



Linguistics in a Primary School

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Abstract

In this article, I discuss a linguistics course that I have been teaching for the past 3 years in a multiage primary school classroom. This experience has led to work in other schools, has changed the way I teach introductory linguistics courses for teachers, and has led to the development of materials and curricula for use in K-12 classrooms. I hope the sharing of these experiences will help to effect real change in the way in which knowledge about language is taught in K-12 classrooms in the USA.

1. Introduction

In this article, I discuss a linguistics course that I have been teaching for the past 3 years in a multiage primary school classroom and how what started as a simple 'guest spot' in a school has evolved into a bigger project with broader applications. I demonstrate ways in which I, along with the teachers, have integrated linguistics into the curriculum (into language arts, social studies, science, and even a bit into math).

It has long been recognized that K-12 teachers can benefit from linguistic knowledge. Linguists in the USA began to recognize the importance of some of the findings of their field to K-12 education in the 1960s and 1970s, which led to several projects designed to determine which aspects of linguistics might be best incorporated into K-12 curriculum and how to undertake that incorporation. O'Neil (forthcoming) describes a 1962 US Office of Education project, strongly supported by the National Council of Teachers, called Project English. Keyser (1970) offers lesson plans that were part of a Massachusetts Department of Education project to integrate linguistics into K-12 curricula. Although these projects came to an end for various reasons (see Denham and Lobeck forthcoming), a handful of linguists have continued to work at incorporating linguistics into K-12 classrooms.

More recently, Chomsky et al. (1985), Fabb (1985), Goodluck (1991), Honda (1994), Wolfram (1997), and Reaser and Wolfram (2005) have all demonstrated that linguistics activities are successful and beneficial in K-12 education. David Pippin, a teacher in Seattle, frequently uses linguistics

problem solving with his sixth to eighth graders and has successfully done so with the third to fifth graders as well, using materials from Honda (1994) and others.

However, these projects have remained only small-scale ones because the lesson plans and activities either require a linguist in the classroom or assume a great deal of linguistic knowledge and expertise. Also, the activities, materials, or curricula are not typically set up to meet other existing goals of the teachers and students. A few linguists (Reaser and Wolfram 2005; Sweetland 2006, forthcoming) have been developing dialect awareness curricula, and these have been successfully used by teachers with no linguistics training.

Research that examines more precisely which aspects of linguistics would be most beneficial and how that knowledge can be put to good use in the K-12 classroom has come out in the last few years (see, for example, Adger, Snow, and Christian 2002; Denham and Lobeck 2005; Denham and Lobeck forthcoming; Wheeler 1999a,b; among others). But despite these steps forward, many states do not require linguistics courses for preservice teachers. Even in the states that require linguistics for teachers, such courses are not typically targeted at teachers directly; rather, they are general introductions to linguistics in which information and material that is relevant and important for teachers is not highlighted. One reason for this lack of focused instruction is that linguists are not even certain of which aspects of linguistics *are* most important for teachers to know, precisely because of the relative lack of collaboration between linguists and educators. (Another important reason that there are not always separate linguistics courses or topics for future teachers is that many fields and subject areas are competing for the few spots available in teacher preparation curricula.) Even if the teachers are able to make connections for themselves when they get into their own classrooms, the materials and curricula do not typically reflect the insights about language that they were taught in their university classrooms, and most teachers do not have the time or experience to develop their own linguistics materials.

It should be noted that some linguistically informed instructional materials do exist for the early grades, although they relate almost exclusively to reading, writing, and spelling (see, for example, 'word study' curriculum such as the following: Morris 1982; Abouzeid, Invernizzi, and Ganske 1995; Invernizzi, Abouzeid, and Bloodgood 1997; Ganske, 2000; Bear, Invernizzi, Templeton, and Johnston 2004; among others). Beyond these, there are simply very few materials, lesson plans, or curriculum programs for K-12 education that incorporate linguistics and knowledge about language.

My work reaches beyond the one primary school classroom I have been working in since I take what I learn in the primary classroom back into the university classroom in which I am preparing preservice teachers

(among others). Also, a National Science Foundation grant, discussed more below in Section 7, allows me and my colleague Anne Lobeck to expand our work into other K-12 classrooms. What we learn from the K-12 students and teachers is directly affecting the ways in which we teach introductory linguistics to future teachers. A secondary, but equally important aspect of this work is that it is resulting in a collection of materials and curricula for use by teachers in K-12 schools. I have begun to compile these (at <http://teachling.wvu.edu>), making them easily accessible by teachers, and I hope that others (linguists and K-12 teachers) will contribute their own materials.

Although I believe it is important to get linguistic knowledge in at every level of schooling, I also believe it is especially important to integrate linguistics at the primary school level for several reasons. One is that as most primary school teachers teach all subjects, working with primary school teachers and children allows for integration of linguistics across the entire curriculum. Also, linguistics is so well-suited to introduce to primary school-age children because there are fewer effects of literacy, the children's natural aptitude for language makes instruction rewarding as they are such eager and able participants, and there is not a great deal of language prejudice or prescriptive attitudes about language at this point. Also, language is an easy and accessible way to introduce the scientific method of analysis [as shown by Honda, O'Neil, and Pippin (2004), and Honda (1994) (for secondary students)].

I offer below some examples of the kinds of linguistic investigation I have introduced in the primary school. It is my hope that by sharing my experiences we can continue to effect real change in the way in which knowledge about language is taught and the ways in which it can be best integrated in to K-12 education in the USA.

2. At the School

The school at which I have been teaching linguistics for almost 3 years is a small, private, K-5 school of about 18 students between the ages of 5 and 11. There are two teachers who both teach all of the students. All students are native speakers of English. This school has provided a unique opportunity for me to work with a wide age range of students. Typically, I work in a multigrade class with the older students (ages 8-11), while the teachers work with the younger students on separate activities. For some linguistics activities though, I have all of the students.

When I first started teaching in the school, I had no long-term plans for the class. The school had lost their Spanish teacher, so I volunteered to teach them 'some things about language' once a week.¹ I tried to formalize my own goals for this class, and made the following list.

Goals for primary school linguistics class:

- to introduce students to language as an object of study;
- to allow students to discover the unconscious knowledge they already possess with respect to language and language rules;
- to maintain and foster children's natural love of language and language play;
- to allow students to discover the patterns and systematicity of language;
- to reduce linguistic discrimination; and
- to engage in scientific investigation.

The young students were so good at our language exploration and so enthusiastic that I soon began to do more: I began to collaborate more with the teachers; I began to integrate linguistics into other aspects of the curriculum; and I began to develop more materials and lesson plans. In the following three sections I describe some of the activities that I have conducted with the students, noting in particular which of these require linguistic background and which could be taught by any teacher, given the proper materials and lesson plans.

3. Morphology Lessons

With the students aged 8–11, I introduced morphology problems (using Hungarian, Michoacan Aztec, Turkish, Quiche, Samoan, Nahuatl, Lushootseed, and others) in which students compare partially similar words to discover patterns of the language. They were really good at these, although there seemed to be a natural split, with the older students (ages 9–11) being the ones who could do the more challenging ones, and the younger students (ages 5–8) struggling a bit more with this kind of pattern recognition. However, the youngest were not fully literate, so I found it challenging to do these kinds of morphology problems with the emergent readers as I was so accustomed to using handouts and written language data. When we investigated English morphology (the meanings and patterns of prefixes and suffixes) and there was less of a need to rely on printed data, all ages were able to participate equally well.

The benefits that these morphology problems offer – categorizing, analyzing, and simply conducting basic scientific investigation – seem obvious. Such activities can be used to meet goals and skills standards of social studies, language arts, and science. Teachers interested in seeing these kinds of morphological analysis problems can find them in most introductory linguistics textbooks, although linguists could be working to make them more accessible for those with no background in linguistics.

Below is a small sample of a larger activity the students did, based on the word-building process reduplication, common in the Salish language Lushootseed, a native language spoken in Washington state. The study of the language became part of a larger thematic historical, cultural, and

linguistic study [ʔ is a glottal stop, a consonant of Lushootseed (and many other languages)].

A		B	
ʔáʔlal	house	ʔáʔaʔlal	hut
ʔuq ^w ud	pull out	ʔúʔuq ^w ud	pull part way out
hiwil	go ahead	híhiwil	go on ahead a bit
q'ix ^w	upstream	q'íq'ix ^w	a little bit upstream

After we examined the data, I posed the following questions: How do you form the words in column B from the words in column A? What is the meaning that is added to the word? Does English use this process of forming one word from another by doubling a piece of the word (called reduplication)? Are these examples of reduplication in English: *hocus pocus*, *hoity toity*, *itty bitty*, *teeny tiny*? The students latched onto the Lushootseed diminutive rule and began using the process in English with all sorts of words, showing excellent command of the process and wonderful creativity with language. They used the reduplicative diminutive with their names (Morgan became Momorgan, Josh became Jojosh, Ella became Elela, Ivy became Ivivy, Celestina became Cecelestina, and so on) and with other nouns and verbs around the school (Hand me my bobook. Please opopen the dodoor).

4. Phonology Lessons

We also did traditional phonology problems, including the allomorphic variation of English plural. I did not introduce any phonetic transcription at first, but just used *s/z/ez* and emphasized that we were talking about sound and not spelling. They were so much faster at this problem than my university students. The younger ones, being preliterate, were not affected by English spelling patterns so they tuned in quickly to the differences in sound. They got the voiceless/voiced distinction immediately and even the sibilants. They were the ones who made the connection to spelling, realizing why they had spelled some words incorrectly. 'So that's why *dogs* sounds like it ends in a /z/?' Yes!² They came to understand the mismatch between sound and spelling themselves.

This sort of linguistics problem-solving activity develops analytical skills, introduces the scientific method, allows for exposure to other languages and their diversity, and is, quite simply, fun. Working with other languages also allows for insight into English and its structure, which can be difficult to reflect on without the comparison of a different kind of system. However, teachers may not be able to teach such lessons without some knowledge of linguistics, and they might not see the benefits of

teaching them unless those benefits are clearly laid out and it is shown how such lessons could help accomplish other goals and standards that they need to be satisfying.

The English plural ending lesson is also an excellent example of how linguistic knowledge – in this case, knowledge of phonetics and phonology – is so important for teachers. In order to understand how to teach spelling, how to recognize why students are making errors, and how to properly respond to misspellings, knowledge of phonetics and phonology is crucial. This is not new news; ever since linguist Charles Read (1971) first discussed preschoolers' spelling inventions, some curriculum programs and teacher preparation materials emphasize the importance of an understanding of phonetics and phonology (see, for example, Ganske 2000; Bear et al. 2004). But many do not, and many teachers for whom linguistics was not a required course still seem unaware of the importance of phonetics and phonology, among other areas of linguistic study.

5. *Morphosyntax Lessons*

As further illustration of lessons I conducted with the students, I offer below two lesson plans on syntactic categories, parts of speech, showing how a linguistically informed approach may differ from traditional approaches to teaching grammar. The student comments included below illustrate some of their insights – and the success of this approach. These two lessons emphasize what the students already know about parts of speech as speakers of a language. I think they show too that there may be some real results from this approach for 'struggling readers'. These lesson plans also illustrate the importance of having linguists work on developing materials for use in primary school classrooms, but then how such materials can be 'freestanding' after that, allowing all teachers, regardless of their training, to make use of the lesson plans.

5.1 BE A WORD IN A SENTENCE

Goals:

- to introduce parts of speech;
- to see that there is a difference between content words and function words; and
- to discover how parts of speech have to do with meaning and that we can describe content words by their meaning and function in the sentence.

I handed out words on individual pieces of paper to seven students.

The	rabbit	hopped	in	the	tall	grass
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I asked them first to put themselves in order to make a sentence. Then they were to act out the words for the rest of the students and those students were to try to guess what the words were. As expected, those with the words *rabbit*, *hopped*, *tall*, and *grass* all could act out their words fairly easily (although *grass* was kind of tough); *the* and *in* were harder.

We did it with different students and a second set of words.

A	cat	is	eating	a	bird
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Here *cat*, *eating*, and *bird* were easy to act out, but not *a* and *is*.

Then we talked about which words were harder to act out. I put the words into groups on the board (using different colors for each group too):

rabbit	the
hopped	in
tall	a
grass	is
cat	
eating	
bird	

What follows is the dialogue between me (KD) and the students.

KD: What makes the words in the first column easier to act out?

Students: They mean something. They're things and actions. They also describe.

KD: What about the other ones?

Students: They don't mean anything. You need them, but they're hard to act out because they don't mean anything.

We discussed the fact that the function words do, in fact, have meaning, but that they are indeed harder to act out. (They tackled describing the difference, for example, between *a* and *the* – not an easy task – and ended up with quite an accurate description of the definite/indefinite distinction.)

KD: What can we call the kind of words in the first column?

Students: Nouns. Verbs. Adjectives.³

KD: Are nouns, verbs, and adjectives more meaningful than the other words?

Students: Yes. But the others still mean something.

KD: OK, so one way we can identify nouns, verbs, and adjectives – parts of speech – is by their meaning. How can we describe nouns?

Students: Things, people, places, stuff you can touch.

KD: How can we describe verbs?

Students: Actions, doing-words.

KD: How can we describe adjectives?

Students: They describe.

5.2 FOLLOW-UP AND EXTENSIONS

The students really like doing this charades-like activity and want to play it all the time. They have developed a system for representing some of the functional category words: one student made her body into an *A*-shape for the determiner *a*. The students guessed the word so now they use that body position not only for *a*, but for other determiners – if it is not *a*, they go through a list, guessing *the, that, this, each, some*, etc., showing excellent command of the category determiner. Also, I have used different verb forms to see what they do with these (*ate, is eating, have eaten*, etc.). It is obviously difficult to get at these distinctions via charades, but again, the students started going through lists of verb forms: *is eating, ate, have eaten, will eat*. It illustrates their unconscious knowledge and shows their excellent command of the verbal system. It is important for teachers to do the following activity too, however, to make it clear that our understanding of syntactic categories goes much deeper than just meaning.

5.3 JABBERWOCKY

Goals:

- to see that meaning is not the only way we understand parts of speech – we also use our syntactic and morphological knowledge;
- to see that we use our knowledge of other pieces of the sentence to figure out categories (parts of speech);
- to understand that we already have all of this knowledge simply by being speakers of the language;

I wrote on the board this sentence from Lewis Carroll's *The Jabberwocky*:

The froobling greebies snarfed the granflons with great libidity.

We circled the words that are English words: *the, with, great*.

I then asked if there were pieces of the other words that they recognized from other English words: *-ing, -(e)s, -ed, -s, -ity*. (They were fast on this; much faster than my university students.) We talked a little about what these suffixes mean.

KD: What part of speech is *greebies*?

Students: Noun.

KD: How do you know it's a noun?

- Students: Because it has an *-s*.
- KD: How else? What other word nearby gives you a clue that it's a noun?
- Students: The word *the*.
- KD: So you know that if you have a *the* that there will be noun nearby?
- Students: Yes.
- KD: So what part of speech is *froobling*?
- Students: Verb. Adjective.
- KD: Yes, you're both right. Do verbs sometimes have *-ing*?
- Students: Yes.
- KD: Is this a verb here?
- Students: No, it's describing *greebies*.
- KD: Can you think of other words that describe nouns that have *-ing*?
- Students: The running horse, the drinking cat, the spitting boy.
- KD: So sometimes *-ing* words are verbs and sometimes they are adjectives?
- Students: Yes, it depends on where they are in the sentence.

We did this for the other nonsense words in the sentence. *-ity* was interesting because most of the suffixed *-ity* words they thought of were 'big' words – *probability*, *fluidity* – that some of the students did not know the meanings of. When we put several of these words into sentences with more context, such as the following, the students instantly used morphology to understand the category noun:

The probability of rain is low.

Students: Oh, it occurs with *the* so it's a noun!

They also mentioned *city* and *kitty* and said that these are nouns too.

- KD: They are, but how are they different?
- Students: They don't mean anything when you take off the *-ity*.
- KD: Exactly. So we have two *-itys*. One can attach to an adjective and make a noun, the other can't be separated from the noun.
- Students: There's also *itty bitty*!

So we go back to the Lewis Carroll sentence.

- KD: How do we know the parts of speech of these words when we don't even know what the words mean?
- Students: We have the other words and parts of words as clues.

They also wanted to know the names for the function words which they didn't want to call the 'little' words. They were quite pleased with the word *determiner*. I have found that instead of shying away from 'hard words',

the young students are proud of being privy to special vocabulary and remember it quite well too.

An additional benefit of many linguistics lessons such as these is that they appear to be very appealing to some ‘struggling readers’. In the school I work in, there are a handful of fourth and fifth graders who self-identify as ‘math and science’ types and do not like ‘reading and writing’. However, they really love linguistics and are very good at these analytical problem-solving language activities. As Honda et al. (2004) also found, reluctant or struggling English language arts students excel at linguistics problem solving. My bet is that introducing linguistics problem sets will perhaps turn students who struggle with ‘language’ in a broad sense into students who can be successful with language-related activities. It could even lead to improved test scores. Someone needs to do that assessment; it is an area ripe for further research.

6. Other Language Study Activities

The following activities illustrate other ways in which I have incorporated language study into the curriculum, especially as it relates to geographic and cultural study. These support the idea that language itself, not just reading and writing and spelling, should be studied, and that there are a myriad of ways to integrate it across the primary school curriculum.

6.1 LANGUAGES OF THE WORLD

I began to integrate linguistics into the school’s thematic studies. For example, when the students were doing a study of continents, spending about a week on each one, I discussed languages of those regions. When studying the African continent, I introduced languages of Africa and we investigated five of them more closely (Swahili, Arabic, French, Fly Taal, and Tswana), leading to discussion of language change and language contact. We learned greetings in these languages and made decorated signs with these greetings to use throughout the month. We made an illustrated Swahili–English alphabet book. We talked about Swahili words they knew (from *The Lion King*): *rafiki*, *samba*, *pumbaa*, *hakuna matata* and their meanings. For languages of Asia, we also talked about five of them in depth, and two of them, Japanese and Mandarin, even more. This led to discussion of writing systems, comparing alphabetic to ideographic, and the students practiced writing the Chinese characters for some words, and created a Japanese counting book with the numbers and their characters 1–10. They also used greetings from the five languages we discussed throughout the month. We did an excellent exercise (found at <http://www.askasia.org>) on Chinese dialects, in which the students looked at characters and translations, but made up (in groups) their own pronunciations. Each group was able to understand only their own group’s sentences. This

again led to discussion of writing systems, dialects, and the arbitrariness of the sign, among other topics. Later, they studied Hawaii and so I discussed Hawaiian and Hawaiian Creole English. This offered a great opportunity to talk about creoles in general and language genesis.

6.2 LANGUAGE CHANGE

The broad area of 'language change' is one in which linguistic training plays an important role, although the amount of knowledge a teacher might acquire in an introductory linguistics class would be sufficient to conduct this sort of study. With the students, I introduced the notion of language change frequently and in various contexts. We have looked at Old English and listened to recordings of it (along with discussion of other aspects of the people and their culture, geography, immigration and settlement patterns). We often discuss spelling and the historical reasons for many of the spelling idiosyncrasies of modern English. We talk about the distinction between spoken and written language and have discussed the effects of standardization and the influence of dictionaries and grammar books. For a specific exercise, we researched the etymology of each of the students' names. This activity led to discussion of cultural, historical, and social influences on naming (and related conversations about capitalization and spelling conventions).

6.3 LANGUAGE VARIATION

We have studied language variation by comparison of British and American dialects. We first discussed vocabulary differences that the students came up with (*lift/elevator, torch/flashlight*) and used the experience of several children in the class who had British connections (Scottish father, English grandmother). Then we turned to *Harry Potter*, which offered a good opportunity not only for discussion of British and American dialect differences and how these are represented in print, but also offered an opportunity to discuss Latin. (There is a great deal of superb information online on language in *Harry Potter*. The students really had fun with Latin spells, which led to more exploration of Latin and Greek roots later in the year, requested by the students.) Another way in which I have discussed variation came out of discussions I had heard the students having about variation in games and rhymes [jumprope rhymes, game calls, such as *Come out! Come out! Wherever you are!*, *Ollie Ollie Oxen/All Come Free*, and the students' own ludlings (language games), called Obbish and Ubbly Dubby] (see Denham 2005 for further discussion of these ludlings).

6.4 WRITING SYSTEMS

We have also discussed writing systems: alphabetic (Roman, Cyrillic, Greek, etc.), syllabic (Japanese, Cherokee), and pictographic and logographic systems

more generally (which had been introduced when we studied Chinese and Japanese). We also talked about runes used in the writing of Old English and they ‘carved’ (with permanent black ink) their names and/or a saying into stones.

6.5 WRITTEN WORD GAMES

We have played lots of written word games, such as the following:

- Anagrams. These explore knowledge of sound and spelling and illustrate how we use our unconscious knowledge of possible letter/sound combinations. For example, *ngisre* is easily unscrambled to *singer* as many of the letter combinations are not possible in English.
- Pink stinks. This game explores knowledge of rhyme and synonyms (and is good to do with even the very youngest students). For example, the clues *iguana snowstorm* result in the rhyming answer *lizard blizzard*.
- Word chains. This game explores sequencing, spelling, and the sound/symbol mismatch. Here are two types of word chains: *a, an, and, sand; metal, almost, stone, nest, stare, reverse, seat*. These were integrated into a math unit on sequencing.

The teachers I worked with used these kinds of language games already in their classrooms, and primary school curricula and lesson plans often incorporate similar examples of written word exploration.

7. Reflections

There are, of course, so many more ways in which linguistics – broadly defined – can be incorporated into primary school classrooms; I have merely given a sampling here of the kinds of activities I have conducted in one primary school. What will make these activities more broadly useful is developing them into free-standing lesson plans and the broad dissemination of linguistics materials and curriculum that can help meet K–12 students’ and teachers’ needs. The multiage classroom I worked in provided a unique opportunity to test out lessons on a diverse age range. By and large, the students excelled at all of the linguistic activities. And having been given free rein by the teachers, I was able to integrate linguistics across the entire curriculum.

When I first started teaching university-level linguistics to preservice teachers, I was somewhat resentful that they asked me what this information had to do with what they would be doing with their first graders, fifth graders, or tenth graders. I did not know; my job was to teach them linguistics. Their job was to figure out how to apply that knowledge. But as I have come to appreciate the lack of basic knowledge about language that exists in schools, in curricula, and in primary school textbooks, and

as I have become a better, more experienced teacher who wants K-12 teachers to incorporate their knowledge of linguistics into their classrooms successfully, I have realized the importance of both being in schools and also becoming much more involved with teacher preparation in order to effect change.

I am now working directly with primary school teachers and students, and I believe such partnership is very important to the work of integrating knowledge about language into K-12 classrooms. Anne Lobeck and I currently have a National Science Foundation grant (the Western Washington University Teaching Partnership Project: Improving teacher education in linguistics through partner teaching and curriculum design) that helps support partnerships with teachers. We identify language issues of most importance to teachers, and then determine how linguistics can be most effectively integrated into K-12 curriculum to meet teachers' and students' goals. (Lobeck works primarily with middle and high school teachers and students. I work primarily with elementary and middle school teachers and students.) We are working to identify ways to expand linguistic knowledge beyond the border of current pedagogy, and together with teachers are creating effective ways to bring linguistic knowledge into classrooms. The next stage of the project is the development of a new teacher education course, informed by our fieldwork in schools.

The 'partnering' aspect of our work is very important. In the field of education, teachers have always had to endure people from many fields telling them what they should be teaching. But until more linguists get into classrooms and become educated about how schools and school systems work, what takes place in classrooms, and what teachers need, little progress will be made. As I noted in Section 1, there is, in fact, linguistically informed instruction already taking place, especially in the areas of reading, writing, and spelling. Also, many reading teachers know a lot about linguistics, whether they know it by that name or not. It is important to acknowledge what is already in use and then expand on that base knowledge and the existing materials.

Also, in this era of increased accountability for educators and their students in the USA, it is even more important that curriculum on language and linguistics be justified. Because there is a limit to what can be taught in schools and because standardized testing and standards-based curricula are the driving forces behind what is taught, it is crucial that linguists working on integrating linguistics into K-12 education consider these factors and work within the educational framework, seeking ways that linguistics can meet existing standards.

And finally, it is important to explore ways in which linguistics and knowledge of language can be integrated into curricula other than in the traditional areas of reading or grammar, as has been done by Reaser and Wolfram (2005) in the North Carolina social studies curriculum, for example, and by Honda (1994) in the science curriculum.

The opportunity to work directly in a primary school has allowed me to begin to develop materials for teachers to use in the primary grades (but many of these could be easily adapted for use in secondary school classrooms), to explore ways to integrate more linguistic material into existing curricula, and to learn how to adapt my own linguistics course for teachers.

8. *Charge to Others*

Although we have begun to see a shift in linguists' attitudes toward the role of linguistics in education (e.g., more sessions at the Linguistic Society of America meetings on linguistics in education, more books on linguistics and education), we can do more. The following suggestions, some of which overlap with each other, will enable us to move forward more rapidly, accomplishing our goal of incorporating linguistics into K-12 education, and, therefore, moving into the public sphere.

- We need to change the way we teach introductory linguistics for teachers by allowing more linguists to work with teachers and with teacher educators.
- We need to work with teachers to develop more linguistics materials for use at all grade levels and across all disciplines.
- We must connect the activities and materials to national, state, and local standards of education and assessment measures.
- We need to develop more materials that are able to stand alone, materials that can be used effectively by teachers who are not experts in linguistics.
- We need to share and disseminate the materials.
- We need to respect linguists' work on linguistics and education as legitimate and 'scholarly', worthy of tenure and promotion.
- We need to have more sessions devoted to linguistics and education at local and national conferences.
- We need to collaborate more with schools of education and educational professional organizations.
- We need to require linguistics for teachers – all teachers in all states in all disciplines.
- We need to sit on state/national standards boards, both for teacher education requirements and for K-12 student standards and benchmarks.

9. *Conclusion*

As our field continues to grow, an area of particular interest to many linguists is how the scientific study of language can be productively integrated into K-12 education. K-12 teachers are also aware of the need for scientific study of language, particularly in order to meet the goals articulated in state or national accountability requirements. In spite of primary and secondary teachers' and linguists' joint commitment to the

importance of the study of language in the K-12 curriculum, research in linguistics has had a minimal impact in schools. Key to integrating linguistics into the schools is improving teacher preparation, and although some teacher education programs offer courses in linguistics, linguists who teach such courses typically know little about K-12 teaching. Improving teacher preparation thus depends on improving teacher education faculty expertise: linguists who teach future teachers must better understand which areas of linguistics are of most importance to K-12 teachers, and also how that material can be taught most effectively in the K-12 classroom. More linguists need to get into K-12 classrooms and work with teachers and education faculty to develop excellent resources for all of our students. My work in a primary school has fully convinced me of the importance of such partnering and of the need for other linguists to undertake similar projects.

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Short Biography

Kristin Denham's research involves the integration of linguistic knowledge into K-12 teaching, both in the development of materials for the K-12 classroom and in the preparation of teachers. She has two books which she has co-edited (both with Anne Lobeck) in this area: *Language in the schools: Integrating linguistic knowledge into K-12 teaching* (Mahwah, NJ: Lawrence Erlbaum Associates, 2005) and *Linguistics at school: Language awareness in primary and secondary education* (Cambridge: Cambridge University Press, forthcoming 2008), as well as two forthcoming textbooks (co-authored with Anne Lobeck): *Introductory Linguistics* (working title), (Boston, MA: Thomson/Heinle, forthcoming 2009), and *English Grammar: A Guided Tour* (Boston: Blackwell Publishing, forthcoming 2008). She has also written

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Notes

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¹ I have found that there are actually quite a few linguists who do similar visits to schools, giving presentations, workshops, or short lectures (often in the classrooms of their own children). It is also often the case that they then discover the dearth of linguistic knowledge in schools, prompting many to get more involved in incorporating more knowledge of the workings of language into education. Also, many linguists (it would be nice to have figures on this) teach future teachers. These linguists also must confront what teachers should know about language and how that knowledge should be transferred into K-12 classrooms.

² This phonology problem allows students to discover that it is the final sound that a word ends in that determines which of the sounds /s/, /z/, or /ez/ is added to the word as a plural ending. So words that end in 'voiced' sounds (with vocal cord vibration) take /z/ as a plural ending, words that end in 'voiceless' sounds (no vocal cord vibration) take /s/ as a plural ending, and words that end in what are called sibilants (hissing or hushing noises) take /ez/ as a plural ending. Thus, *dog* takes /z/: *dogz*, *cat* takes /s/: *catz*, and *dish* takes /ez/: *dishēz*.

³ They were already familiar with the terms *noun*, *verb*, and *adjective* from other games we had played (Mad Libs, Parts of Speech Bingo).

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