Looking Beyond English: Linguistic Inquiry for English Language Learners

Daniel Ginsberg[1], Maya Honda[2]* and Wayne O'Neil[3]
[1]*Georgetown University,* [2]*Wheelock College and* [3]*MIT*

Abstract

This paper reports on a pilot project that explored the potential of linguistic inquiry in a high school English as a Second Language (ESL) class. In class meetings across the school year, students worked collaboratively to investigate noun phrase pluralization, language acquisition, writing systems, and translation in their own and other languages. Classroom observations and students' oral and written work provide evidence that:

- Examining the structures of the spoken and written languages represented in the ESL classroom captures students' interest and engages them in critical inquiry about the nature of linguistic knowledge and their beliefs about language.
- The cross-linguistic analysis of students' home languages validates their languages in the school context, defining them as a rich resource worthy of study, rather than as a hindrance to education.

These findings are of particular significance in this time of English-only education in the United States, when students' home languages are often rejected in schools.

> I'm showing how all languages are connected.
> – A high school English Language Learner on doing linguistics

1. Introduction

Language captures people's interest. It is obvious from almost every setting that people are keen observers of – and willing commentators on – the forms and functions of language, whether their own or that of others. Children too can think and talk about language and this metalinguistic awareness can motivate serious examination of mental grammar – its phonology, morphology, syntax, and semantics (e.g., Denham 2007; Fabb 1985). Yet despite its draw, knowledge of language as an object of inquiry rather than prescription has little to no place in K–12 education in the United States. (For discussion of this matter and its history, see Brown 2009a and references there.)

The [US] Common Core State Standards for English Language Arts, for example, specify grade-level expectations in speaking, listening, reading, and writing for college and career preparation. Instruction in 'grammar' and 'knowledge of language' is defined with respect to standard English and to the aforementioned communication and literacy skills; students in grades 6 through 12 are to '[d]emonstrate command of the conventions of standard English grammar and usage when writing or speaking' and to '[a]pply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening' (Common Core State Standards Initiative 2010a).[1]

Over the last 50 years, linguists and educators in the United States, the United Kingdom, and Australia have attempted to expand the definition of grammar and knowledge of language by introducing aspects of modern linguistic inquiry into the primary and secondary school curricula of English language arts, social studies, and science, as well as into extracurricular activities and programs. For detailed discussion of a number of these efforts, see the papers in Denham and Lobeck (2010), Stewart and Kuhlemann Cárdenez (2010), and Brown (2009b).[2]

Common to all of these efforts is a focus on investigating and uncovering the internal patterns and structures of language – the mental grammar of one's own language, as well as of other languages. For beyond being captivating, language is accessible to scientific investigation through native speaker introspection and collaborative inquiry. Moreover, doing linguistics enables students to uncover misconceptions about language and to understand the complexity of what they didn't know they knew about language – and about their ability to engage in careful, critical inquiry (see, e.g., Honda 1994; Wolfram 1997).

From this point of view, we were led to ask:

• Is there a role for linguistic inquiry in a class of high school English Language Learners (ELLs)?
• In particular, can the analysis of students' home languages interest and engage them in critical inquiry?

Based on a year-long pilot project conducted at Malden High School in Malden, Massachusetts, we believe the answer to these questions is 'yes'. In this paper, we present evidence to support this conclusion.

2. Linguistic Inquiry for ELLs

O'Neil (1978) argued a number of years ago that investigating 'minority' dialects and languages represented in the school population would legitimate what is generally considered illegitimate: the linguistic resources that students bring to school. Given the current English-only era in US schools, this is a particularly compelling reason to look beyond English. When the rare opportunity to do so arises, students respond. For example, in her Boston-based study of linguistic theory construction in junior high and high school science classes, Honda (1994: 176) noted that students who had studied a foreign language or who had a home or heritage language other than English 'spontaneously made cross-linguistic comparisons about the particular [English] phonological phenomenon being discussed'. Based on subsequent cross-linguistic work with students in mainstream middle school English classes in Seattle, Honda et al. (2010: 186–7) observed that

> [c]omparing English to other languages is especially rewarding when students have another language at home, for it piques their interest in these languages. Students have even on occasion asked to create problem sets [for the class] on their own and have done so with the help of family members.

In this pilot project, we pursued these ideas further, exploring the potential of linguistic inquiry in a linguistically diverse class of high school students – all native speakers of a language other than English.

The pilot project took place at Malden High School, a public school in Malden, Massachusetts, where Daniel Ginsberg was then an English as a Second Language (ESL) teacher. Ginsberg initiated the project because he was seeking to supplement the curriculum of his high–intermediate ESL class with critical inquiry activities. Curious about linguistics-as-inquiry curricula, he approached Maya Honda and Wayne O'Neil for materials that he could incorporate into his classes. The three of us met and decided to develop a curriculum specifically for this student population, using existing materials only as a starting point.

Given that the pilot project was conducted in the context of the regular ESL curriculum, it was necessarily limited in time and scope. Although the project extended across an entire academic year, there were only 10 class meetings, averaging 50 minutes each, focused solely on linguistic inquiry. Follow-up discussions and work sessions occurred as time permitted.

2.2. THE STUDENTS

Ginsberg's high–intermediate ESL class had about 10 students, with the exact number changing across the year as students' English proficiency was reassessed and their course assignments were modified. Most of the students were in grades 10 and 12 and had passed an intermediate level high school ESL course, but had been assigned to an additional year of ESL support because of low grades, test scores, or teacher recommendation. Two students in grade 9 had been recommended for an additional year of ESL support by their middle school and grade 9 content teachers. In every case, it was expected that the student would either graduate or be exited from ESL services at the end of the year.

The class included speakers of Cantonese, French, Haitian Creole, Hindi, Mandarin Chinese, Punjabi, Spanish, and Tibetan – a small fraction of the 67 languages spoken by students in the school district.

3. The Curriculum-in-Process

The curriculum that we developed emphasized collaborative, cross-linguistic analysis of the students' languages, including, of course, English. However, although English was the language of the classroom and an object of inquiry, our primary goal was to look beyond English to engage students in critical inquiry about their home languages.

In 10 class meetings across the year, supplemented by Ginsberg's preparation for and follow-up of these meetings, we covered four topics with the students: noun phrase (NP) pluralization, language acquisition, writing systems, and translation. Beyond NP pluralization and language acquisition, for which Honda and O'Neil had existing materials and activities, the curriculum evolved in response to what the students found interesting and curious about their own and each other's home languages.

3.1. NP PLURALIZATION

We began by inviting students to become linguists by working through a problem set on the morphophonology of NP plural formation in Armenian, a language not represented in the class, based on material in Honda and O'Neil (2008: 4–8). As they worked through the problem set, they were introduced to terms and concepts in linguistics

('mental grammar', 'singular', 'plural', 'noun', 'suffix', 'syllable', 'consonant', 'vowel'), as well as terms and concepts of scientific inquiry ('data', 'hypothesis', 'counterexample').

Students were first asked to consider the tightly constrained set of data given below and to hypothesize about why the Armenian plural suffix varied between -ner and -er. Note that in the data, a period (.) marks a syllable boundary and a hyphen (–) marks the boundary of a suffix – which may not necessarily coincide with a syllable boundary.

	singular		plural	
1.	ga.dou	'cat'	ga.dou.-ner	'cats'
2.	tas	'lesson'	ta.s-er	'lessons'
3.	kirk	'book'	kir.k-er	'books'
4.	shov.ga	'market'	shov.ga.-ner	'markets'

The students, as always happens with this set of data, came up with two competing hypotheses – in more or less these forms:

• Add -ner if the singular form has two or more syllables; otherwise add -er
• Add -ner if the singular form ends in a vowel; otherwise add -er

We then asked them to consider the following data, in which a form that fluent speakers would judge to be ill-formed is marked with an asterisk (*):

	singular		plural	
5.	ha.koost	'dress'	ha.koost.-ner	'dresses'
6.	au.to.nav	'airplane'	au.to.nav.-ner	'airplanes'
7.	doon	'house'	doo.n-er	'houses'
8.	du.gha	'boy'	du.gha.-ner	'boys'
9.	looys	'light'	looy.s-er	'lights'
			but not *looys.-ner	
10.	ba.doo.han	'window'	ba.doo.han.-ner	'windows'
			but not *ba.doo.ha.n-er	

These additional data pushed them to recognize counterexamples to the second hypothesis, which then forced them to choose the first hypothesis as the best account:

• Add -ner if the singular form has two or more syllables; otherwise add -er

Students worked with a partner on this and other class activities. In a follow-up session, the class as a whole discussed the problem set.

We next turned to examining NP pluralization in the students' languages, the focus of several class meetings. Students were given a data sheet of pairs of sentences with singular and plural, definite and indefinite NPs in English (e.g., *I see the dog* : *I see the dogs*; *I have a book* : *I have some books*). They were asked to translate the pairs of singular and plural NPs into their languages (an unconscious form of analysis); to compare and contrast the pairs (a conscious form of analysis); then on the basis of their work, to formulate a hypothesis in explanation of the data. Their analyses required that more linguistics terms and concepts be introduced ('definite article', 'indefinite article', 'classifier'), and that previously introduced terms be reviewed and used.

The students' work culminated with class presentations on NP pluralization in their languages. They were asked to begin with general information about the language and its speakers, using a resource such as *Ethnologue*, and then to lead the class to an

understanding of NP pluralization in the language by writing examples of singular and plural NPs on the board, asking the audience to identify suffixes, changes in words or other differences, and then explaining their hypothesized rules. Finally, they were asked to take a few questions from the class.

In what follows, we discuss what emerged from some of the in-class analyses and presentations. Note that students' oral and written responses are given in their original form throughout the paper.

3.1.1. NP Pluralization in Tibetan

The students' accounts were, for the most part, descriptive. That is, they stated the facts of singular and plural NPs as they understood them: sometimes basing their rules on spelling conventions, sometimes being guided by the nature of discourse, and so on. On occasion, their analyses rose to the level of explanation. The Tibetan speaker, for example, noted that his language has singular and plural morphemes and that in informal speech they could be dropped, but only in [+definite] NPs.

3.1.2. NP Pluralization in Chinese

The four Chinese students in the class were native speakers of Cantonese and were educated in Mandarin Chinese. Despite this shared language background, they came to different analyses of NP pluralization – just as real linguists often do. Their different translations of one pair of [+definite] singular and plural NPs are shown in Figure 1. We found this disparity challenging to make sense of and, of course, interesting.

At first glance, it would appear from these data that only Student C correctly analyzed the singular and plural NPs, for he accurately represented both definiteness and number (singular vs. plural). In contrast, Student A and Student B mistakenly used [−definite] *yi* 一 'a, one' as the quantifier for the [+definite] singular NP (*I see the dog*). Student A and Student D also used a [−definite] quantifier *jǐ* 几 'a few, some' for the [+definite] plural NP (*I see the dogs*). Why might this be? Given that definiteness may not come immediately to

Fig 1. Chinese speakers' translations of one pair of singular and plural [+definite] NPs.

mind in the absence of context, translating [+definite] NPs as [−definite] is understand-able, for discourse moves to definiteness but does not begin with it.[3]

Student B, although he has [−definite] *yi* 'a, one' for these [+definite] singular and plural NPs, used the collective *qún* 群 'flock, group, etc.' for the plural NP. His using *qún* is a perfectly reasonable way to represent plurality since it is a 'massifier' (Lisa L.-S. Cheng, personal communication), the radical for that character being the character for 'sheep' 羊, the quintessential flocker.

Student C went the next step, correctly choosing [+definite] *zhè* 这 'the, this' rather than [−definite] *yi* 'a, one' for these [+definite] NPs.

We note that when these students began their in-class analyses, two of them chose to work on Mandarin, while the other two worked on Cantonese. Yet when they presented to the class, they all used Mandarin pronunciations and pinyin romanizations. When a student from the Cantonese group was asked specifically about Cantonese, he said that it was 'street language' and offered Cantonese pronunciations for what he had written on the board. The Cantonese speakers' language use and attitudes most likely reflect their schooling in China.

3.1.3. NP Pluralization in Haitian Creole
Working collaboratively on the analysis of pluralization, one of the several Haitian Creole speakers in the class made the following observation:

• In Creole the article *an* replaced by *anpil* to indicate plural. The article does tell us what it is … Creole alway used *anpil* when they were in plural, but if we in singular you used *youn* or *an* …

Her partner uncovered an interesting fact about the structure of NPs in Haitian Creole. In a paper based on her presentation, she wrote that:

• Sometimes the nouns come before the article.

Examples   the dog[s] = *anpil chien* or *chien yo* [the dog]
                     the pencil = *creyon yo*
                     the bird = *yon wazo*

As her examples show, the head of the NP can be on the right or left edge.

3.1.4. NP Pluralization in French
One of the French speakers in the class wrote this account of NP pluralization:

• In French the article *un* replaced by *des* to indicate plural. The article does tell us what it is in plural. Example: *un livre* → *des livres*
A phrase plural in French always use the articles, *des*, *mes*, *tes*, *ses*.
When it's in … singular … always *un*, *une*, *ma*, *ta*, *sa*.

This student noted that:

• Yes there are suffixes in French, but not in all words that you said it showing.

She explained this, giving examples of a suffix that is not pronounced:

• There some words that use x in the end in plural.

When a word in French end with *eu*, *au*, *eau* you have to put <u>x</u> at the <u>end</u> to make it plural

Example   *Manteau* > *Manteaux*
                 Neveu > *Neveux*
                 Tuyau > *Tuyaux*

This student and the other French speakers in the class were educated in French in their home country of Haiti. That their hypothesized rules for French were partially based on spelling (as exemplified by the *x*-rule above) is not surprising, given the time and effort devoted to learning to read and write in school. English speakers too focus on the spelled forms of English plurals, even when asked to focus solely on the pronounced forms of the plural morpheme (Honda 1994).

3.1.5. Thinking and Talking About NP Pluralization

And so the presentations went, with students offering questions and comments throughout. Although some students were initially reluctant to present, all of them seemed to enjoy the opportunity to teach and learn from each other about their languages. For example, the Spanish speaker was quite shy about presenting, but she made an important discovery about NPs in response to questions from the audience. After presenting a couple demographic facts about Spanish, she wrote two singular NPs on the board:

• a book = *un libro*   the pencil = *el lapiz*

She then stated her pluralization rule and wrote the corresponding plural NPs:

• The plural in Spanish is -*s*.
  some books = *los libros*   the pencils = *los lapices*

A student asked, 'What does *los* mean?' Someone else asked, 'Can you use *los* always for plural?' Thinking on her feet, the Spanish speaker observed that in her language NP plurality was indicated in both the determiner and the noun: 'You have to add both sides –*s*'.

  A generally reticent student, she and other students later noticed that the –*s* suffix marks plurals in English, French, and Spanish. This may be why she raised her hand at the end of the Hindi speaker's presentation and said, 'I have a question. Do you have -*s*?' To which, he replied, 'No, my language is different'.

  Exchanges about language went beyond the class. We were pleasantly surprised, for example, when a few Haitian students who were not in the class stopped by for the presentations about Haitian Creole. Obviously, the presenters had told their home-language peers what they were doing in class. It is clear that the students were pleased to be talking about Haitian Creole and that their friends were curious and/or loyal enough to listen in.

3.2. LANGUAGE ACQUISITION

Following these presentations, we moved on to a discussion of language acquisition. Students prepared for this by reading the relevant section of Daniels 1983 ('Children learn their native language swiftly, efficiently, and largely without instruction').

We began with this question: How did you learn your native language? Students' responses ranged from the view that they were taught the language to the idea that they just 'got' it:

- When you were babies, your parents taught you words.
- Teachers and parents showed you pictures.
- You listen to your family talk. They show you how to say it right.
- Babies listen and just learn it.

We then turned to an investigation of children's native language development. Students were told that they would collect data by watching a video and observing young children interacting with their family. In keeping with the focus on critical inquiry, before watching the video, students were asked to predict what kind of language they would observe in children of different ages based on their prior knowledge and experience – with younger siblings, for example. Students then tested their predictions against data collected from a video segment (Stiles and Montagnon 1991) that highlights the everyday language use of the Berrigan family, all of them deaf and speakers of American Sign Language (ASL). The Berrigan children, Kevin, Di, and Crystal, are 11 months old, 3 years old, and 5 years old, respectively, and thus at different stages in their acquisition of ASL.

Knowing only their ages and not their native language, students, following intuitions based in a different modality, made quite accurate predictions:

- Kevin: He will try to talk; he will learn some words – *mommy*, *daddy*, *toy*; babbling funny sounds; no speaking.
- Di: She will know words and say them; she will know a lot of words; she might mispronounce words; no sentences or only some simple sentences.
- Crystal: She'll talk perfectly; she'll start to write.

Students then watched the video (which has English subtitles for the family's signed interactions) and recorded their observations. Afterwards, they discussed whether their predictions were supported by the data and concluded, correctly, that they were.

Using the Berrigan children as a case study of language acquisition allowed us to introduce students to ASL. Students seemed to enjoy watching the signing, although reading the subtitles at the same was a challenge for them. This class meeting made a lasting impression on several students who wrote about it at the end of the year (see Section 4.1). Unfortunately, one of these students came to the partial misconception that 'There is not suffix, syllable, plural in sign language'; thus more focused discussion on the structure of ASL and other signed languages would have been useful.

3.3. WRITING SYSTEMS

As the students analyzed and gave their presentations on NP pluralization in their languages, they noted with interest the writing systems being used. Students also expressed misconceptions about writing, for example, interpreting 'the same writing system' to mean 'the same language', as in the case of one student who said that English and Haitian Creole have 'totally different' writing systems and another student who said that Tibetan is 'the same as Indian language' (probably because its writing system is related to the system used for Hindi and Sanskrit).

Students also expressed fascination with and pride in the non–alphabetic systems on display. For example, the Tibetan speaker took great care in employing three alphasyllabic scripts during his presentation. Students were amazed by these scripts and tried to copy the symbols down. Several wrote in their class notes:

- The way how write is so different.
- They are sign instead of letters.
- It very difficult to learned Tibetan but the writing is interesting.

So we decided to follow students' interests and misconceptions and look further into this topic.

To prepare for the discussion of writing systems, students were given a handout with samples of written Arabic, Hebrew, Hindi, Japanese, Korean, and Russian. They were also asked to answer two questions: Do all languages have a writing system? How was writing first invented? Every student answered 'yes' to the first question. The class then read and listened to *The 5-minute linguist* on 'Where did writing come from?' (Daniels 2005), after which they realized that they were wrong about the first question.

3.3.1. System Types
The students then turned to other questions: In your language, what's the smallest written symbol that you can read? What's the smallest written symbol that means something? How many symbols does it take to spell /ma/? For the last question, there were these answers: two symbols for the Roman ('English') alphabet; one for Tibetan; one and a half for Hindi; three different symbols for Chinese.

Next, students were introduced to three types of writing systems:

1. those that have one symbol for each unit of meaning
2. those that have one symbol for each unit of sound
3. mixed systems that have symbols for both units of meaning and units of sound.

Students were asked to identify what type of writing system is used to represent their language and to give examples in support of their answer. The discussion that followed was quite rich because of the different writing systems of students' home languages: Mandarin Chinese and Cantonese represented type 1 systems that have one symbol for each unit of meaning; French, Haitian Creole, Spanish, Tibetan, and Punjabi represented type 2 systems that have (more or less) one symbol for each unit of sound. When asked, Do you ever use a symbol for a whole word? a speaker of Haitian Creole and French replied, 'Numbers'; this illustrated the mixed nature of even type 2 writing systems.

3.3.2. Moving Between Systems
We next examined the Cherokee syllabary and its usefulness in representing students' home languages. This activity allowed us to introduce the class to an indigenous language of North America and to the syllabary that Chief Sequoyah created for the language, as well as discuss sound–symbol relationships.

The class was given a handout with the Cherokee syllabary shown in Figure 2 and asked, Could you use the Cherokee syllabary to write your language? Why or why not?

Given the syllable structure of the languages in the class, this task varied from being relatively easy to difficult to impossible.

a	e	i	o	u	v
Da	Re	Ti	Ꭳo	Ꮎu	iv
Sga Ꭺka	Fge	Ygi	Ago	Jgu	Egv
ha	Phe	hi	Fho	Γhu	hv
Wla	le	Pli	Glo	Mlu	lv
ma	Ame	Hmi	mo	Ymu	
Ꮎna trhna Gnah	Ane	hni	Zno	nu	Cnv
Tqua	que	Pqui	quo	quu	quv
Usa s	se	si	so	su	Rsv
da Wta	de te	di ti	Vdo	Sdu	dv
dla tla	Ltle	tli	tlo	tlu	Ptlv
Gtsa	Vtse	tsi	Ktso	Jtsu	tsv
Gwa	we	wi	wo	wu	wv
ya	ye	yi	yo	yu	Byv

Fig 2. The Cherokee syllabary (from Holmes and Smith 1977: 2).

In the third class about writing systems, students completed a follow-up Cherokee problem set. They were asked to answer these questions:

1. What are these English sentences?

Ⅎ Ᏻ Ᏻ̈
/ha waa yu/

Ꮎ Ꭲ Ꮤ Ꭻ �
/wi i ta gu gi/

Answers: *How are you?* and *We eat a cookie.*

2. Can you write these English sentences with Cherokee letters? Why or why not?
   We know you.
   He eats a banana.
   What's for lunch?

It was interesting to observe students grappling with this problem set. Many of them were confused about the phonetic conventions on the Cherokee syllabary handout, for example, using the symbol for the Cherokee syllable /we/ for English *we*, not understanding that the two are pronounced differently. But beyond this, students understood why the sentences in question 2 could only be partially transliterated: for example, there's no /b/ for banana, and in *What's for lunch?* there are too many consonants in a row. Some students seemed surprised that the answer to a 'Can you …?' – question is sometimes 'yes' and sometimes 'no'; determining the potential and limits of the syllabary seemed an unusual school experience for them.

In previous classes, it was clear that students believed that the spoken and written forms of their home language were one and the same thing (a view that supported their misconception that all languages have a writing system). For example, a Haitian Creole speaker wrote that 'Creol is very easy because you just write the word that you hear'. Working with the Cherokee syllabary introduced some cognitive dissonance about the presumed relationships between sounds and symbols as well as between spoken and written language.

3.4. TRANSLATION

The final topic of our pilot curriculum was translation – a relevant topic for these bilingual and trilingual students. We began with the question, What is translation? Everyone agreed with the student who said, 'Meaning from one language to another'.

Students were then given the *Omniglot* entry for their home language, which gave a description of the language and its speakers, the writing system for the language, and Article 1 of the UN Universal Declaration of Human Rights written in the language – their assignment being to translate Article 1 into English.

This was a very engaging activity that grabbed students' attention. In fact, two Chinese students who were not in the class, but were studying in the classroom, jumped right in. Working with a language partner or with one of us if they were the only speaker of their language, students were quite focused in their work. They thought a lot about what words meant and what words to use for their translation, only occasionally using paper and electronic dictionaries. The hour-long period passed quickly.

While a few students said the translation exercise was easy – perhaps because it was so captivating, most found it difficult for a variety of reasons. Some students discovered that a translation dictionary was not always a useful tool, as when a Spanish speaker was puzzled by the Spanish word *dotado*. 'What's that?' she asked. When she looked up the word in a Spanish–English dictionary, she found that it meant 'endowed', an English word that she also did not know. Despite her lack of understanding, she used *endowed* in her translation. Another student initially felt he could not do the translation because of his inability to read Haitian Creole well, as the following conversation he had with one of us indicates:

'I can't pick it up and do it,' he said.
'But what if [your partner] reads it to you?'
'Then I can – sure.'
'That's because the language is in your head, not on the paper.'
'That's what I told him!' he said, pointing to his partner.

He then worked on the exercise orally with his partner, who wrote their translation down. When students presented their translations to the class, this student declared, 'Ours is the best!'

The students made posters of their translations, presented them to the class, and displayed them in the classroom. Figures 3 through 6 show some of these translations.

When asked, Why are the translations different? students attributed the differences to 'different people' or 'different word or words'. As can be seen in these translations, some translators made more nuanced word choices than others.
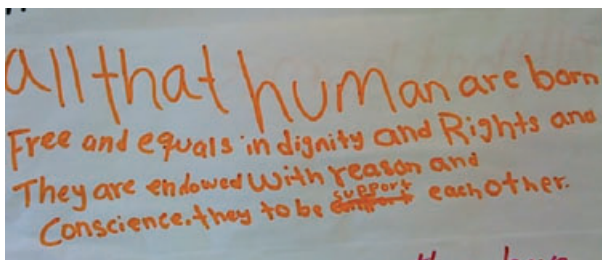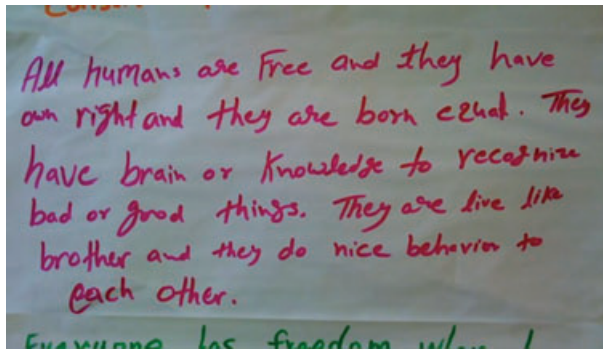

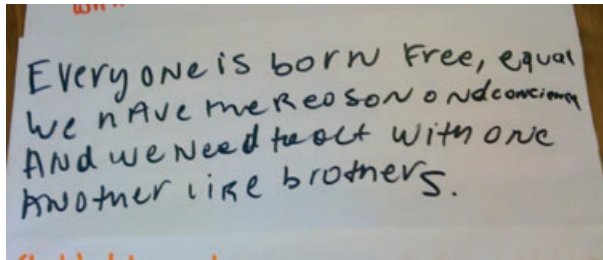Fig 3. Translation from Spanish.

Fig 4. Translation from Hindi.
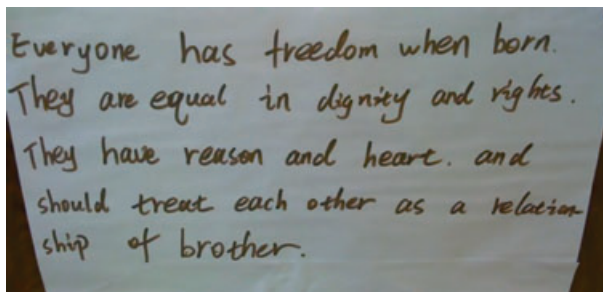

Fig 5. Translation from Haitian Creole.

Fig 6. Translation from Chinese.

4. Findings

4.1. STUDENTS' OBSERVATIONS

We asked students to write about what they had learned from the linguistics classes at two points during the year: toward the end of the first semester as we were completing NP pluralization and toward the end of the second semester before the final class meeting on translation.

During the class presentations on NP pluralization, students were given a worksheet to take notes on and to record 'something interesting I learned' about each language. While a few NP pluralization rules appeared in their notes, given this very open-ended task, students commented on a variety of things. Some students observed similarities between languages. About French, for example, the Spanish speaker found it interesting that 'some

words are same to Spanish' while one of the Haitian Creole speakers noted that it is 'very similar from Spanish and Creole'. About Spanish, the Tibetan speaker wrote, 'That has a lot of related langu[ages] so it be good to learn, because we can know some other langu[ages] with it'. As has already been discussed, many students were intrigued by the writing systems for Chinese, Tibetan, and Hindi. One of the Chinese students copied several Tibetan symbols on his worksheet and noted that the writing system has '3 kinds of [symbols for] one'. A couple of students commented on the fact that in Cantonese, 'You write the year first the month an[d] then the day'.

Before the final linguistics class, students were asked to write about what they had learned about language and what questions they still had. For this task, a number of prompts related to the linguistics classes were provided on the board (e.g., 'children', 'data', 'suffix', 'mind', 'write', 'speak', 'sign', 'English', 'plural', 'hypothesis'). Some responses to this informal survey were about specific terms or topics that we covered; some were more global comments about language. Here is a representative selection of students' written responses:

- There are many suffix for plural in many language.
- Suffix − A letter that we add at the end of a word like *s*, *x*.
- Plural − A word that is not singular and means more than one.
- In Hindi more sentence for plural than English. In English plural is *s* or *es* but in Hindi a lot … like (yan) or (ae).
- English is the international language of the world.
- Sign − Many people use sign as a language.
- Language was not only that speak but they also have sign language. We watched a movie about a family using sign language and parent and children all use that sign to communicated each other.
- Children learn language for first is pronounce, then learn syllable. Next they can speak. After that they can read and write.
- Many children learn to speak other language.

Students also had questions, such as:

- Is it the same sign language between Chinese and America?
- Do you think its better know more than 10 language?
- How many languages are in that world?
- What is common to all languages?

One student's insightful summary particularly impressed us:

> On our linguistics class we talk about the different language and their similary part and different part. We discussed about that by looking on the plural and singular of the words, and how divide syllable on different language … We learn how lots [of] language related to each other and they have some similary writing and reading also way of sentence goes that tell us language are relate to each other as a human evolution. They are connect each other.

4.2. OUR OBSERVATIONS

In this pilot project, our primary goal was to look beyond English to engage ELLs in critical inquiry about their home languages. Here are some of the things that we learned from this work:

- Students have different levels of education in their languages. Some are highly literate in their home language, while others are barely literate, if at all. Many come from cultures where different languages are used in home and school, such as Haitian Creole/French or Cantonese/Mandarin. Also, depending on the education they received in their home country and the length of time they have been in the United States, some ELLs may be more comfortable in English than in any other language. Class activities and assignments must accommodate this range of backgrounds.
- Each of the four topics that we covered took a lot of preparation. We needed to know enough about the spoken and written forms of the students' languages to guide and support their work. Among the three of us linguists, we already knew a lot, but we certainly needed to learn more before we taught the class. This sort of work is certainly necessary in any class driven by students' interests.
- At the same time, one of the greatest affective benefits of using students' home languages as classroom content is that it authentically puts students in the role of expert. Often, students are shy about discussing academic content in English, but as we observed, they may be motivated by an adult who says, 'I don't know how your language works; please teach me'.
- Despite the fact that students struggled with oral and written English, this did not prevent them from enthusiastically investigating the oral and written forms of their home languages.

5. Significance

In this time of English-only education in the United States, when ELLs' home languages are often rejected in schools, we believe that this pilot study highlights an important role that these languages can play in the ESL classroom. Although the time spent on linguistic inquiry in this class of ELLs was very limited, students were clearly drawn into exploring their own language as well as those of their classmates, learning facts and concepts about language and about inquiry.

Thus, based on our observations and students' oral and written work, we conclude that:

- Examining the structures of the spoken and written languages represented in the ESL classroom captures students' interest and engages them in critical inquiry about the nature of linguistic knowledge and their beliefs about language.
- The cross-linguistic analysis of students' home languages validates their languages in the school context, defining them as a rich resource worthy of study, rather than as a hindrance to education.

These conclusions argue for an additive approach to bilingualism, in which students come to see that English is an additional rather than the only language in the classroom and beyond. On this view, the goal of education for ELLs should be to support students' home languages and to preserve and enhance them while at the same time providing students with the English necessary to thrive in an English-dominant environment.

In the document, *Application of Common Core State Standards for English Language Learners* (Common Core State Standards Initiative 2010b), it is noted that

> ELLs bring with them many resources that enhance their education and can serve as resources for schools and society. Many ELLs have first language and literacy knowledge and skills that boost their acquisition of language and literacy in a second language … Teachers must build on this enormous reservoir of talent …

But no mention is ever made of an active role for students' home languages in the classroom.

Nearly two decades ago, Honda and O'Neil (1993: 237) suggested that linguistic inquiry in the K–12 school curriculum would ideally 'take advantage of the linguistic diversity of a class of students ....' We believe that our project gives substance to this suggestion, demonstrating that bilingualism is an asset and that there is a role for both linguistic inquiry and home languages in the ESL classroom. Indeed, we believe that learning about the many languages that students bring to school should have a place in the general education of <u>all</u> students.

Short Biographies

Daniel Ginsberg is a graduate student in the Linguistics Department at Georgetown University, as well as a Research Assistant at the Center for Applied Linguistics. His research interests involve applications of sociolinguistic observation in educational settings. Formerly, he was a teacher of ESL and Mathematics at Malden High School, Malden, MA.

Maya Honda is Associate Professor of Human Development at Wheelock College, where she teaches linguistics and developmental psychology. Her work focuses on developing students' understanding of the nature of science through linguistic inquiry. She conducts workshops for K–12 teachers on language and language acquisition, and works with teachers to develop inquiry-based curricular materials about language. She is co-author with Wayne O'Neil of *Understanding First and Second Language Acquisition* (Indigenous Language Institute, 2004) and *Thinking Linguistically: A Scientific Approach to Language* (Blackwell Publishing, 2008). She has served as chair of the Linguistic Society of America's Committee on Language in the School Curriculum.

Wayne O'Neil is Professor of Linguistics at the Massachusetts Institute of Technology and sometime instructor in Human Development at Wheelock College. His current work is centered on linguistics in the school curriculum and second-language acquisition, both the theory and relevance of the latter to the revitalization of indigenous languages. With Maya Honda, he is the co-author of *Understanding First and Second Language Acquisition* and *Thinking Linguistically: A Scientific Approach to Language*. More recent work of his appears in Kristin Denham and Anne Lobeck, eds. *Linguistics at School: Language Awareness in Primary and Secondary Education* (Cambridge University Press, 2010): 'Bringing linguistics into the school curriculum: Not one less' and (with Maya Honda and David Pippin) 'On promoting linguistics literacy: Bringing language science to the English classroom'.

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Notes

* Correspondence address: Maya Honda, Department of Psychology and Human Development, Wheelock College, Boston, MA 02215, USA. E-mail: mhonda@wheelock.edu

[1] The Common Core State Standards are the result of a year-long process led by US governors and chief state school officers to establish K-12 expectations for college and career readiness. The release of these standards in 2010 led to their adoption by an overwhelming majority of states.

[2] With the notable exception of the *Voices of North Carolina* dialect awareness curriculum for middle school grades (Reaser and Wolfram 2007a,b), most of these efforts in the United States have been short-lived. For a general analysis of why this might be so, see Denham (2007); for a case study analysis, see O'Neil (2007).

[3] Not understandable is Student D's use of *dào* 到, for it is a predicate, and neither a classifier nor a quantifier. Thus, whatever it means, this Mandarin Chinese representation of *the dog* is ungrammatical in the context of the task. Note also the students' accurate use of the classifier *zhī* 只 in both singular and plural NPs.

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