —and perhaps because of— a school in which half the time students are immersed in a non-English language, two thirds of the 6<sup>th</sup> grade

43

participants displayed English CALS-I scores that were higher than those of 50% of the students in the CALS-I norming sample of approximately 7,000 monolingual and bilingual students attending English-only urban public schools in the U.S. Participants performed, on average, higher in English than in Spanish CALS, yet results are still provisional as these two assessments still need to be calibrated.

Our analysis of academic language teaching practices revealed three key lessons:

- The teacher's scaffolding of students' academic language resources was best supported by a sociocultural pragmatic approach that created a welcoming and safe space for students and teachers to flexibly employ a range of languages (both English and Spanish), language varieties (standard and non-standard varieties) and ways of using language (from academic to colloquial) while explicitly discussing the affordances of these uses across different communicative situations and purposes.
- The teacher was able to serve as master bridge builder, inviting students to walk with her from the language of text to more conversational language and scaffolding them to build their own language bridges.
- Our team's understanding of how to embed academic language teaching in the service both (a) advancing deep understanding of text and content and (b) expanding students' critical rhetorical flexibility developed over time.

44

The CALS framework seems helpful to make students' language visible. More specifically, students' scores in the CALS instruments can be helpful to teachers because they concretely illustrate the vast individual variability within a single classroom. Complementarily, the CALS construct has the potential of offering a common school-wide language to talk about language and to support the strategic scaffolding of a commonly understood set of high-utility academic language skills that depart from prescriptive or appropriateness-based conceptualizations. Yet, too much reliance on the CALS instruments could also lead to unintended pitfalls. The CALS instruments need to be taken just for what they are, simple and limited assessments that sample a few selected skills from the much wider universe of the CALS construct. This instrument can only illustrate key language resources that need to be taught and regularly scaffolded, not as decontextualized skills, but as part of authentic academic practices. Whereas we have focused on the teacher's scaffolding of CALS during micro classroom interactions, we do believe that explicit, contextualized and recurrent instruction of language resources would need to complement these interactions.

45

The ultimate pedagogical goal of a CALS-informed approach is not to produce obedient users of formulaic and rigid academic language forms. On the contrary, a CALS-informed approach is guided a sociocultural pragmatic conceptual framework. It seeks to foster students' critical rhetorical flexibility, which entails having the language resources and awareness to use language effectively with various interlocutors and in a variety of contexts. However, it also entails critically

evaluating whether to conventionally follow the traditions of discourse prevalent of certain contexts or, instead, to contest those with alternative language moves. Thus, if students decide to achieve more effective, more poetic, more profound communication by breaking boundaries, code-switching, or producing different types of hybrid, innovative communicative patterns, students will do so on the basis of knowledge and awareness of ways of using language across contexts, not as the result of lack of language resources. Language is dynamic, flexible, and always evolving. Language will continue to evolve, influenced by users' creativity, by the contact between different languages and language varieties, and by the new communicative needs and purposes that language users encounter. Just as we need to prepare students to be independent learners of new knowledge, we need to prepare them to be reflective observers and flexible participants in the different evolving ways of using language, with academic ways of using language certainly being the most important in school, but only one way of using language among many others which are also relevant to navigate a wide and diverse world. We close this discussion with one of the teacher-researcher's oral reflections about the task of learning to fit CALS into her existing instruction:

*"The breakdown of the CALS into all the discrete parts. I think I thought about most of them on my own already, but maybe not all of them, and certainly not with names. I'd thought about the use of antecedents, but hadn't thought about participant tracking as a larger lens for looking at antecedents through a text... it sort of just gave me the language for concepts I'm teaching, and helped me fit it into my schema, helping me to scaffold the kids' schema, so they have a framework for thinking about this in the future."*

## References

- Berman, R. A. (Ed.). (2004). *Language development across childhood and adolescence*. Philadelphia, PA: John Benjamins. <http://bit.ly/28Jwvhw>
- Biancarosa, G., & Snow, C. E. (2004). *Reading next: A vision for action and research in middle and high school literacy*. Carnegie Corporation of New York.
- Carter, P. L. (2006). "Straddling boundaries: identity, culture, and school." *Sociology of Education*, 79(4), 304–328. <http://bit.ly/28JidQY>
- Clark, J. V. (2014). *Closing the achievement gap from an international perspective: transforming stem for effective education*. Springer Netherlands: Dordrecht.
- Compton, D. L., & Pearson, P. D. (2016). "Identifying Robust Variations Associated With Reading Comprehension Skill: The Search for Pressure Points." *Journal of Research on Educational Effectiveness*, 9(2), 223-231.
- Cummins, J. (1980). "The cross-lingual dimensions of language proficiency: Implications for bilingual education and the optimal age issue." *TESOL Quarterly*, 14(2), 175–187. <http://bit.ly/28JIA7i>
- Cummins, J. (1982). "Tests, achievement, and bilingual students." *FOCUS*. Retrieved from <http://1.usa.gov/28lzo00>
- Ferguson, K. E. (1994). "On bringing more theory, more voices and more politics to the study of organization." *Organization*, 1(1), 81–99. <http://bit.ly/28IPgE2>
- Flores, N., & Rosa, J. (2015). "Undoing appropriateness: Raciolinguistic ideologies and language diversity in education." *Harvard Educational Review*, 85(2), 149–171. <http://bit.ly/28JjirF>
- García, O., Kleifgen, J. A. & Falchi, L. (2008). *From English Language Learners to Emergent Bilinguals. Equity Matters: Research Review No. 1* (pp. 18-25). NY, NY: Teachers College, Columbia University.
- García, O. (2009). *Bilingual education in the 21<sup>st</sup> century: A global perspective*. Wiley-Blackwell: Malden, MA.
- Halliday, M. A. K. (2004). *Collected works of M.A.K. Halliday. Vol. 5: The language of science*. (J. J. Webster, Ed.). New York, NY: Continuum.

47

Heath, S. B. (2012). *Words at work and play: Three decades in family and community life*. Cambridge, UK: Cambridge University Press.

Heath, S. B. (1983). *Ways with words: language, life, and work in communities and classrooms*. Cambridge England; New York: Cambridge University Press.

Hemphill, F. C., & Vanneman, A. (2011). *Achievement gaps: How Hispanic and white students in public schools perform in mathematics and reading on the National Assessment of Educational Progress. Statistical analysis report. NCES 2011-459*. National Center for Education Statistics. Retrieved from <http://1.usa.gov/28J7EqX>

Hvistendahl, R., & Roe, A. (2004). The literacy achievement of Norwegian minority students. *Scandinavian Journal of Educational Research*, 48(3), 307–324. <http://bit.ly/28IPt9W>

Kena, G., Aud, S., Johnson, F., Wang, X., Zhang, J., Rathbun, A., Kristapovich, P. (2014). *The condition of education 2014. nces 2014-083*. National Center for Education Statistics. Retrieved from <http://1.usa.gov/28JJ8du>

Krashen, S. (2012). “Academic Jibberish.” *RELC Journal*, 43(2), 283–285. <http://bit.ly/28Jp08f>

Ladson-Billings, G. (2014). “Culturally relevant pedagogy 2.0: a.k.a. the remix.” *Harvard Educational Review*, 84(1), 74–84. <http://bit.ly/28JJksV>

Leeman, J. (2005). “Engaging critical pedagogy: Spanish for native speakers.” *Foreign Language Annals*, 38, 35–45.

NAEP. (2015). NAEP - 2015 Mathematics & Reading - Home. Retrieved March 20, 2016, from <http://1.usa.gov/10XyzlO>

Ninio, A., & Snow, C. E. (1996). *Pragmatic development* (Vol. xii). Boulder, CO, US: Westview Press.

O’Brien, D. G., Stewart, R. A., & Moje, E. B. (1995). “Why content literacy is difficult to infuse into the secondary school: complexities of curriculum, pedagogy, and school culture.” *Reading Research Quarterly*, 30(3), 442–463. <http://bit.ly/28JJksV>

Ochs, E. (2002). “Becoming a speaker of culture.” In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 99–120). New York, NY: Continuum. Retrieved from <http://bit.ly/28JBBwG>



- Paris, D., & Alim, H. S. (2014). "What are we seeking to sustain through culturally sustaining pedagogy? A loving critique forward." *Harvard Educational Review*, 84(1), 85–100. <http://bit.ly/28JbXYb>
- Parra, M. L. (2013). "Expanding language and cultural competence in advanced Heritage- and Foreign-Language Learners through community engagement and work with the arts." *Heritage Language Journal*, 10(2), 115-142.
- Proctor, C. P., Silverman, R. D., Haring, J. R., & Montecillo, C. (2011). "The role of vocabulary depth in predicting reading comprehension among English monolingual and Spanish–English bilingual children in elementary school." *Reading and Writing*, 25(7), 1635–1664. <http://bit.ly/28JbXYb>
- Ravid, D., & Tolchinsky, L. (2002). "Developing linguistic literacy: a comprehensive model." *Journal of Child Language*, 29(02), 417–447. <http://bit.ly/28JrTbB>
- Reardon, S.F. (2011). "The widening academic achievement gap between the rich and the poor: new evidence and possible explanations." In Richard Murnane & Greg Duncan (Eds.), *Whither Opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children*. New York: Russell Sage Foundation.
- Silverman, R. D., Proctor, C. P., Haring, J. R., Doyle, B., Mitchell, M. A., & Meyer, A. G. (2014). "Teachers' Instruction and Students' Vocabulary and Comprehension: An Exploratory Study With English Monolingual and Spanish–English Bilingual Students in Grades 3–5." *Reading Research Quarterly*, 49(1), 31–60. <http://bit.ly/28JKpRK>
- Stanford CEPA. (n.d.). *The Educational Opportunity Monitoring Project: Racial and Ethnic Achievement Gaps*. Stanford University, Center for Education Policy Analysis. Retrieved from <http://bit.ly/28JKpRK>
- Uccelli, P., Barr, C. D., Dobbs, C. L., Galloway, E. P., Meneses, A., & Sánchez, E. (2015a). "Core academic language skills: An expanded operational construct and a novel instrument to chart school-relevant language proficiency in preadolescent and adolescent learners." *Applied Psycholinguistics*, 36(05), 1077–1109. <http://bit.ly/28JBTUq>
- Uccelli, P., Galloway, E. P., Barr, C. D., Meneses, A., & Dobbs, C. L. (2015b). "Beyond vocabulary: Exploring cross-disciplinary academic-language proficiency and its association with reading comprehension." *Reading Research Quarterly*, 50(3), 337–356. <http://bit.ly/28IEkBE>

- Uccelli, P., & Galloway, E. P., (in press). "Academic language across content areas: Lessons from an innovative assessment and from students' reflections about language." *Journal of Adolescent & Adult Literacy*
- Valdés, G. (2001). "Heritage language students: Profiles and possibilities." In J. Kreeft Peyton, D. A. Ranard, & S. McGinnis (Eds.), *Heritage languages in America. Preserving a national resource* (pp. 37–77). Washington, DC: CAL, ERIC; [McHenry, IL]: Delta Systems Co., Inc.
- Valdés, G. (2005). "Bilingualism, heritage language learners, and SLA research: Opportunities lost or seized?" *The Modern Language Journal*, 89, 410-426.
- Valdés, G. (2004). "Between support and marginalization: The development of academic language in linguistic minority children." *International Journal of Bilingual Education and Bilingualism*, 7, 102-132.
- van Lier, L., & Walqui, A. (2012). "Language and the Common Core State Standards." Paper presented at the Understanding Language Conference, Stanford, CA.
- Walqui, A. (2006). "Scaffolding instruction for English language learners: a conceptual framework." *International Journal of Bilingual Education and Bilingualism*, 9(2), 159–180. <http://bit.ly/28JC8yF>
- Walqui, A. & van Lier, L. (2010). *Scaffolding the Academic Success of Adolescent English Language Learners: A Pedagogy of Promise*. San Francisco, CA: WestEd.

50

Paola Uccelli

Harvard Graduate School of Education

Emily Phillips Galloway

Harvard Graduate School of Education

Gladys Aguilar

Harvard Graduate School of Education

Melanie Allen

Dual Language School