

## Teacher practices and perspectives for developing academic language

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This study investigates the ways in which middle school teachers in the USA develop academic language in intermediate-level English learners who attend mainstream content classes. Analysis of field notes, transcripts, and student work show that (a) academic language and higher-order thinking skills are closely linked, and (b) classroom discourse patterns and activities both develop and impede language growth. The teachers used four principle communication strategies: questioning, gestures, connecting to background knowledge with examples and analogies, and personifying. The results suggest that students, despite growth in certain dimensions of cognition and language, also learn counter-productive “rules of school”. This research is intended to benefit the millions of ‘non-mainstream’ students worldwide who struggle in schools that have been created and shaped to serve mainstream purposes.

*Keywords:* academic language, cognition, scaffolding, classroom discourse, English learners

Esta investigación analiza cómo los maestros de la escuela secundaria in los Estados Unidos desarrollan el lenguaje académico de los estudiantes con niveles intermedios de inglés. El análisis rindió los temas siguientes: (a) el lenguaje académico y las destrezas cognitivas y están vinculados; (b) los patrones discursivos y las actividades desarrollan e impiden el crecimiento del lenguaje académico. Las maestras usaron varias estrategias comunicativas: preguntas, gestos, ejemplos, analogías, y la personificación. Los alumnos, a pesar de del crecimiento del lenguaje académico, aprenden unas “reglas escolásticas” contraproducentes. Esta investigación tiene la intención de beneficiar a los millones de estudiantes minoritarios que tienen dificultades en las escuelas que se formaron para servir a los propósitos de los grupos lingüísticos y socioeconómicos dominantes.

*Palabras clave:* lenguaje académico, cognición, apoyo pedagógico, discurso escolar, aprendices de inglés

### Purpose of the study

Many nations around the world use multiple languages (local languages, “official” national languages, and international languages) to conduct daily affairs. National and international languages then branch off into a variety of

specialized registers that serve the participants in business, scientific, political, and research fields. Academic language, whether it is academic Spanish, Arabic, or English, forms a vital foundation for this eventual branching of language into workplace registers. Academic language is shaped by both home and school factors, and the processes by which it develops are complex, particularly in classroom settings with students of diverse backgrounds. This study attempts to shed some light on these complex processes and, although it investigates academic English in the United States (referred to simply as 'English' here), similar research could be carried out in any country where (linguistically) non-mainstream students struggle to succeed academically using the mainstream language of schooling. Given the wide variety of language groups in many nations around the world, it is my hope that the findings will inspire further research and discussion on the most effective ways to educate all students in diverse settings.

The language of schooling is loosely referred to as academic language, the lack of which is cited as a significant cause of low achievement for diverse learners (Collier 1995). Despite its importance, the development of academic language in mainstream content area classrooms is not well understood. Several factors contribute to this problem. First, research has focused too little attention on the interplay between subject matter learning and language development in English learners (August and Hakuta 1997). The second factor is a limited conceptualization of academic language by teachers and researchers. For example, a commonly held view is that academic language consists mainly of content vocabulary, such as *photosynthesis*, *democracy*, *irony*. Vocabulary is one dimension of academic language, but in-depth understanding of concepts in upper grades requires a student to know how to use additional aspects of English to connect these key words in order to construct the meaning of complex and abstract concepts (Dutro and Moran 2003; Scarcella 2003).

Making the right connections is highly dependent on what I call "academic capital", a combination of Bourdieu's (1977b, 1986) notions of social, cultural, and linguistic capital that a student uses, often unknowingly, to succeed in school. Students who have been raised in middle- and upper-class homes where they speak the language of education have acquired a wide range of linguistic, cognitive, and cultural patterns that play a vital role in the comprehension and communication of concepts in school (Gee 1996). These students more easily acquire the conventions of academic discourse and thinking, which tend to provide them with significant advantages in school and workplace settings. Many non-native speakers of the school language and members of non-dominant groups, on the other hand, enter school without a sufficient range of communication patterns that drive the tasks, texts, and tests in mainstream classrooms.

In the United States, millions of students have a home language other than the national language, English. In most of the literature these students are referred to as 'English learners'. Some of them have strong academic backgrounds, achieve advanced levels of English, and perform well in school

after only two to three years. The focal students in this study, however, were members of a different subset, the very large yet neglected group of 'long-term English learners'. After being in US schools for more than four or five years, they still hover at intermediate levels of English and struggle to read, write, and participate in mainstream classes. They are often mixed in with native English speakers in mainstream content courses at secondary levels where they are required to interpret and comprehend academic English well enough to compete with classmates who have been speaking English and "doing school" from a very early age.

The purpose of this study was to investigate the ways in which teachers of mainstream content classes develop academic language in non-mainstream students who lack access to mainstream English and school-like communication practices outside of school. This involves three dimensions:

- clarifying what is meant by the term 'academic language' in the contexts of this study
- understanding the influence of underlying social and cultural factors in the acquisition of academic language
- examining teacher–student classroom interactions that are likely to influence the development of academic language (Cazden 2001; Gee 1996; Mercer 2000).

## Theoretical framework

The following research questions guided the formation of the theoretical framework for this study:

- What are the linguistic, cognitive, and sociocultural aspects of academic language in middle school content classes?
- How do teachers explicitly and implicitly develop academic language as they teach their content?

Pursuing these questions involves the following four research domains: academic language, cognitive psychology, second language acquisition (SLA), and sociolinguistics.

Scholars tend to credit the initial research on academic language to Jim Cummins, who coined the terms 'basic interpersonal communication skills' (BICS) and 'cognitive academic language proficiency' (CALP). Academic language, according to Cummins (1979), is communication that is cognitively demanding and context-reduced. Diaz-Rico and Weed (2002) expanded on this definition and considered academic language to be a "cognitive toolbox", a set of thinking skills and abilities to encode and decode complex thoughts. Dutro and Moran (2003: 230) described academic language proficiency as the ability to interpret and infer meaning from oral and written language, discern precise meaning and information from text, relate ideas and information,

recognize the conventions of various genres, and enlist a variety of linguistic strategies on behalf of a wide range of communicative purposes.

These and other recent conceptualizations of academic language have begun to replace the early dichotomous thinking that language is either social or academic. Most researchers who study academic language tend to agree that academic language (a) is an evolving set of words, expressions, and syntax that describe abstract academic concepts and complex thinking processes (Chamot and O'Malley 1994); (b) is the linguistic skill of expanding the meanings of familiar words in novel and figurative ways in order to communicate and comprehend new concepts (Dutro and Moran 2003); and (c) varies widely across content areas, classrooms, and materials (Scarcella 2003; Valdés 2001).

Cognitive psychologist Lev Vygotsky (1962) pointed out the powerful link between language and thought. He argued that our thinking processes require language to articulate them. These processes are often called higher-order thinking skills in related literature (Swartz 2001) and include skills such as comparing, identifying cause and effect, persuading, analyzing, evaluating, synthesizing, empathizing, and interpreting in some form (California Department of Education 1998; Marzano, Pickering and Pollock 2001; Wiggins and McTighe 1998). Thus, academic language tends to function as a dialect that describes cognitive processes, complex relationships, and abstract concepts.

Academic language can also be a tool used in school and wider society for promoting social stratification (Bourdieu and Passeron 1990). Bourdieu and Passeron asserted that classrooms are often reproducers of social structures in which some members of the community take advantage (often unwittingly) of their cultural, social, and linguistic capital. Cultural capital refers to the useful set of experiences and knowledge that are shaped by family and community. Social capital refers to social networks that guide and limit a person's life path. Linguistic capital is the store of words and communication patterns that a person uses to communicate and comprehend in a given context. Bourdieu (1977a) argued that the practices in any field result from the interaction between forms of capital and 'habitus', which is a set of internalized behaviors and attitudes that become accepted, natural, and habitual. Habitus shapes both teacher and student decisions, and in most schools it contributes to academic capital and ultimately serves to perpetuate dominant forms of discourse.

Teachers, texts, and tests expect all students to process and produce knowledge in certain ways. Students who grow up in mainstream English-speaking environments share many of the knowledge bases, culturally specific communication cues, and thought patterns typically found in learning situations and materials in US schools. These students have acquired more than just linguistic knowledge that gives them marked advantages in school. They have, as Gee (1992: 73) points out, acquired knowledge about "ways of being in the world, ways of acting, thinking, interacting, valuing, believing, speaking, and sometimes writing and reading, connected to particular identities and social roles". When non-mainstream students are placed in

mainstream classrooms, they may experience the “pedagogy of entrapment” (Macedo 1994), where schools require from learners the academic discourse skills and knowledge that teachers do not explicitly teach. Mainstream middle- and upper-class English-speaking students avoid this entrapment because they tend to have more academic capital that aligns with school ways.

## Research setting

The site of this study was a middle school (ages 12–14) located in a suburban area near San Jose, California, with an enrolment of 1100 students, 290 of whom were designated as ‘English learners’ who came from more than 20 language backgrounds. Approximately 120 students at the school fit into the ‘long-term English learners’ category. They had been in the United States for more than four years, and most used a non-English language at home or used English with relatives and community members whose first language was not English. These students were near-fluent in nonacademic oral interactions in English yet struggled in academic tasks. Many scored at intermediate levels of English proficiency, which corresponds to an average score of 3 on the California English Language Development Test’s (CELDT) oral, reading, and writing sections. Oral scores hovered around 4, and the reading and writing scores averaged 2.5.

Three of the four focal students were considered to be long-term intermediate English learners: Sara and Armando are Spanish speakers, and Kim is a Vietnamese speaker. The fourth student, Juan, speaks Spanish and had been in the USA for only three years. I chose these ratios because Spanish speakers not only make up the majority of bilingual students in California but are also the subgroup with the lowest achievement statistics. I chose a non-Spanish speaker for the purposes of comparing different linguistic and cultural backgrounds.

I observed the 7th-grade classes of a science teacher (Nina), a social studies teacher (Helen), and a language arts teacher (Elisa). All three teachers were female, European-American, and had over five years of teaching experience. There were between 8 and 12 intermediate English learners in each class, including several of the focal students. Observing the same students in two different classroom settings allowed me to see how academic language was supported in multiple contexts.

## Methodology

To effectively document the products and processes involved in the development of academic language, the research design for this study drew from qualitative approaches found in the research traditions of linguistics, anthropology, and psychology. The questions that drove this study required a qualitative design

because (a) language needed to be observed and understood in a natural setting; (b) data needed to be collected in multiple forms, such as classroom observations, open-ended interviews, and text analysis, in order to achieve triangulation; (c) data analysis was emergent, inductive, and highly interpretive; and (d) there was a need to purposefully select participants (Creswell 2002).

I observed the three teachers' classes approximately two days per week for four months, focusing on teacher and student language events that described academic thinking skills. I noted down the explicit teaching of academic language, paying special attention to its modeling and scaffolding, along with less explicit uses of academic language by teachers and students. Several questions guided my observations:

- What tasks are students being asked to do? What are they being asked to learn?
- What types of thinking skills are being taught, used, and required?
- What language do students need to understand and accomplish learning tasks?
- What are the language teaching practices used by the teacher?
- How do students use language with each other?

During classroom observations and transcriptions, I coded the observation data onto a matrix which evolved during the study into the one shown in Figure 1. For example, if a teacher uttered the phrase "played a vital role", I entered the code 2T and CE in the top left box along with other contextual information such as gestures or visual aids used by the teacher. The involvement of focal students was indicated by a code corresponding to their pseudonyms. The data on reading included the name of the text that the student read. Speaking represents activities such as oral presentations and speeches. Each week, I gathered writing samples, tests, and other products from the four focal students in order to catalog the written language that they used to express their academic messages.

Four forms of data provided an acceptable approximation of what was happening in the three classrooms. From the classroom observations I culled the examples of classroom talk that showed: how the teacher made her own language more comprehensible; teacher interventions in student conversations; and the types of tasks and contexts in which students used academic language and any changes in language use over time. From the classroom texts and student writing samples I took examples of academic language.

Coding the markers of academic language allowed me to measure the level of "academic language-ness" of particular utterances. The markers used here were: academic thinking skills described by the message, nominalization, passive voice, complex sentences, cohesion, and coherence (Bartolomé 1998; Chamot and O'Malley 1994; Scarcella 2003). The student writing samples offered evidence of language used to communicate to more distant audiences, as well as of their abilities to use academic writing conventions. I paid particular

| Language modes        | Language functions and features |                    |            |
|-----------------------|---------------------------------|--------------------|------------|
|                       | ACADEMIC THINKING               | ACADEMIC LANGUAGE  | VOCABULARY |
|                       | cause/effect = CE               | passive voice      |            |
|                       | compare = CO                    | nominalization     |            |
|                       | persuade = PD                   | complex sentences  |            |
|                       | interpret = I                   | cohesion/coherence |            |
|                       | perspective = PV                | devices            |            |
| <hr/>                 |                                 |                    |            |
| LISTENING             |                                 |                    |            |
| to teacher = 2T       |                                 |                    |            |
| to video = 2V         |                                 |                    |            |
| to peer = 2P          |                                 |                    |            |
| CONVERSING            |                                 |                    |            |
| w/teacher = wT        |                                 |                    |            |
| w/peer = wP           |                                 |                    |            |
| WRITING               |                                 |                    |            |
| teacher writes = T    |                                 |                    |            |
| student write = S     |                                 |                    |            |
| READING               |                                 |                    |            |
| SPEAKING              |                                 |                    |            |
| SOCIOLINGUISTIC NOTES |                                 |                    |            |

**Figure 1.** Note-taking matrix for classroom observations of academic language

attention to the differences and similarities between the language of the classroom dialogs and that of the student compositions.

I examined the codes for overlap and redundancy and then collapsed them into a small number of meaningful themes, described in the ‘Teacher behaviors and language’ section and the ‘Student language behaviors’ in Table 6 (Creswell 2002). These themes and the language used to develop them provide insights into the nature of academic language in each particular setting. The themes consist of multiple levels and therefore contain multiple codes. Each language event involves linguistic features, speaker behaviors, listener behaviors, motivational factors, and sociolinguistic influences.

## Observation data

### Cognitive Skills

After four weeks of observation, five principal cognitive skills emerged: identifying cause and effect, comparing, persuading, interpreting, and taking other perspectives. Tables 1, 2, and 3 include samples of the language used

**Table 1.** Academic thinking skills, number of times used, and sample teacher language in history classes

| Concept or skill being taught | Total times used | Examples of language used by Helen   |
|-------------------------------|------------------|--|
| cause/effect                  | 13               | The repercussions of Luther's actions were what?   |
| comparison                    | 15               | How is Christianity different from what it was like before Luther?<br>How was the Byzantine Empire different from Western Europe?<br>Similarly, the saints are a problem for many protestants.                     |
| persuasion                    | 7                | What's another reason for thinking that?<br>Why don't you think Dante made friends?  |
| interpretation                | 9                | Who was Joan of Arc? Why was she important?<br>Why do we care? Why is she in the history books?<br>What did the Round Table symbolize?<br>Design symbols to describe your achievements, hobbies, goals, nicknames. |
| perspective                   | 10               | What if you lived in the country at that time?<br>How might people feel in each place? (Paradiso, Purgatorio, Inferno)   |

**Table 2.** Academic thinking skills, number of times used, and sample teacher language in science classes

| Concept or skill being taught | Total times used | Examples of language used by Nina   |
|-------------------------------|------------------|---|
| cause/effect                  | 8                | Why do you think squids have sharp beaks?   |
| comparison                    | 12               | How are the cells different and how are they alike?<br>You need to list the important characteristics of this type of cell. |
| persuasion                    | 5                | You can't just say what you think and stop there.<br>You need to give me good evidence.                                     |
| interpretation                | 9                | You need to interpret the results of the experiment.<br>What does the data tell you?  |
| perspective                   | 7                | Let's say you are a paramecium. How do you get food?<br>How do you move?  |

by the three teachers to bring out these skills as well as the number of times that the particular cognitive skill was evoked in class by that teacher.

As Tables 1 through 3 indicate, thinking skills were spread across content area classes, and the academic language varied widely in the ways in which



**Table 3.** Academic thinking skills, number of times used, and sample teacher language in language arts classes

| Concept or skill being taught | Total times used | Examples of language used by Elisa  |
|-------------------------------|------------------|---|
| cause/effect                  | 5                | Why did Brian begin to feel more confident about surviving?   |
| comparison                    | 9                | But Petri, what was different about him?<br>How is <i>Hatchet</i> like other books you have read?   |
| persuasion                    | 6                | Write your opinion about the article and whether you think someone else should read it or not.<br>Tell your opinion about the text and why you think that way.  |
| interpretation                | 14               | You put “families were torn apart”. What does that mean?<br>So if it has very little carbon-14, where would it be on this timeline?   |
| perspective                   | 12               | I’m a happy flea; I’m sucking blood from the rat, having a great time then fall off the rat into straw and as soon as somebody comes along with blood, I bite them and I’m happy again.<br>Like if you were my sister, I would say, “Get away from me, don’t talk to me.” |

it described the thinking processes. Comparing was more prevalent in history and science lessons than in language arts, while interpretation was the most frequent cognitive skill observed in the language arts class. Perspective-taking was more evident in history and science than I expected, while persuasion was less evident in language arts than expected, given the importance of persuasion in the year-end writing assessments. The language examples in the right-hand columns were not difficult to interpret, yet many language excerpts either fell into multiple categories or none at all.

An important factor in this data is the sequence of the excerpts. A pattern that emerged in most discourse events was the progression from facts and concrete ideas to more abstract and complex ideas. More specifically, teachers often asked fact-based questions that had right or wrong short answers at the beginning of the discussion, then asked for information that involved explanation, cause and effect, and comparison, and finally gave prompts for answers that involved persuasion, interpretation, and perspective-taking. Many of the more academically complex prompts were used at the end of the discussions. This sequence from concrete to abstract and simple to complex was natural (and what teachers are generally taught to do), yet when we look at questioning practices later on, we will see that English learners were asked more of the early fact-based questions while mainstream students were asked (and responded to) more of the cognitively demanding questions.

**Table 4.** Behaviors and sample academic language used by teachers

| Teacher behavior or strategy  | Examples of academic language   |   |  |
|---|---|---|--|
|   | History   | Science   | Language Arts  |
| Questioning<br>– display  | What did Martin Luther think about that?  | What's a flagella?  | Where did the disease come from?   |
| – open  | Why do you think this statue is important?  | What would you say if you were that cell?                           | Would you have liked to be Brian? Why?   |
| Gestures  | a big split in religious ideas [separates hands to describe the split]  | cilia are like hairs [spreads fingers out from head and moves them] | an arrogant or stuffy person [lifts nose up and looks down on a student in front row]                                |
| Connecting to background knowledge with examples, analogies, personifying | That's like me writing a book about Juan and all the bad things he has done and letting everyone read about it, whether true or not. Would you like that? | For example, you might eat a hamburger and some fries every day.    | Think of some things that would make a perfect world for you. For example, my perfect world wouldn't have pollution. |
| Linguistic enabling (negative)  | OK, that's fine.  | Good enough. Now let's look at . . .                                | You are on the right track. Anyone else?   |

## Teacher behaviors and language

Many of the behaviors that teachers used to develop academic language are related to second language teaching strategies for target vocabulary words. I also identified other behaviors that are not prevalent in the literature, listed in the left-hand column of Table 4. Each of these will be discussed in turn below.

### *Questioning*

Questioning was one of the most common discourse strategies used in all three classrooms. Each teacher initiated student responses with a wide variety of questions, most of which fell under two main categories: display and open-ended.

Display questions formed part of a common discourse pattern called initiation–response–evaluation/feedback (IRE or IRF) (Mehan 1979; Sinclair and Coulthard 1975). Answers to display questions were usually known by the teacher, who used them half the time to get students to connect to background information and the other half to recall recently covered information. Both types (connection and reminder/check) were used by the teacher, Elisa, in the dialog below. The connection questions are: “Do you know what *solved* means?” and “What’s a flea?” The others are reminder/check questions related to the current lesson about the cause of the Black Plague.

### Excerpt 1

- 1 *Elisa*: Look, in 1898, what did they realize the cause was? Read that to me.
- 2 *Kim*: In 1898, a French scientist solved mystery.
- 3 *Elisa*: Do you know what *solved* means? (pause) To answer the puzzle. What’s a flea?
- 4 *Kim*: This bug on rats.
- 5 *Elisa*: OK. Where did the rats come from?
- 6 *Kim*: The boats?
- 7 *Elisa*: Yes. But why did people get disease?
- 8 *Kim*: I don’t know.
- 9 *Elisa*: Because fleas would come off the rats and bite people because things weren’t very clean. They found out that . . . what?
- 10 *Kim*: Where the disease come from.

Open-ended questions allowed students to craft more personalized responses. Such questions often elicited follow-up questions. The three teachers asked open-ended questions that typically fell within four categories: personal (thoughts, feelings, opinions, and interpretations), justifying, clarifying, and elaborating. In excerpt 2 the teacher, Helen, uses “What (and Why) do you . . .” with focus on the word *you* to make the student feel more secure about answering the question. She used several types of questions here to help Armando prepare an oral presentation describing life as a medieval monk in the first person.

### Excerpt 2

- 1 *Helen*: What do you want to say?
- 2 *Armando*: I’m a monk and my name is Javier.
- 3 *Helen*: What do people want to know about being a monk?
- 4 *Armando*: We wake up at 2 am and then at 3 am we go back to sleep for three hours.
- 5 *Helen*: Why do you do that? Why wake up at 2 am?
- 6 *Armando*: It says right here?
- 7 *Helen*: But why? You have to tell them. Because that’s interesting. You want to tell interesting stuff. So do you know why you do that?
- 8 *Armando*: No.

- 9 *Helen:* Why do you think you would do that as a monk? Why would you have a church service at 2 am? Do you have a guess?

Justification questions often followed personal questions. Teachers asked questions such as: “Why do you think that? What evidence do you have? Do you have a good reason for thinking that?” Such questions are important builders of thinking processes, especially those required for the writing assignments in middle school. Unfortunately, a problem that I saw in this area was the lack of modeling by teachers. Teachers asked many questions that called for the students to justify their thoughts and opinions and provide good reasons to back up their statements, but they did not sufficiently model the typical language used for this, nor did they discuss what constituted a good reason or justification.

Clarification questions require students to explain their responses. The most common of these questions used by the teachers were: “What do you mean?” and “Can you explain?” I assumed that by the end of the second semester that Elisa’s language arts students, who were asked these questions many times, would clarify their answers without further prompting – but they continued to over-rely on shared background knowledge in their spoken (or in many cases their written) production.

Elaboration questions were by far the most common form of open-ended questioning used by the three teachers, most often in whole class discussions. In many cases such questions prompted students to think more deeply about a concept or to further define their understanding of it. Notice below how Helen attempts to get students to elaborate with responses that require cause/effect and interpretative thinking.

### Excerpt 3

- 1 *Helen:* How did trade affect people after the plague? How did it affect their minds?  
 2 *Sara:* They wanted more!  
 3 *Helen:* OK, they wanted more. What else?  
 4 *Juan:* Trade flourished. Individualism.  
 5 *Helen:* What does that mean? Setting their own goals and did what they want?  
 6 *Juan:* Money, wealth!  
 7 *Helen:* This led into the . . .  
 8 *Sara:* Dark ages, middle ages?  
 9 *Helen:* No, the Renaissance. This means what? Renaissance, like renacer.  
 10 *Juan:* Rebirth!  
 11 *Helen:* Rebirth of . . . ? (pause) Of art and culture. A lot came as a result of more wealth that they got.

The problem with elaboration questioning is its tendency to put one student on the spot, either placing added pressure on the student or raising the status of that particular – often vocal and already high-achieving – student.

**Table 5.** Questioning practices by teachers in all three classrooms

| Question type | directed at mainstream students | directed at 'English learners' |
|---------------|---------------------------------|--------------------------------|
| display       | 45%                             | 55%                            |
| open          | 82%                             | 18%                            |
| elaboration   | 78%                             | 22%                            |

In some cases, elaboration may actually confuse students, sending both positive and negative feedback in reaction to their responses. Teachers often repeated or rephrased a student response, which students considered to be an acceptance of a correct response. But when teacher followed up with an elaboration question ("What else?"), this suggested that the response may not have been adequate after all.

My data indicate that the teachers asked fewer follow-up elaboration questions of English learners. In fact, in the four-month period of the study, I only observed three instances of the focal students being asked to elaborate on their answers, while an above-average percentage of display questions that did not require significant elaboration were directed to them.

Roughly one third of each class was composed of intermediate English learners. They thus should have received one third each of display, open, and elaboration questions, yet the data show otherwise. As can be seen in Table 5, mainstream students were called on more for responses which would involve academic thinking and academic language, while English learners were called on more to answer fact-based, explicit display questions.

### *Use of gestures*

Gestures, facial expressions, and other nonverbal cues help to augment and clarify verbal discourse. Several of the gestures used by these teachers seem to be universally comprehensible. For example, the language arts teacher Elisa accompanied the term *imagery* with movements suggesting she was painting a picture. Helen often emphasized the words *however* and *yet* as she moved her left hand, palm down, to her right and then flipped it over to the left, palm up. She also performed this action when she used similar contrastive terms that contradicted a previous point.

### **Excerpt 4**

- 1 *Helen*: Martin Luther wanted to change church practices. However, [hand motion] the Catholic Church wasn't ready to change. So what did they do?
- 2 *Juan*: They killed him.

- 3 *Helen*: Why?  
 4 *Juan*: Because they liked getting money. He was an enemy.  
 5 *Helen*: So they killed him. Yet, did it work? [hand motion for *yet*]

Some gestures, however, seemed to be culturally bound and thus did not aid the comprehension of English learners. For example, Helen accompanied the word *pacify* by forming the peace sign (V) with her fingers. As I looked around the class, it was obvious that most of the mainstream students understood the gesture, while the focal students had quizzical looks on their faces. I asked them later about the gesture and they thought it meant the number two. In another instance, Nina used the word *promise* when referring to a court oath and then traced a cross over her heart with her finger (as in “cross my heart and hope to die”). The focal students told me later that this gesture was not universally understood.

### *Examples, analogies, and personifying*

Teachers often use examples after introducing a challenging term in order to clarify it or try to connect the concept to a student’s background knowledge or personal experience in some way. Helen did this when she explained the concept of *religious indulgence* by relating it to the practice of “free homework tickets” that some teachers gave out.

#### **Excerpt 5**

- 1 *Sara*: Like reconciliation?  
 2 *Helen*: Kind of. That’s a good word. Umm, it’s to reduce punishment for sins. Like a “free homework” ticket. Like if you do something bad, . . . if you pay me 50 dollars, I’ll give a certificate. That means you won’t get as punished for your sin by God.  
 3 *Sara*: That’s not true!  
 4 *Helen*: They made a lot of money off that. You sound like Martin Luther, then. What you said sounds like him.

In this excerpt, what I call ‘personifying’ was used to connect the new concept to student background knowledge, making it more tangible, dramatic, humorous, or exciting. Personifying involves stepping into the mindset of a person or object and then acting or talking appropriately. This seems to be effective for two reasons: (a) it makes the content more relevant and fun to the students, connecting to their lives in some way, often through the use of slang and exaggeration (e.g. “I can’t make it to the party tonight – I’m going through mitosis!”); and (b) it allows students to feel safe when answering, knowing that their such responses cannot be seen as wrong. Personifying also helps students to build up the cognitive skills of perspective and interpretation. The following monologue about squid exemplifies this.

### Excerpt 6

*Nina:* Yes, catching prey. They have evolved, or changed over time, in order to catch prey. Squid are predators and they catch fish. So, if I'm a squid, as I swim through the ocean, I see something I want to eat, I shoot out the tentacles and grab onto the fish and use my eight arms to wrap around them.

### *Linguistic enabling*

These teachers also used behaviors that seemed to undermine, rather than cultivate, academic language development. In the desire to affirm student responses and avoid placing undue pressure on students, Helen would accept oral and written responses that were not sufficiently academic in nature. In the following excerpt, which involves perspective-taking and empathy, notice how (in lines 5, 7, 10, 14) she does not challenge students to produce more elaborated and academic responses.

### Excerpt 7

- 1 *Helen:* So do you think that he [Dante] was popular with some of the people in Florence? You think he made friends?
- 2 *Armando:* No.
- 3 *Helen:* Why don't you think he made friends? What did he write about?
- 4 *Armando:* their sins.
- 5 *Helen:* Yes, he wrote about real people and all the bad things they did. That's like me writing a book about Juan and all the bad things he has done and letting everyone read about it, whether true or not. Would you like that?
- 6 *Juan:* No.
- 7 *Helen:* How might people feel in each place?
- 8 *Sara:* For paradise, it would be better than being in hell.
- 9 *Armando:* Freedom, or free? Love?
- 10 *Helen:* OK, keep going.
- 11 *Sara:* Safe?
- 12 *Armando:* In purgatory, scared? Maybe that's for inferno.
- 13 *Juan:* Sorrow? Humility?
- 14 *Helen:* What about hope?

In line 5 Helen did not ask Armando to connect Dante's writing about sins to his lack of friends; rather, she did it for him. She did not ask him for reasons behind his "no" in line 6. Helen only responded "OK, keep going" to Armando's very thought-provoking feelings expressed in line 9. She seemed primarily focused here on getting the answers as quickly as possible and appeared to want to do most of the thinking and talking herself. This

dialog brings up the important question of how much teachers should model academic language, which one might argue Helen was doing, versus how much they should get students to think more deeply and prompt more academic language production, even if it is still very rough around the edges.

### *Academic idioms*

The data also contain a set of metaphors used for academic purposes that are not found in more formal writing, which I call 'academic idioms'. These idioms, which were produced by teachers more often than students, include phrases such as *all boils down to*, *the gory details*, *that answer doesn't hold water*, *a thin argument*, *a keen insight*, *crux of the matter*, *on the right track*, and *dissect the article*. Many of these academic idioms serve to describe cognitive processes and school tasks. This language seems to fit into Bourdieu's notion of linguistic capital (Bourdieu and Passeron 1990), the language patterns and terms that are valued in school settings and that give a person access to increasingly complex ways of knowing.

### Student academic language changes

Table 6 shows the average change in the use of academic language behaviors by the four focal students in the history class over the semester (7–8 observations of each class per month). It is important to remember that the increases or decreases in students' use of academic language may have been influenced by other teachers, maturation, and/or non-school factors. Despite these limitations, the data in Table 6 are helpful, indicating rough changes over time in these categories.

**Table 6.** Average number of instances of academic language used by focal students in history classes

| Thinking skill/language function                           | February | March | April | May |
|--|----------|-------|-------|-----|
| cause/effect   | 1.5      | 3.2   | 2.6   | 4.1 |
| comparison   | 3.2      | 2.4   | 5.0   | 6.2 |
| persuasion/stating an opinion                              | 2.5      | 2.3   | 4.5   | 3.8 |
| supporting with examples/evidence                          | 1.5      | 2.5   | 3.0   | 3.1 |
| interpretation   | 2.0      | 2.4   | 3.3   | 3.7 |
| perspective  | 1.9      | 1.5   | 2.6   | 2.9 |
| disagreeing or negating                                    | 4.0      | 5.2   | 2.7   | 3.3 |
| adding to another's point                                  | 2.6      | 1.7   | 2.3   | 1.0 |
| explaining or defining<br>(linguistically contextualizing) | 2.4      | 1.5   | 3.2   | 3.7 |



The most significant increases were in the cognitive skill categories of comparing and identifying cause and effect. These two skills also appeared most often in the transcripts of teachers' language and in many of the questions and other classroom tasks. They also are mentioned frequently in the literature and recommended methods and objectives for learning history. Unfortunately, the cognitive skills of interpreting, persuading, and perspective-taking are not very evident in this data set, even though they are also cited as being important skills for learning about history in most history teaching resources.

Two student behavior categories, disagreeing/negating and adding to another's point, decreased in use over time. This suggests that one of the outcomes of the classroom practices was that students learned *not* to express themselves during discussions.

## Results and discussion

All four focal students showed slight increases over time in their use of academic language functions and forms in their oral responses in pairs, groups, and whole class discussions, and in their informal and formal written work. Despite positive growth in some areas, these students also acquired and adopted several ways of "doing school" that seem to impede the development of academic discourse. I have grouped the results into three categories: features of academic language, classroom discourse patterns, and social and cultural factors.

### Features of academic language

The data indicate that a significant feature of academic language is that it describes and facilitates cognitive processes. Such language is subtle yet pervasive in school contexts, e.g. the phrases *the difference between*, *led to*, *it is similar to when*, *support your argument*, *in this way*, *if . . . were*, *because of*, and *yet from the point of view of*. Many of the phrases linked to cognitive skills are figurative, embodying abstract meanings that describe complex relationships among ideas that are difficult to see, point to, touch, or act out. Teachers and academics use such phrases every day without really thinking about them. This group also includes the use of specialized meanings of familiar words in different disciplines and words used to describe technical processes and complex relationships (Short 2002). I have called this subset of academic language 'academic idioms'.

A salient feature of academic language is that it needs to be modified to meet the needs of a distant audience who do not share common background knowledge or social settings (Bartolomé 1998). Students thus need to explain and support their points more extensively, using examples and evidence, often for a recipient who is not in a face-to-face conversation in which one can negotiate

meaning when confusion arises. Yet, from my discussions with students, this process was somewhat confusing to them, because they were often asked by the teacher to speak *as if* to a distant audience, while the audience (the class), in fact, was not distant and knew most of the material being presented. This is yet another challenging “rule of the game of school”, or habitus (Bourdieu 1977a), that students need to learn in order to succeed in the game of academia.

## Classroom discourse patterns

### *Questioning*

Teachers in this study used many more display questions than open-ended questions, particularly with English learners. Display questioning, often used early on in the discussion sequence, does serve a purpose: it can quickly show what students know or have learned. But such questioning can dominate class time and displace the exploration of deeper issues and higher-order thinking. Display questions lead students to believe that learning and schooling largely consist of figuring out what the teacher wants to hear. Teachers should think about how questions and other prompts contribute to daily discourse patterns and whether or not they encourage student self-expression, academic responses, and the social construction of knowledge. Teachers should consider how display questions can be used as a foundation (or raw material) to construct more complex understandings. Perhaps most importantly, teachers should analyze their own questioning distribution practices to make sure that English learners are receiving their fair share of open and elaboration questions.

### *Elaborations*

One teacher response pattern was asking students to elaborate on their answers. However, just telling a student to elaborate is not enough; rather, a teacher should guide the student on how to elaborate and why. In one of only three examples of a focal student being asked to elaborate, Elisa said to Kim: “Tell us more about what it means that everyone has free houses. Maybe you mean free housing? And your readers might want to know why that would make things perfect.” This type of prompting and explicit modeling of academic knowledge structuring was rare in my data but yielded positive results in student writing and discussion.

### *Modeling and practice*

When students did use academic language, two conditions were present. First, teachers modeled and provided students with the language that they

needed to express their thinking; second, teachers created conditions that allowed students to practice their thinking processes and language as emerging experts. For example, a teacher might ask a student to compare two organisms and point to comparison language on a wall chart.

Another way of presenting academic language was through using gestures; although this was infrequent in the three classrooms, it was effective when used. Gestures were mostly used to teach content vocabulary, but a small number were used to teach cognitive skills, including gestures for *on the other hand*, *it all boils down to*, *support your point*, and *step into their shoes*.

One interesting finding was that some practice activities seemed to be “too active”, “too social”, or “too hands on”. That is, some activities in this study, ironically, provided so much context such that a student could simply point to an object or visual aid rather than attempt to describe it to a distant audience. This was evident during several science labs and history simulation activities. While labs and simulations are important experiences, the teachers in this study did not take advantage of these experiences as foundations for higher-order thinking and academic communication.

Despite increases in several categories of language use, the findings also show that long-ingrained classroom discourse patterns played a possible role in limiting the encouragement of academic language use and behaviors. During the period of the study, the focal students learned that teachers had varied and rigid ideas of classroom communication. In the science classes, for example, students learned that they needed to “translate” texts and teacher talk into their first languages and/or simpler English in order to understand the concepts. The teacher sometimes did this for them. Then students needed to “retranslate” the concepts into academic forms that were expected and rewarded by the teacher (yet seldom modeled). This pattern represents a developing schema, or habitus (Bourdieu 1977a), of learning that pervades much education in the United States from primary school to doctoral programs.

### *Analogies and personifying*

Towards the end of discussions and conversations, these teachers tended to use analogies to clarify a complex concept by relating it to something in the students’ experience. In addition to explaining the concept, analogizing also helped to develop the skills of comparison and interpretation.

Teachers also engaged in personifying to dramatize actions, thoughts, and feelings. For example, when Nina portrayed a squid, when Helen acted like a knight, or when Elisa became the main character in a novel, students were more engaged and even contributed to the dialog. This engagement, I believe, helped students to understand the ideas and the language involved in the lesson. Personifying also helped students build the cognitive skills of interpretation and taking different perspectives.

*Linguistic enabling*

A negative pattern that emerged was linguistic enabling, the practice of allowing students to produce non-academic responses. Teachers did this for several possible reasons: to avoid offending students or discouraging their participation, to speed the class along and focus on content, or through lack of awareness of the non-academic nature of the responses. Though it seems counter-intuitive, the desire to be sensitive to differences may hinder academic language development. For example, in seeking to validate students' home language and culture, Helen accepted most of their oral and written language without corrective feedback. Elisa, by contrast, was overly prescriptive and corrective at times, also to the potential detriment of academic language development. Based on these findings and those of other researchers (Bartolomé 1998), I would suggest that teachers become more aware of possible behaviors and responses that do not challenge students to give appropriate academic responses.

**Social and cultural factors**

The overlapping areas of cultural and linguistic capital also appeared to influence language development. For example, students who do not have a strong understanding of the concrete meaning of an idiom or metaphor can not understand its figurative meaning. Understanding the phrase *you are on the right track* requires, first of all, knowledge that a train on the right track is traveling in the correct direction. Once this is known, the student needs to make the conceptual leap to the figurative meaning of being close to the right answer. This widespread use of idiomatic expressions may not be as common or used in the same ways elsewhere as they are used in US school contexts.

Culturally-ingrained discourse patterns such as initiation–response–evaluation appear to train students to be recipients of knowledge rather than co-constructors of their learning (Freire 2000). In the history classes, for example, despite focal students' increases in the use of language signaling cognitive skills, their responses to the comments of other students decreased. In addition, teachers prompted English learners more often with fact-based (easier) questions and did not ask for elaboration as much or as often as they did from mainstream students. Their intention may have been to not overwhelm students who lacked fluency in English, but this can result in a form of linguistic enabling that stunts academic growth.

Finally, a possible interpretation for the decrease in focal students' adding to another's point (Table 6) was that they learned not to consider themselves to be legitimate class participants in relation to their peers due to their lack of fluency in English. It is logical that as they acquired more language, particularly the academic language indicated by other categories, they should have expressed their opinions and ideas more readily. Yet it seems

that, in Bourdieuan terms, they gradually acquired a habitus of keeping their thoughts to themselves and participating only when they felt that they had guessed what the teacher wanted them to say.

## Implications of the study

Despite this study's small number of focal students, several implications emerged that contribute to the discussion of academic language development in secondary school contexts.

First, teachers who are aware of the cognitive skills required for their discipline(s) and the language that supports such skills are likely to be better prepared to teach these as they teach content. Staff development discussions and department meetings might consider the language underpinning the five skills highlighted in this study: identifying cause and effect, comparing, interpreting, taking multiple perspectives, and persuading with evidence. Teachers could discuss how such skills are used and are required in different subject areas.

Second, teachers can be trained to use various strategies to make academic language comprehensible. Learning more about student backgrounds and cultures can help the teacher make complex language more comprehensible to English learners by accompanying it with visual aids, gestures, examples, and analogies. Additionally, teachers can use the technique of personifying to make the content more relevant to and fun for the students, to allow them to feel safe about sharing their thoughts in class, and to build the cognitive skills of perspective and interpretation.

Third, teachers can design classroom activities that require complex thinking and language patterns valued in academia (and in the professional world). Rather than fact-based charts, fill-in-the-blank worksheets, end-of-chapter questions, and formulaic essays, teachers can create scenarios where students think deeply about the facts and concepts and communicate in academic ways in order to accomplish complex, real-world tasks. Educators should reflect on how to build into activities the need to talk richly and academically about processes and products.

Fourth, teachers and teacher educators should reflect on the nature of communication in the classroom and how it cultivates or hinders the growth of thinking and language. Armed with a more solid understanding of concepts of cultural and linguistic capital, teachers and other key players (including legislators and test designers) can make more effective decisions that benefit non-mainstream students rather than marginalize them in subtle yet powerful ways.

Finally, teachers can continually reflect on the patterns that negatively affect language and cognition. Are students adapting and adopting certain notions of learning and being a student that lead to stratification within the classroom (Bourdieu and Passeron 1990)? Are students learning to "play the

game” of school at the expense of their cognitive and linguistic development? In this study, the data suggest that students learned stagnant patterns of simply receiving and memorizing knowledge and not expressing their opinions, disagreements, and new ideas that were sparked by other students’ responses.

## Concluding remarks

Millions of students around the world are still learning to navigate the complex systems of language and learning that exist in school systems. Research has highlighted the powerful roles that home and community factors play in building the discourse and cognitive skills that students bring with them to school (Heath 1983). While it can be tempting to use students’ backgrounds as an excuse for poor academic performance, this study has shown that certain practices in school can benefit non-native speakers and members of non-dominant groups in mainstream settings. At the same time, the study has brought to light certain long-standing classroom practices that might actually hinder language development. These practices should be questioned, researched, and perhaps replaced by more effective ones.

Finally, this study encourages further discussion of the relationships between academic capital, cognition, curricula, classroom communication, and language development. From southern Ethiopia to northern California and from central China to Eastern Europe, teachers’ perspectives and practices make a significant difference in the lives of their students – especially non-mainstream students. Equipped with a greater knowledge of sociocultural factors and effective classroom discourse patterns, teachers can facilitate learning experiences that develop students’ thinking and communication skills that are necessary for higher education, desirable jobs, and positive societal change. It is my hope that the insights gained from this study will be helpful in strengthening the communication practices in schools so that the four focal students discussed here – plus millions of other students like them around the world – will succeed in school and beyond.

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