

Essential Linguistics Resource Guide

Introduction

We are pleased that you have chosen to use *Essential Linguistics* as a text for your course. We realize that many instructors have no need of a guide; however, we thought it would be helpful to share some of the insights we have gained from using the text and to offer suggestions or clarifications for some of the Application activities that come at the end of each chapter. We would also encourage you to have students think about and perhaps respond to the questions at the beginning of each chapter. Students could discuss these questions in class before reading the chapter and then reflect on their answers after having read the chapter.

The Applications are intended to involve the students in doing linguistics on a small scale. The aim is to have students apply what they are learning to their present or future teaching situation. We have used many of these applications with both undergraduates planning to teach and with graduate students who are teaching at different levels K–16. Naturally, students respond differently depending on their experience. The goal is not so much for students to get *right* answers as to involve students in doing linguistics and to have them attempt to apply what they are learning.

This resource guide consists of commentaries and explanations of many of the Applications. We want to emphasize that these are only suggestions. Many of you will adapt or extend the Applications you assign to students. We do not suggest having students do all the Applications. The key is for them to be actively involved in applying the ideas from each chapter. The way we have used student responses is to have students spend time in class discussing their answers in small groups or as a whole class. We often then give them credit for having made a good attempt to respond. We look at their level of effort and check off the results without grading each paper as right or wrong. This seems to have been a good approach that maximizes student involvement and minimizes teacher time and effort.

In the following sections we comment on the Applications chapter by chapter. We should note that at this time the book is in its third printing. You can tell which printing you have by looking at the numbers at the bottom of the second page, which has the credits. If the row of numbers on the right start with 1 2 3, you have the first printing; if they start with 2 3 4, you have the second printing; and with 3 4 5, the third. Alternatively, if you look at the back cover under our bio information, the first printing says we work in the School of Education, and other printings state that we work in the College of Education (a correction that our dean pointed out needed to be made). There are some changes in the wording of the Applications in the newer printings. Where there are differences, we will explain them and include the wording of the most current printing in this guide. The changes came as a result of our further reflection and of student responses (or confusions) as they attempted to complete some Applications. As more students respond, we will continue to reword or rethink the Applications and make changes. Your feedback would also be helpful.

We hope that this guide will be a useful resource for you as you work with students, introducing them to linguistic concepts they need to understand to make informed decisions based on scientific information about how to teach reading, ESL, spelling, phonics, and grammar.

1

First Language Acquisition

1. Students have responded with a variety of graphics to organize the information. Most students opt for the table form suggested in the book. Here are a few of the key ideas for each area. You might suggest that students begin by stating a key question that researchers from each field attempt to answer as they study language development.

Developmental Psychology	Sociology, Anthropology, Education	Linguistics
Key question: Do children learn language the same way they learn other things, or do humans have a special capacity for language learning?	Key question: What are social forces that shape language development and how can social institutions promote language development?	Key question: What is the nature of the language that children develop?
Most studies focus on early language development.	Children develop what Hymes termed communicative competence, the ability to use language appropriately in different social situations.	Different theories of linguistics have led to different theories of language acquisition.

<p>Brown found parallels between stages of language development and Piaget's stages of cognitive development.</p>	<p>Studies have focused on interactions between caregivers and children. Studies show adults often imitate children rather than children imitating adults.</p>	<p>Behavioral psychology and structural linguistics were used together to form theories about language learning. Structural linguists described sentence patterns of oral language.</p>
<p>Rice found that cognitive and language development seem most closely related at early stages and later diverge.</p>	<p>Heath studies three different speech communities and found very different interaction patterns among the children and adults in these communities. She considered the differences between how children interact in the home community and in the school.</p>	<p>Cognitive psychology and generative linguistics were used to form more current theories of language acquisition.</p>
<p>Studies across language groups show that all children seem to develop language in much the same way and go through similar stages.</p>	<p>Well's longitudinal study showed the importance of encouraging children to initiate and sustain conversations rather than correcting them.</p>	<p>Chomsky argues that children acquire basic knowledge of phonology and syntax early in life. They internalize a set of rules that allows them to comprehend and generate utterances.</p>
<p>Pinker and others note that the stages include babbling, production of syllables with CV structure (7 to 8</p>	<p>Goodman and Goodman describe language development as the result of the tension between invention and convention.</p>	<p>Chomsky's model of language includes a surface structure and a deep structure. Children acquire the rules for deep</p>

<p>months), single words for important objects (one year), two-word utterances (18 months). Beyond two years, language develops so rapidly that it is hard to study.</p>		<p>structure and additional rules to transform deep structure forms into surface structure forms.</p>
<p>At 18 months, vocabulary begins to grow rapidly and children show understanding of syntax.</p>		<p>Chomsky based his theory in part on his observation that some sentences are structurally ambiguous.</p>
<p>Petitto conducted studies showing that children acquire sign in much the same way as children acquire oral language.</p>		<p>Chomsky argues that children are born with an innate knowledge of the basic structures of language, what he terms Universal Grammar (UG) and that humans have a language acquisition device (LAD), a capacity to use language input to figure out the rules of any given language through a process referred to as parameter setting.</p>
		<p>Studies of children's errors help confirm Chomsky's theory. Children simply</p>

		don't make certain kinds of errors, and this suggests that they learn language differently from how they learn other things.
		Brain research complements linguistic investigation. This research has looked at where different language functions are located in the brain.

It works well for students to discuss their charts with classmates in small groups and then to create a whole class chart with contributions from each group. We have made copies of the class-generated chart to distribute at the next class session.

Additional Notes

It is good for students to reflect on how different academic fields approach the same phenomenon so differently. Developmental psychologists, for example, are concerned with individual, psychological factors. Sociologists and anthropologists are concerned with social factors that influence development. Educators are interested in the implications for teaching and learning. And linguistics focus on what is being developed: language. If students have majored in different fields, they can reflect on how different academic areas each use their own methods to answer their specific questions even though all of them may be studying the same phenomena.

This chapter only touches briefly on brain research. Students might do additional study of this area since many new books have been written recently.

2. Students have a difficult time coming up with structurally ambiguous sentences that are different from those in the book. Often, students write sentences that contain ambiguous words but are not structurally ambiguous. It

would be good to contrast sentences such as the following to show the difference:

- a. There was a fork in the road. (ambiguous word)
 - b. He saw the girl with a telescope. (ambiguous structure)
3. This exercise is much easier to do. You could discuss these different transformations using some of the traditional terms such as active and passive.
 4. Students enjoy carrying out this exercise and sharing with classmates. Many of our students are married or work with young children, and this gives them an opportunity to observe children's language. Students could also use the guidelines Wells offers (p. 9) to analyze the interaction between adult and child. Does the adult encourage the child to initiate and extend language or does the adult attempt to correct the child? If the adult attempts correction, what is the result?
 5. This question can produce lively discussion especially if your class includes some students who are currently teaching. You could connect Heath's findings to Goodman and Goodman's ideas of invention and convention. To what extent do school practices encourage invention and to what extent do they insist on students' following conventions in areas such as spelling development? Does the increased emphasis on tests with *right* answers affect the school response?

2

Written and Second Language Acquisition

1. There may be students who acquired English as a second language. It would be good to have them contrast their experience with that of students who studied a language in high school or college. Students should be able to identify specific features of learning mentioned in the chapter, such as studying grammar, memorizing vocabulary lists, and practicing dialogues. Some students might have studied using a communicative method. It would be good to have students discuss what helped them in learning a second language and what did not help. They could use these insights to discuss how they work or will work with English language learners in their classes or the methods used to teach ELLs at their school.
2. Some students may have experienced a process approach although many students probably experienced a traditional approach. Encourage students to identify specific aspects from their experiences that correlate with each approach. Remind them to use the chart on page 29. Students can also analyze the approach to teaching writing that is being used in the school where they teach, a local school, or the school their children attend.
3. Brown and Cambourne found what they called direct and indirect spillover. Direct spillover occurred immediately as students used words, idioms, sentence patterns, or punctuation that they encountered in the texts they read. Indirect spillover occurred when students' writing reflected these elements after two or three weeks. Brown and Cambourne saw these results after students read extensively in a genre and participated in the written retelling sessions they describe. If possible, bring in a copy of *Read and Retell* (Heinemann, 1987) to show students. You could also go through the steps of the read and retell process.

4. The key for this activity is for students to discuss/defend their choices, showing they understand the differences between the two views. The way a teacher implements an activity is more telling than the activity itself. Students also often think that any direct teaching must be learning, but it can be listed as acquisition if the activity helps make aspects of texts more salient for students. For example, having students identify words in a story that start with the same sound can lead to acquisition of letter-sound correspondences. We list this as acquisition because it is carried out in the context of an authentic reading activity. Here are some suggested answers.

The students:

- L look up words in the dictionary to write definitions
- A make a Venn diagram to compare two stories
- L practice sounding out words
- L read in round robin fashion
- L correct peers when they make a mistake during reading
- A identify words on a big book page that start with the same sound
- A group cards with classmates' names by criteria such as first or last letter
- A write rhyming poetry and then discuss different spellings for the same sound
- L ask the teacher how to spell any word they don't know
- A read a language experience story they have created with the teacher
- A work in pairs to arrange words from a familiar chant into sentences
- L divide words into syllables
- L on a worksheet, draw a line from each word to the picture that starts with the same sound
- A make alphabet books on different topics

The teacher:

- L preteaches vocabulary
- A does a shared reading with a big book
- L makes sure that students only read books that fit their level
- L has students segment words into phonemes
- A writes words the students dictate for a story and has students help with the spelling of difficult words
- A/L asks students to look around the room and find words starting with a certain letter (This could be an acquisition activity if it helps students notice features of the environmental print. It is a learning activity if it is more of a drill.)

- L uses decodable texts
- A sets aside time for SSR each day
- L teaches Latin and Greek roots (although this practice is useful for older students interested in linguistic investigations—see morphology chapters)
- A has students meet in literature circles
- L conducts phonics drills
- A chooses predictable texts
- A teaches students different comprehension strategies
- A does a picture walk of a new book
- L uses a variety of worksheets to teach different skills

3

English Phonology

Note: The system for transcription we used for the book is based on Akmajian and Demers (1979). You may choose to use a different system. In a future printing, we may add /ɔ̃/ (the open o) to represent the vowel in front of /r/ in a word like *for*. Otherwise this system seems to work well as an introduction. Students understand that long vowels in English include a glide. Some students have tried to type answers that include phonemes and then find they can't represent some figures, so we tell students to write answers by hand. However, you and your students can download a useful set of fonts from the Summer Institute of Linguistics website, which Sandra Wilde alerted us to: <http://www.sil.org/computing/fonts/encore-ipa.html>. We used the Doulos regular font for the book.

It is also good to discuss dialect differences since some students' transcriptions may reflect their dialects. This is particularly true for students who speak English as another language.

1. Figure 3–1 leaves out several elements of communication.
 - Listeners predict what they will hear and sample the acoustic signal. They do not need to perceive every sound.
 - Listeners infer missing information.
 - Listeners use the social context to interpret what they hear.
 - Listeners rely on gesture, tone of voice, and facial features to interpret messages.
 - Since language is redundant, listeners get multiple cues that signal speakers' meanings.

Students can draw different sorts of models to include some of these features. It is good to have the students share their models and explain them.

2. Students should be able to get several meanings, such as happiness, relief, and even unhappiness if, for example, their teacher gives tests on Fridays. The main point is to help students think of how tone of voice influences the message.
3. If you have copies of the *Amelia Bedelia* books or if you can ask students to bring in copies, this makes a good group activity to be done in class. If your students are teachers, they may find copies of the *Amelia* books in school libraries.
4. Students should be able to use the information in the chapter to give answers of the following type:

/d/ voiced, alveolar stop

/m/ bilabial nasal (students may add “voiced” but it is not necessary since all nasals in English are voiced)

/l/ alveolar liquid (students could also refer to /l/ as a lateral; again all liquids are voiced, so students could add “voiced”)

/w/ velar glide (voiced)

/ey/ long mid front vowel

/u/ short high back vowel

We have students try describing some phonemes in class without looking at their books, but at first they need to look to carry this task out.

5. Students had difficulty understanding the directions for this exercise. In the second printing, we changed the wording and the examples. We changed the examples to show both vowels and consonants and to show that the phoneme that differs can occur at different points in the words, not just at the beginning.

Application 5 now reads:

Find a minimal pair of words for each phoneme. The consonant phonemes are listed on p. 61 and the vowel phonemes on p. 59. Minimal pairs differ by just one phoneme. Transcribe your answers. Add boxes to complete the chart here.

/p/	pat	kat	/iy/	biyt	bayt
/b/	tuwb	tuwn	/u/	put	pat

We have found that it is necessary to do a few examples in class before expecting students to do this on their own. It should be noted too that students have had problems with /ŋ/ and /ʒ/. Because the examples in the first

edition had changes only in the first phoneme, students were trying to make minimal pairs with those sounds at the beginning of words.

6. This is a fairly difficult assignment. Students can come up with tongue twisters and transcribe them. We usually ask them to think about where they get tripped up as they say the tongue twisters and then look for a pattern that is not consistent at that point. There may be one pattern for voicing and a different pattern for front to back alternation of phonemes, as in Peggy Babcock. On the other hand, in tongue twisters like “The sixth sheik’s sixth sheep’s sick,” the problem seems to come from alternation of close sounds such as /s/, θ, and /ʃ/. Students may also notice that in normal speech consonant clusters such as the cluster at the end of *sixth* are simplified with the theta being dropped.

7. Using the system described in the chapter, the words would be transcribed as

pley	čæns	dred
kreyziy	šawt	bæθ
ʃ^st	yəs	riŋ
briʃ	fayv	toy
mæst	ðen	teyst

8. Students should be reminded that the /h/ is not a separate phoneme in words like *thin*, *chin*, and *shoe*. Also, you may want them to include borrowed words and then discuss how these words don’t always follow regular patterns of English. In the chart below, we have marked common combinations of two initial consonants. However, we left out combinations like /sv/ that only occur in borrowed words like *svelte*. We also tell students not to include names like *Gwenevere*.

Students usually observe that most initial consonant combinations consist of a stop followed by a liquid or a glide, the two consonant phonemes most like vowels. The phoneme /s/ allows the most combinations. Students sometimes don’t mark consonants followed by /y/ that occur in words like *pew*, *cute*, *beauty*, *music*, *few*, *view*, and *huge*. The number of words that follow this pattern is small. Similarly, there are very few words like *thwart* in which the theta is followed by a velar glide. Also, in words like *when* the /h/ precedes the /w/, so the spelling does not reflect the sound. In many dialects, the /w/ has disappeared.

ESSENTIAL LINGUISTICS

	p	t	k	b	d	g	m	n	ŋ	f	v	θ	ð	s	z	š	ž	h	č	ǰ	l	r	y	w
p																					X	X	X	
t																						X		X
k																					X	X	X	X
b																					X	X	X	
d																						X		X
g																					X	X		
m																							X	
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f																					X	X	X	
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4

Implications from Phonology for Teaching Reading and Teaching a Second Language

1. Students should look for articles in peer reviewed research journals to evaluate the evidence for the claim that many students need phonemic awareness instruction to become better readers. The articles can provide the basis for some lively class discussion, especially if the class includes elementary teachers who are being required to teach phonemic awareness.
2. The Opitz book is a good resource. You might want to choose some specific activities from the book for students to try if they have access to classrooms.
3. You might bring in copies of Read's early article or some of his later writings for students to read and discuss. You could point out that one needs a knowledge of phonology to read such articles.
4. This is another good exercise if your students are in contact with English language learners. You might discuss contrastive analysis in more detail and point out that while linguists and ESL teaching has moved beyond contrastive analysis, schools still may treat common pronunciation difficulties as a problem to be eradicated through drill. In some schools, English language learners who speak with an accent are referred to speech pathologists. It would be good for students to discuss this practice.
5. Students should recognize that /p/ has at least two allophones [p^h] in initial position and [p]. One difficulty English speakers have in speaking Spanish is that they aspirate initial voiceless stops like /p/.
6. Students enjoy studying dialects and often have strong opinions about dialects. For some students, it is a surprise to learn that they, too, speak a

dialect of English. In areas like Texas, where we currently live, dialect reduction is big business. Students could discuss whether or not employers should take dialect into account when they hire.

Note: We have many students whose first language was Spanish. In addition, many of them are teachers whose students are native Spanish speakers. After they have studied phonology, we give them the following handout for discussion of differences between Spanish and English.

A Comparison of Spanish and English Phonemes

Vowels

English has 15 vowels while Spanish has five. None of the vowels are the same. English has long vowels with a glide, such as /iy/ and short vowels like /i/. Spanish vowels are mid length and are produced lower than long English vowels and higher than the short ones. When Spanish speakers pronounce English words with short vowels, like /mis/ the words sound like long vowels to English speakers, closer to /miys/.

The chart below shows the placement of Spanish and English vowels.

	front	mid	back
English	iy	ɪ	uw
Spanish	i		u
English	ɪ		ʊ
		ə, ʌ	
English	ey		ow, oy
Spanish	e		o
English	ɛ	Spanish a	a, aw, ay
English	æ		

Consonants

English has 24 consonants, and Spanish has 17.

Stops

Both languages have the same set of stops:

p	t	k
b	d	g

However, there are some differences in the way the stops are produced. English voiceless stops are aspirated in initial position. This puff of air is transcribed as [p^h], [t^h], and [k^h]. The corresponding Spanish voiceless stops are not aspirated. For that reason, it is sometimes hard for English speakers to hear the difference between the Spanish pairs, /p/ and /b/ or /t/ and /d/. Another difference is that the Spanish stops /t/ and /d/ are dental. The tongue tip hits the back of the front teeth while the corresponding English stops are alveolar. This is because Spanish resting tongue position is further forward in the mouth. English speakers say “uh” when the tongue is in neutral position, and Spanish speakers say “este.” This difference reflects the different tongue positions.

The biggest difference among the stops is that Spanish voiced stops all have allophones that English lacks. These may be represented as follows:

/b/ has the allophones [b] and [β]. The [β] sounds like a /v/ to English speakers. Spanish uses both *b* and *v* to represent these sounds, and many people writing Spanish have trouble with spelling *b* and *v*.

/d/ has the allophones [d] and [ð]. Both of these are represented by *d* in Spanish orthography. However, when Spanish speakers write in English, they confuse spellings with *t*, *d*, and *th*. There is no /θ/ or /ð/ phoneme in Spanish.

/g/ also has two allophones, [g] and [ɣ]. This variation doesn't seem to cause problems in spelling.

Fricatives and Affricates

English has nine fricatives and two affricates. Spanish has three fricatives /f/, /s/, and /h/ and one affricate /ç/. Spanish lacks /v/ (although the allophone of /b/ sounds like a /v/) the interdental /θ/, /ð/, /z/, /ʃ/, and /ʒ/. The /s/ sound is spelled *s*, *c*, or *z* in Spanish. The /h/ sound is spelled with *g* or *j*. The Spanish *h* is not pronounced.

Nasals

English has three nasals, and so does Spanish, but they are not the same.

	bilabial	dental/alveolar	palatal	velar
English	m	n		ŋ
Spanish	m	n	ɲ	

The Spanish /n/ has an allophone [ɲ] but it is not a separate phoneme. The nasals do not cause many spelling problems.

Liquids and Glides

Both languages have /l/. Spanish has two *r* phonemes, and they are different from the English *r*. Both Spanish *r* phonemes are represented by a single *r* in spelling. Spanish does not have double letters as English does.

English has two glides, /y/ and /w/. Spanish does not have the /w/ phoneme. In Spanish /y/ can be spelled *y*, *ll*, *hi*, or *i* so Spanish speakers may have trouble spelling this sound in English.

5

English Orthography

1. Often, students enjoy studying a writing system in more detail. In addition to the usual reference books available in most libraries, there is an increasing amount of information available on the Internet about different writing systems. For example, students could look at some of the websites listed in Figure 5–2 to find information.
2. Several differences are listed on page 106. As students investigate the differences between American and British spellings, they often conclude that the number of differences is actually quite small.
3. You may want to specify the number of words students should find. Also, you may want to check these websites in advance. The Internet changes rapidly and some websites disappear. You may know of others that could be added to the list.
4. This exercise can be somewhat difficult. We have found that it is useful to talk through each column. In the first column, students should list words that are spelled the way they sound. In the second column, they should include words like *sign* and *signal* in which one word has a silent letter that retains a visual link to a related word in which the letter is pronounced. The third column can include any borrowed words that do not follow normal American English graphotactic patterns.
5. Mark Twain has also written a poem making fun of English spelling. You may know of other such poems. This could be an individual assignment, but it is also a good in-class assignment for small groups of students. In the

process of writing a poem, students begin to realize how many homonyms there are in English.

6. If possible bring in the Terban book, *Eight Ate: A Feast of Homonym Riddles*, mentioned in the homonym section of the chapter to read examples for students to follow. Students may know of other books that include plays on words.
7. This assignment takes some time. After the first edition, we rewrote the directions because some students did several different phonemes or they simply repeat the ones in the book. You might even assign different phonemes to different students. The rewrite will read:

Carry out an investigation of the different spellings of one phoneme using the descriptions of /ey/ and /k/ in the chapter as a model (see Figures 5–3 and 5–5). Choose either a long vowel or the consonant phoneme /š/. Make a chart with the possible spellings and examples of words that follow that pattern. Then make some generalizations about the distribution of the spellings.

If students choose to do /š/ they may have difficulty distinguishing between /š/ and /č/ as in *nation* compared with *picture*. In addition, they will have to decide which letter or letters spell the /š/ in words with palatalization, such as *nation* or *sexual*. Some students will find unusual spellings of /š/ such as occurs in *ocean*. Here as well one could argue that it is the combination of *ce* rather than the *c* that represents the phoneme. The idea though is that if your students carry out this sort of investigation they become more aware of spelling patterns, and they may choose to carry out similar investigations with their students.

8. Encourage students to devise an organized way to investigate these spellings. An easy way to approach the assignment is to group words that follow various patterns. Students may be familiar with this approach to word family study. Here is a sample list of common words:

-each	-eech	-ooch	-oach	-ouch
beach	beech	brooch	broach	couch
leach	leech	hooch	coach	pouch
peach		pooch	poach	touch*
reach			roach	vouch
teach				

-atch	-etch	-itch	-otch	-utch
batch catch hatch latch match patch watch*	fetch ketch retch stretch vetch wretch	ditch glitch hitch pitch stitch snitch witch	botch crotch notch scotch	butch* crutch Dutch hutch

*these words do not follow the usual sound pattern exceptions to these: *rich*, *which*, *much*, *such*

Students should be able to make the generalization that *ch* follows a long vowel (or a consonant, as in *birch*) and *tch* follows a short vowel.

-age	-iege	-ooge	-ouge	-eige	-auge
cage page rage sage wage	liege	stooge	rouge	beige	gauge
-adge	-edge	-idge	-odge	-udge	
badge	hedge ledge pledge sledge wedge	bridge fridge midge ridge	dodge hodgepodge lodge	budge fudge judge nudge sludge trudge	

The same generalization seems to hold here. The *ge* follows a long vowel or a consonant. The *dge* spelling follows a short vowel.

9. When *g* is followed by *a*, *o*, *u*, the pattern seems to hold. However, even though *g* followed by *e* usually has the sound of /j/ there are a number of words in which the *g* has the sound of /g/. Some common words include: *gear*, *geek*, *geese*, *get*, and *geyser*. When *g* is followed by *i*, the pattern is even less consistent. Some common words with *gi* where the *g* has a /g/ sound are: *giddy*, *gift*, *gig*, *giggle*, *gill*, *ginko*, *gird*, *girl*, *girth*, and *give*. Students may find that some of the exceptions come from borrowed words or from Old English.

6

A Linguistic Perspective on Phonics

1. For the first application, it would be good to have students bring in some phonics rules and talk about them. Then they could choose a few rules to test. Students could each do a rule, or they could work in groups. For the sample of words, it might be good to have a list for the class to use. There are a number of word lists available. If students use a basal series, the series may have a complete list of words in an appendix. To test a phonics generalization against a list of words requires students to just go through the list. This is a painstaking process. They wouldn't need to transcribe the words, but, like Clymer, they might want to have a dictionary handy to check some of the words for the most common pronunciation.
2. There is considerable confusion between spelling worksheets and phonics worksheets. Lucero (p. 159) actually used a spelling worksheet. However, it includes two spelling patterns that each have two sounds. A good pattern to use is *ea* since it can be pronounced /iy/, /ey/, or /ε/. Students might work together to create short readings for different phonics patterns. Then, each student could find a reader to complete the worksheet and the reading.
3. We have often brought in books for students to evaluate using the Checklist. However, it is most effective if students bring in books from their classroom or from a school they have access to. These could include stories in a basal anthology.
4. Teachers who work with younger students may find this assignment easier than teachers who work with older students. However, there are very sophisticated alphabet books that are appropriate for high school students. In the case of high school teachers, they might find one or two

alphabet books that would fit with a theme or unit they teach. There are good books in math, science, and social studies as well as language arts. Bilingual teachers could bring alphabet books in languages other than English.

5. The assignment is useful because it provides students with a good reason to practice transcribing words. You may want to provide the source of words. You could have students all do the same words, but by doing different words, they will find more spellings for the phonemes. You might also want to have students work in groups with each group doing a different word set. One way to generate the word list is simply to use a spreadsheet and type in consecutive words. Then use the sort function, and that will group words so that duplicates can be eliminated.

Our students were somewhat unclear on how to do this assignment. We suggest that you do a few words in class, following the example in Figure 6-2. Students transcribe the word and draw a line from the phoneme to the letter or letters that correspond to that sound. Once they have transcribed all the words, they transfer the results to the chart. This is where our students got confused. We now provide examples of this step.

Using the words from Figure 6-2, for example, they would fill in the first block after /k/ this way:

/k/	c	
	√	

For each subsequent case in which /k/ is spelled with *c* they would add another check. They would follow the same procedure for indicating that /æ/ is spelled with *a* and /t/ with *t*. Then, when they get to *quick* they would add to the spellings of the /k/ phoneme with both *q* and *ck*. Now their chart would look like this:

/k/	c	q	ck
	√	√	√

They would add the *k* spelling when recording the spellings from *think*. If the sample also included a word like *cake*, they would simply put additional checks under the *c* and the *k*. Now the rows beside /k/ would look like this:

ESSENTIAL LINGUISTICS

/k/	<i>c</i>	<i>q</i>	<i>ck</i>	<i>k</i>
	√√	√	√	√√

For each phoneme, students record spellings in the top row and check off the number of times the spellings occur in the second row. If students find more than one spelling, they can add columns to the chart on pp. 163–165. For unusual spellings, students should write the word out at the side as a reminder to use during class discussion.

We have shown just one phoneme, but students would transfer all the spellings of the phonemes in their 100 words to the chart. Then, in class discussion, students can reflect on general patterns. For example, /k/ has several spellings, but /p/ usually only has p or pp. This is true for several of the consonant spellings and leads naturally to a discussion of the importance of teaching a doubling rule.

7

English Morphology

1. We usually ask all students to complete this application since it requires them to apply several of the important concepts from the chapter.

The instructions for listing the words in this exercise are different from those for the last application in the previous chapter because here students include duplicates. Students often find it interesting to note which words most often repeat in a sample of 100 words.

The chart in the book is a compressed version of what students should create. Students will need to expand the chart to add the additional words they categorize. What is important to discuss once students complete the application is the number of words (usually a fairly small number) whose meanings can be determined by structural analysis.

2. Once students get started on their list, they usually easily find 100 two-word verbs with *up*. It would be good to have a chart up in the room that students could add to over time. Two-word verbs are particularly difficult for English language learners, so this exercise can be helpful information for teachers as they work with English learners.
3. You may want to assign students or groups of students specific prefixes or suffixes for this application. For example, they could do one prefix and one suffix. It helps to explain that prefixes do not change the part of speech. When listing the category change, there is no change, and students can simply list, for example, $V \rightarrow V$ to show the words that follow this pattern both start and end as verbs. Generally, suffixes provide information about the part of speech, so they are more difficult to define. It is helpful to begin by listing several words that follow the pattern and then making the

generalizations. You might suggest that students find at least ten words and list them for each WFR they write.

Here are suggestions for the words listed in the application:

de- sample words

defoliate	degrade
delight	delay
deport	debrief
depart	depend
design	determine

Base Word	Derivational Affix	Sound Change	Category Change	Meaning Change
defoliate	de	add /diy/	Verb to verb	to X down or away from

defoliate – to take leaves from
 delight – to take pleasure from
 deport – to carry away
 depart – to go away from
 design – literally, to mark out or plan
 degrade – to take a grade away from or to grade down
 delay – to put off
 debrief – to get a summary from someone
 depend – literally to hang from
 determine – to set a limit (terminus) from

Words that don't fit

demerit – *Merit* could be a noun or a verb. It appears that *demerit* is a noun, so it doesn't follow the pattern even though the meaning comes from the meanings of *de* + *merit*.
 degree – This word is similar, since *degree* is a noun.
 dermatology – Here *de* is part of *derma* for skin and not the prefix *de*.

You may want to specify the number of exceptions students should find. The exceptions could include words that don't follow the category change and words in which *de* begins the word but is not a prefix.

trans- sample words

transact	translate
transform	transgress
transmit	transplant
transpose	transpire
transfigure	transfer

Base Word	Derivational Affix	Sound Change	Category Change	Meaning Change
transact	trans	add/trænz/	verb to verb	to X across or through

transact – to act across or through
 transform – to change across
 transmit – to send across
 transpose – to place across
 transfigure – to change the form through
 translate – to carry across (to another form)
 transgress – to step across limits
 transplant – to plant across
 transpire – to breathe through
 transfer – to carry across

Words that don't fit

transatlantic – This is an adjective, so it doesn't fit the category change. There are quite a few instances of *trans* + *adj* so this could constitute another rule.
 transaction – This is a noun derived by adding *-tion* to transact. It doesn't fit the category change. Students should see that the base is the verb *act*. The question is whether *trans* is added to verbs like *act* or nouns like *action*. Students could test this by trying to find *trans* + *verb* where the verb can't be made into a noun. *Transfer* seems to fit this category, although *transfer* can be a noun or a verb.

Suffix examples

It should be noted that students may have more trouble with suffixes, because they can't easily look up a list of words in a dictionary.

-ize sample words

formalize	actualize
rationalize	solemnize
sterilize	familiarize
traumatize	simplify
realize	Americanize

Base Word	Derivational Affix	Sound Change	Category Change	Meaning Change
formalize	-ize	add /ayz/	adj to verb	to make X

formalize – to make formal
 rationalize – to make rational
 sterilize – to make sterile
 traumatize – to make traumatic
 realize – to make real
 actualize – to make actual
 solemnize – to make solemn
 familiarize – to make familiar
 simplify – to make simple
 Americanize – to make American

Words that don't fit

categorize – *category* is a noun, so the category change is not the same. In fact, many nouns also take *ize* (unionize, terrorize, prioritize). These words constitute another word formation rule.

-ity sample words

stupidity	sterility
proclivity	familiarity
reliability	reality
changeability	solidity
formality	creativity

Base Word	Derivational Affix	Sound Change	Category Change	Meaning Change
stupidity	ity	add /itiy/	adj to noun	state of being X

stupidity – state of being stupid

proclivity – state of inclining or leaning toward something

reliability – state of being reliable

changeability – state of being changeable

most adjective with *-able* can add *-ity* to become nouns

formality – state of being formal

sterility – state of being sterile

familiarity – state of being familiar (like a family)

reality – state of being real

solidity – state of being solid

creativity – state of being creative

most adjectives formed by adding *-ive* to a verb can then add *-ity* to become a noun

Words that don't fit

quantity, quality – It seems hard to break these words down to *base* + *ity* although it may be possible.

8

Implications from Morphology for Teaching Reading and Teaching a Second Language

1. As students look at how prefixes change, they become more aware that, although it may be useful for readers to know that a prefix like *in-* adds a certain meaning to a base (or in this case, one of two meanings, *in* or *not*) since prefixes often assimilate to roots, readers may find it difficult to recognize the prefix.

Both *in-* prefixes assimilate to *m* before bilabials (*imbalance, impatience, immodest*) and to *l* or *r* before bases starting with *l* and *r* (*illegal, irregular*).

2. Students using different dictionaries or websites may find different answers, and this can lead to good discussion. Students sometimes have trouble tracing words back to their origins since dictionaries give etymological information from the present back. For example, they might identify a Latin word as French or Middle English.

Students enjoy these kinds of exercises. Here are some suggested answers:

alligator – Spanish – the lizard (*al lagarto*). You might point out that Spanish words starting with *al* reflect the Moorish occupation. *Al* is Arabic and generally means *the*. In Spanish, *al* became *el*.

beetle – Old English — biter

caterpillar – French – hairy cat

cobra – Portuguese – hooded snake

crocodile – Greek – pebble worm (the English spelling represents a transposition of the original spelling – in Spanish, for example, the word is *cocodrilo* – this might be a case of a copying error)

duck – Old English – diver

elephant – Greek - ivory
hippopotamus – Greek – river horse
leopard – Greek – lion and panther
lobster – Old English - spider
moose – Algonquin – bark stripper
octopus – Greek – eight feet
porpoise – Latin – pig fish
rhinoceros – Greek – nose horn
spider – Old English – spinner
squirrel – Greek – shadow tail
penguin – Welsh – white head (This one is controversial, since penguins do not have white heads. Good reference books give different possible reasons for the name.)
porcupine – Latin – spiny pig
walrus – Norse – sea whale

3. Our students have tried the cognate activities suggested in the chapter at various grade levels starting with students at second or third grade.

9

English Syntax

1. You may want to specify the number of people to be surveyed. It's good if the students survey people with different backgrounds. The results can lead to good class discussion and a good review of the list of meanings that Weaver developed.
2. For editions after the second printing, we rewrote the directions here to say:

“The position of a word in a sentence can change the meaning of the sentence. *Only* is a modifier (it could be classified as a quantifier) and its position determines which word it modifies. Moving *only* changes the meaning of the sentence.”

Here is a rough translation of each of the sentences:

Only he said that he loved linguistics.

He was the only one that said this.

He only said that he loved linguistics.

He said it, but he didn't mean it. (extra stress on *said*)

It was the only thing he said. (normal sentence stress)

Meaning seems to depend on intonation.

He said only that he loved linguistics.

This is all he said.

He said that only he loved linguistics.
He claimed that no one else loved linguistics.

He said that he only loved linguistics.
He didn't love any other subject. (stress on *linguistics*)
He didn't do anything else except love linguistics. (stress on *love*)
Again, the intonation makes a difference here.

He said that he loved only linguistics.
He said that he loved linguistics only.
These two sentences seem to mean about the same thing:
He loves this subject and no other. In this respect, the sentence means about the same as "He said that he only loved linguistics."
The last version with *only* at the end seems more poetic.

Students may have different interpretations. Part of the point here, though, is that the syntactic structure helps determine the meaning even when the words are the same.

3. The purpose here is to help students understand transformational rules. If they study linguistics further, they can certainly refine their understanding. However, a good answer would show that students understand some basic terms. For example, a possible rule might be this:

To change an active sentence to a passive sentence follow these steps:

Move the NP that is the direct object of the verb out of the VP to the left of the subject.

Move the NP that is the subject into the VP following the verb.

Insert the preposition *by* immediately to the right of the verb.

Change the form of the verb to the passive, making sure that the tense agrees with that of the active sentence (or put *was* to the left of the verb and add *ed* to the verb.)

The rule should include linear order, word categories such as noun and verb, and sentence constituents, such as subject and object.

4. The Pinker example is quite complex. However, students should come to understand that the semantics depends on the syntax. In this case, though, it is not the result of moving words as in Application 2. Instead, each sentence has a different meaning in part because words like *time*, *flies*, and *like* can serve as different parts of speech. As a result, it is possible to assign different syntactic structures, and each one results in a different interpretation. In

addition, there may be literal or figurative interpretations of the sentence. Here are some comments on each of the interpretations that Pinker provides:

1. Time proceeds as quickly as an arrow proceeds.

This is the usual interpretation. The sentence is a metaphor to describe the passage of time. The DS might be written “Time flies like an arrow flies.” In the SS, the second instance of *flies* is deleted.

In this sentence *Time* is a noun, *flies* is a verb, and *like* is a conjunction.

2. Measure the speed of flies in the same way that you measure the speed of an arrow.

This is a literal interpretation in the form of a command. The DS might be written, “You should time flies like you time an arrow.” In this sentence, *time* functions as a verb, *flies* is a noun, and *like* is a conjunction.

3. Measure the speed of flies in the same way that an arrow measures the speed of flies.

Again, this is literal. It is also a command. The DS could be written, “You should time flies like an arrow times flies.” Here *time* is a verb, *flies* is a noun, and *like* is a conjunction. The difference between 2 and 3 is that in 2 *you* is the understood subject of the second clause, and in 3 *arrow* becomes the subject.

4. Measure the speed of flies that resemble an arrow.

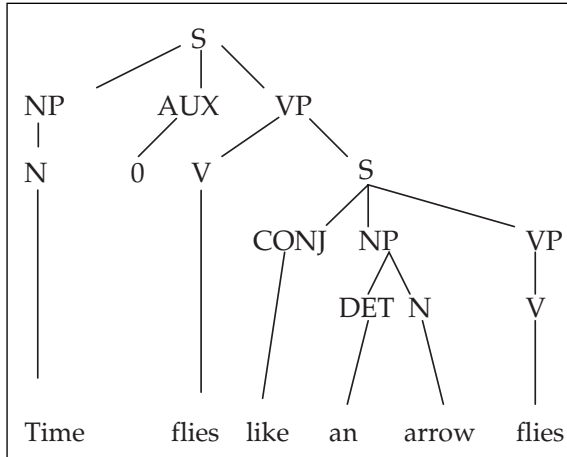
The change here is in the function of *like*. The DS is “You should time flies that look like an arrow.” *Like* serves as a preposition that introduces the PP *like an arrow* and this phrase modifies *flies*. One could also argue that *look like* is a phrasal or two-word verb. The diagram below reflects the first interpretation.

5. Flies of a particular kind, time flies, are fond of an arrow.

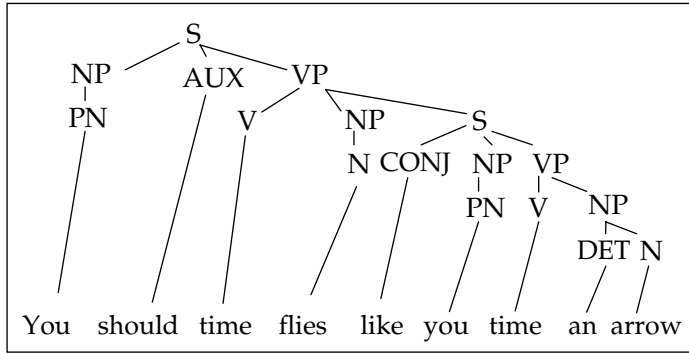
This is the least likely interpretation, but it is possible. There would be no change between the SS and the DS, that is, no words need to be added or deleted. However, *time* functions as an adjective that modifies *flies*, and *like* becomes a verb.

You could ask students to diagram each sentence to show the underlying structure. Using the format in the chapter, here are some tree diagrams.

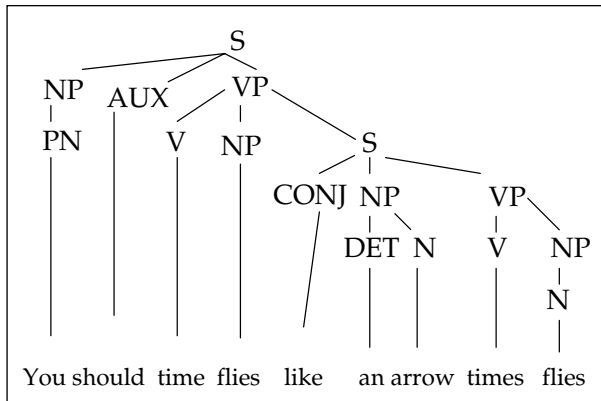
1.



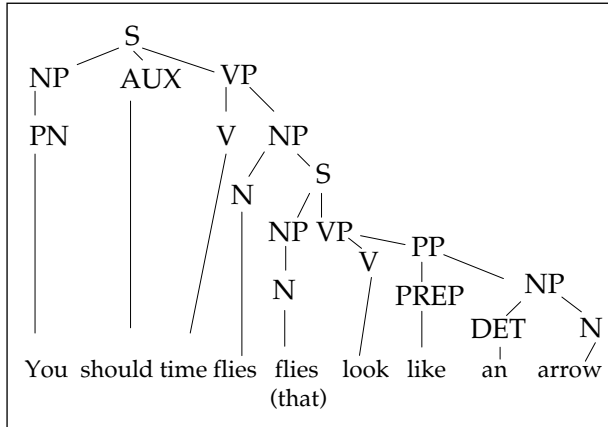
2.



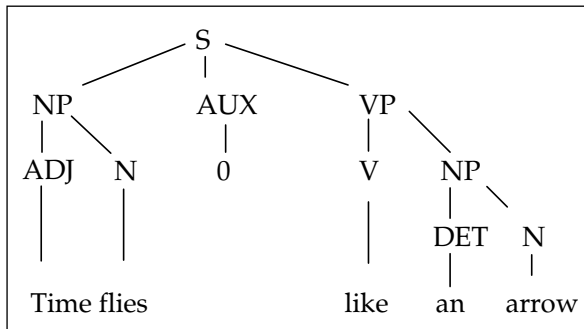
3.



4.



5.



5. This is a good exercise to use in class. Groups of students can also do this as homework and then share their creativity. Sentence combining does seem to help students improve their writing, so it is good to ensure that students understand the process. They are then more likely to use it in their own teaching.
6. This would also be a good in-class exercise. Perhaps a student or several students could bring in textbooks. Close examination of the texts can help students understand the complexity of scientific writing.

Afterword

We hope these suggestions are helpful for you. We continue to make changes in the text as we discover inaccuracies or areas that are not clear. This website includes the changes made in the applications. If you have suggestions or catch our errors, please e-mail us at dfreeman@panam.edu.