



# *Abbreviated Literature Review/Research Base for Grammar and Syntax*

To understand the role of grammar and syntax in ALD, it is important to have a clear understanding of the terms *grammar* and *syntax* as well as an understanding of the characteristics of academic language. Teachers who understand these concepts can better plan how to teach and assess English language learners.

### FOUR VIEWS OF GRAMMAR

In the minds of most people, grammar refers to a set of rules needed to speak and write the standard or conventional form of a language. A second view is that grammar is the built-in, subconscious knowledge of a language that enables people to communicate in that language. Most linguists, especially those whose work is based on Chomsky's (1965) theories, consider grammar to be the study of syntactic structures. For these linguists the terms *grammar* and *syntax* are synonymous. More recently systemic functional linguists have developed a theory of grammar as a functional resource.

Weaver (1996) lists these definitions of grammar: (1) prescriptions for correct use, (2) the functional command of sentence structure that enables us to comprehend and produce language, and (3) a description

of syntactic structures. Derewianka (2007) adds a fourth view in her explanation of language as a functional resource. Each of these views of grammar has led to different approaches to teaching ELLs and SELs the grammar and syntax of academic language.

## PRESCRIPTIONS FOR CORRECT USE

For most people, the word *grammar* means studying rules for correct speaking and writing. At one time schools were conducted in Latin. Teachers in these grammar schools taught Latin grammar. When the language of instruction shifted to English, these same teachers applied their knowledge of Latin grammar to English and began to teach English grammar. Because students could already understand and speak English, the focus was on written language. Teachers believed that their job was to prescribe the rules of the language, and if students learned grammar, they could apply this knowledge to both writing and speaking.

### REFLECT AND APPLY

What was your own experience with being taught grammar when you were in school? Did you find grammar interesting or frustrating? Be prepared to share with your colleagues.

## RESEARCH ON THE EFFECTS OF TEACHING TRADITIONAL GRAMMAR

Despite the widespread practice of teaching formal grammar explicitly, research has consistently shown that students have trouble learning traditional grammar or applying grammar rules when they write or speak. In the first place, students find it difficult to learn and retain concepts from traditional grammar. In one series of studies, Macauley (1947) tested the grammar knowledge of students in schools in Scotland. At the time of these studies, grammar was taught in both elementary and secondary schools for an average of 30 minutes a day. At the elementary level, the lessons emphasized knowing parts of speech and their functions. For example, students

were taught to identify nouns in a sentence, and they learned that nouns served as subjects and objects.

Macauley tested students at the end of elementary school. The test required students to read 50 sentences and decide whether the underlined word in each sentence was a noun, verb, pronoun, adjective, or adverb. Even though all the students had studied the parts of speech every day for several years, the average score for the 131 students was a mere 27.9 percent right. Macauley had set 50 as a passing score. Students could get about 11 percent right just by guessing, but only one student scored 50 percent or better on all five parts of speech.

When Macauley tested secondary students, they did somewhat better, but the mean for the top classes at the end of their third year of secondary school had only risen to 62 percent. Macauley's studies with students who received intensive training in traditional grammar showed that students have a great deal of difficulty even learning basic parts of speech.

Krashen (1998) also reviewed research on the teaching of grammar. His conclusion is blunt: "Research on the relationship between formal grammar instruction and performance on measures of writing ability is very consistent: There is no relationship between grammar study and writing" (p. 8).

One of the strongest statements on the teaching of grammar comes from a report issued by the National Council of Teachers of English, an organization with many members vitally interested in grammar and in the teaching of writing. The authors of the report state:

In view of the widespread agreement of research studies based upon many types of students and teachers, the conclusion can be stated in strong and unqualified terms: the teaching of formal grammar has a negligible or, because it usually displaces some instruction and practice in actual composition, even a harmful effect on the improvement of writing. (Braddock & Lloyd-Jones, 1963)

None of these are new studies. There are no current studies that dispute the early findings. Despite the research consensus, teachers continue to teach traditional grammar to native standard English speakers, SELs, and ELLs. Weaver (1996) lists several reasons:

- Teachers may not be aware of the research.
- They may not believe the research.
- They believe grammar is interesting and teach it simply for that reason.
- They notice that some students who are good readers and writers are also good at grammar, so they assume that this correlation shows cause and effect.
- They are required to teach grammar.
- They feel pressure from parents or other community members to teach grammar.
- They feel that although grammar may not help the average student, it still may help some students.

### REFLECT AND APPLY

Have you taught grammar to your students? Did you find that the students learned from your grammar teaching? Do any of the reasons that teachers still teach traditional grammar apply to you or to your colleagues?

## TRADITIONAL GRAMMAR AND ENGLISH LANGUAGE TEACHING

Teachers do need to know about grammar. This should be part of their pedagogical language knowledge (Bunch, 2013). However, teachers should not expect that teaching traditional grammar will improve their students' academic language proficiency.

Derewianka (2007) refers to the traditional approach to teaching grammar as “language as structure.” This approach involves identifying different parts of speech, such as nouns and verbs, and the rules for combining them into sentences. As Derewianka writes, “Traditionally grammar in the ELT [English language teaching] field has been conceived of in terms of identifying the parts of speech and the rules for combining them into structures” (2007, p. 844). *Structures* refers to subjects, predicates, and other parts of a sentence. Traditional approaches to second language teaching, such as the Grammar Translation method, used this approach. This method consists of explicit teaching of rules followed by decontextualized

exercises designed to give students practice with the rule. For example, students might learn the proper forms for the present perfect tense in English and then be given an exercise in which they convert past tense sentences, such as “He studied English,” to present perfect, “He has studied English.”

Derewianka (2007) comments that a traditional approach to teaching grammar is still the most widely used model of English language teaching. However, this applies primarily to teaching English in countries where English is not the native language. Traditional approaches to grammar teaching result in students learning about the language (they can tell you how to form the present perfect tense), but this approach has not been shown to help students develop the ability to communicate in the language. As a result, in English as a second language (as opposed to English as a foreign language) and bilingual classes, traditional grammar is not usually taught.

### **Focus on Form**

Although traditional grammar-based approaches to teaching a second language are outdated and are not supported by research, within more current second language teaching methods, some aspects of grammar continue to be taught. That is, there is still what Long (2001) refers to as a “focus on form.”

Ellis (1998) looked at three ways of presenting form-focused instruction. One way is to structure the input. “This option asks learners to process input that has been specially contrived to induce comprehension of the target structure” (p. 44). Learners are not required to produce the structure, but they are exposed to large amounts of the structure and asked to attend to it. For example, students often say things like “I am boring” when they mean, “I am bored,” so structured input might focus on the difference between these two grammatical forms. For example, the teacher might give students a reading that contains many examples of “boring” and “bored” and similar pairs that students often confuse.

To take another example, the teacher could ask students what they would do if they won the lottery. The teacher might give the example: “If I won the lottery, I would buy my parents a new house.” Then the teacher could have each student report on what he or she would do. As they listen to these examples, all the students

would receive input that contained the conditional structure: “If I \_\_\_\_, I would \_\_\_\_.”

A second possibility that Ellis suggests is explicit instruction. Such instruction can be direct (the teacher teaches the rule, and the students practice it) or indirect. In indirect explicit instruction, students look at some sample of language and try to figure out the rule. Explicit instruction can be deductive or inductive. Explicit instruction is designed to raise students’ consciousness of the grammatical form.

An example of indirect explicit instruction might involve students looking at a series of phrases that each contains several adjectives before a noun, such as, “a large heavy brown leather English suitcase.” Based on their analyses of the phrases, students could develop a rule for the order of adjectives preceding a noun. Native English speakers recognize that it does not seem right to change the order and say, “a brown heavy English leather large suitcase.” Once students develop a rule, they can test it against new noun phrases with several adjectives.

A third approach to incorporating grammar into second language teaching is what Ellis (1998) calls “production practice.” This approach involves students in practicing certain grammatical forms. For example, students might do a worksheet that asks them to put the words *in*, *on*, or *at* into the appropriate blanks in a sentence. Finally, teachers can teach grammar by providing negative feedback. When a student makes an error, the teacher can correct it, usually by modeling the correct form. For instance, if the student says, “I have been here since two days,” the teacher might respond, “Oh, so you have been here *for* two days. What have you been doing?” As Ellis points out, most language teaching includes a combination of these methods, so it is difficult to know which one works best.

### REFLECT AND APPLY

Which type of grammar instruction have you experienced as a student? Have you taught grammar to students using one or a combination of the four approaches to teaching grammar described in this chapter?

## THE FUNCTIONAL COMMAND OF SENTENCE STRUCTURE

A second view of grammar is that a grammar is a set of internalized rules that people acquire. These are the rules that allow humans to communicate in a language. Derewianka refers to this view as “language as mental faculty.” Chomsky (1965) and other linguists argue that humans have an innate capacity for language. We are born with Universal Grammar, a set of mental structures that enable us to use language input to form subconscious rules to understand and produce one or more languages. The internal grammar includes a syntactic component along with knowledge of phonology, morphology, semantics, and pragmatics. Over time, humans develop a full command of the grammar of their community of speakers, and this allows them to function effectively.

Chomsky (1975) argues that humans have an innate ability to construct rules that allow them to comprehend and produce utterances in any language. What they need is exposure to specific languages to refine general rules to fit those languages. Given that this is a subconscious process that functions without the need for teaching of the rules, this view of language leads to a belief that explicit grammar teaching is not necessary for language acquisition. Clearly, no one teaches babies grammar rules, and yet they acquire language.

For second language teaching, the basic question is whether second language learners can still acquire language the same way that children acquire their first language. Sociolinguists such as Grosjean (2010) provide numerous examples of how adolescents and adults can acquire a second language. Krashen’s (1982) theory of second language acquisition is based on Chomsky’s theory of language. He argues that a second language can be acquired in the same way as a first language by receiving comprehensible input.

Krashen has written extensively about the value of reading as a source of comprehensible input. He has developed a reading hypothesis. Krashen (1992) states:

Current theories of literacy development hypothesize that we develop literacy the same way we acquire language, by means of comprehensible input. Smith (1988a) and Goodman (1982) have presented compelling evidence that we “learn to read by reading,” by making sense of what is on the page.

In addition, there is overwhelming evidence showing that free reading is the major source of our competence in many aspects of literacy, including vocabulary, spelling, grammatical competence, and writing style. (p. 8)

### Using Grammar to Monitor Output

Within Krashen's theory, the benefits of grammar teaching are limited. However, Krashen explains that knowledge of grammar can be used to monitor output. Monitoring requires that the person knows the rule and has time to apply it. During conversations, it is difficult to monitor output because a person can't focus on meaning and grammatical correctness at the same time. If someone is trying to decide which endings go on verbs, that person can't also be thinking about the message he or she is trying to convey.

Yvonne remembers a time when she applied her monitor to her output. During her oral exams for her doctoral degree, one committee member asked her a question in Spanish. Yvonne knew that this was a setting where grammatical correctness would be expected. As she answered, she consciously thought about the rule in Spanish that says after expressions like "It is necessary," the subjunctive form of the verb must follow. She applied the rule as she was giving her answer in Spanish.

Immediately after the exam, a colleague from the Spanish department saw her and asked her how it went. As Yvonne excitedly told her about the exam and the positive feedback she received, she spoke in Spanish, but she did not apply her monitor once. She could well have made a few grammatical errors while speaking Spanish in this setting, but her focus was on explaining that she had passed the exam and had done well. Effective use of the monitor requires that speakers use it in appropriate contexts and do not overuse it or underuse it.

While applying the grammar rules may not always be practical when one is speaking, students should apply rules to monitor their writing. As we write, we usually have time to think about what we are writing, and we usually try to convey a clear message with as few errors as possible. When ELLs or SELs are provided short mini lessons on specific points of grammar they are having trouble with and then are given opportunities to edit papers working with the teacher and with peers, they begin to learn conventional English.

**REFLECT AND APPLY**

Have you ever been in a situation where you knew you needed to apply your monitor as you were speaking? What was the context? Were you able to monitor your grammatical correctness?

In our experience, students who are better writers are those who have done a great deal of reading. Do you think that reading can help people become better writers, that is, writers who write well grammatically? Can you think of some examples? Why might reading help students write well grammatically?

**A DESCRIPTION OF SYNTACTIC STRUCTURES**

A third view is that grammar is a description of syntactic structures. Although linguists study all the different aspects of language, the major area of study in recent years in the United States has been syntax, the structure of clauses. Syntax is one component of the grammar of a language. In their study of syntax, linguists have attempted to make explicit the implicit rules that humans have acquired that allow them to comprehend and produce language. Chomsky (1965) argued that there must be a small set of rules that can generate an infinite number of sentences. If there were a large set of rules, people could not acquire them.

**Surface and Deep Structure**

To create a small set of rules, Chomsky hypothesized that language has a surface structure and a deep structure. The surface structure is what we say or write—the sounds we make and the marks on a page. The deep structure is the underlying structure that is in basic form. Deep structures can be transformed to create different surface structures. Structural linguists attempted to describe language by using the surface structure outputs of speech and writing. However, these descriptions were very complex. Chomsky, in contrast, used deep structures as a basis for his descriptions. For example, Chomsky assumed that positive statements were basic, so they were considered the deep structure form, and questions and negative statements were surface structure variations.

This approach enabled Chomsky to identify basic syntactic structures for English. For example, a simple sentence (a clause) consists of a noun phrase, an auxiliary verb, and a verb phrase, and each type of phrase can be further described. A verb phrase contains a verb and can include one or more noun phrases, an adverb phrase, and a prepositional phrase. In early studies, using a theory of transformational, generative grammar, Chomsky attempted to describe how deep structures were transformed into surface structures. For instance, the statement, “He can play the tuba” can be converted into the question: “Can he play the tuba?” by moving the auxiliary to the left of the subject. In later work, Chomsky focused more on describing what limits movement of deep structure sentence elements rather than on describing each movement.

Chomsky’s work provided important insights into syntactic structures. As he developed his theory of transformational grammar, articles and books on using transformational grammar to teach English were produced. However, attempts to teach ELLs or SELs conventional English by using insights from transformational grammar were not successful, and Chomsky’s later work was not used as a basis for teaching language.

## **LANGUAGE AS FUNCTIONAL RESOURCE**

Derewianka (2007) discusses a fourth view of grammar that she refers to as language as functional resource. This approach is based on linguistic studies by Halliday (1989) and his colleagues. Derewianka points out an important difference between Chomsky and Halliday. As she comments, Halliday explains language “not in terms of a genetic blueprint located in the individual brain, but as the result of countless social interactions over the millennia” (p. 849). Halliday sees language use as a series of choices based on the context of situation, which is made up of three components: the field (what we are talking about), the tenor (who we are talking to), and the mode (the means of communication, such as speech or writing). We constantly make choices in each of these areas to carry out social functions, such as explaining or describing. Each context of situation occurs in a context of culture as different cultural groups have different ways of carrying out the functions of language.

**REFLECT AND APPLY**

Think about how you talk in two different settings. For example, you might consider the conversation at the family dinner table and the conversation around the table at a formal banquet with other professionals. That is, think about the vocabulary you use and the formality of the language you use. How is the language you use different in the two settings? Why?

**The Curriculum Cycle**

In Australia, Halliday's approach to linguistics has been translated into a method of second language teaching called the curriculum cycle or the Teaching and Learning Cycle. The cycle involves building up the field (providing students with basic concepts for a subject or building background), modeling and deconstruction (e.g., showing students a model science report and analyzing the report so that students understand each part), joint construction (e.g., students and teacher work together to write a science report), and independent construction (students work independently to write their own science reports). The focus of this approach is to teach students the different academic genres, such as reports, analyses, and explanations.

**CHARACTERISTICS OF ACADEMIC LANGUAGE**

The challenge of teaching language to ELLs and SELs is greater now than it was in the past. Whereas earlier approaches to teaching ELLs and SELs, such as the Natural Approach (Krashen & Terrell, 1983) and ALM (Larsen-Freeman, 1986), focus on developing conversational language, more recent methods have shifted to an emphasis on academic language, even at beginning stages. In the course of their schooling, students are expected to read, write, and discuss texts written in the academic genres used in literature, science, social studies, and math. A text is any oral or written use of language. Academic texts are the oral and written texts used in schools (Freeman & Freeman, 2009).

Fang (2004) points out that academic texts are characterized by technical vocabulary, lexical density, and abstraction. These

characteristics create an authoritative tone. The following passage from a high school physics and chemistry textbook is a good example of an academic text with these characteristics:

Although fossil fuels are a useful source of energy for generating electricity and providing the power for transportation, their use has some undesirable side effects. When petroleum products and coal are burned, smoke is given off that contains small particles called particulates. These particulates cause breathing problems for some people. Burning fossil fuels also releases carbon dioxide. Figure 9 shows how the carbon dioxide concentration in the atmosphere has increased from 1960 to 1999. (McLaughlin, Thompson, & Zike, 2002, p. 296)

### Technical Vocabulary and Lexical Density

This passage contains technical vocabulary, such as *particulates* and *concentration*. It also is lexically dense. Academic texts have greater density than conversational texts. Linguists measure lexical density by determining the number of lexical words in each clause. Lexical words are content words—nouns, verbs, adjectives, and some adverbs. This passage has 6.4 content words in each clause, whereas conversational language has about 2.5 content words per clause. Greater lexical density makes academic texts more cognitively demanding because more ideas are packed into each sentence.

### Nominalization

Lexical density is often the result of long noun phrases. In this passage, the noun phrase “the carbon dioxide concentration in the atmosphere” has seven words. Frequently, long noun phrases result from nominalizations. Nominalization is the process of turning verbs or adjectives into nouns. In this passage, phrases such as “generating electricity and providing the power for transportation” and “Burning fossil fuels” contain nominalizations. Rather than saying, “Fossil fuels generate electricity and provide the power for transportation,” the authors use the nominalized forms “generating” and “providing.” Nominalizations are very common in academic texts. Consider the following two lists of words:

Verb or Adjective	Noun
introduce	introduction
honest	honesty
refuse	refusal
complex	complexity
create	creation
treat	treatment
toxic	toxicity

Now consider these sentences:

The scientist introduced his speech with a specific example. This made the audience more attentive.	The introduction of the scientist's speech with a specific example gained the audience's attention.
The main character in the novel was an honest man. This was his outstanding trait.	The main character's honesty was his outstanding trait.
Washington's soldiers refused to give up hope, even under difficult conditions. As a result they won the battle.	Washington's soldiers' refusal to give up hope, even under difficult conditions, led to their victory.
The calculus problem was very complex. Even the best students became frustrated.	The complexity of the calculus problem that the teacher had assigned frustrated even the best students.
The scientist mixed these two chemicals to create a compound.	The creation of this compound was the result of mixing these two chemicals.
The soldiers treated the prisoners humanely. This was noted in the report.	The soldier's humane treatment of the prisoners was noted in the report.
The gas was toxic. The workers began gasping.	The toxicity of the gas left the workers gasping.

Nominalization in these examples results in greater lexical density. When verbs and adjectives are turned into nouns, the nouns can become part of a complex noun phrase, as is shown in the second set of sentences in the table. For example, changing the verb *introduce* into the noun *introduction* results in a noun phrase with 10 words, as

shown in the first example. The other examples are similar. These long noun phrases that are typical of academic writing are difficult for SELs and ELLs to understand or produce.

### **Teaching Nominalization**

Secondary students can learn to incorporate nominalization into their writing with focused instruction. The first step would be for the teacher to give students a list of verbs and adjectives and ask them to convert these words into nouns. To help students do this, a teacher could give students a list of suffixes that are used to change verbs and adjectives into nouns, such as *-tion* (destroy, destruction), *-ness* (happy, happiness), *-al* (dismiss, dismissal).

When students understand nominalization, they can rewrite sentences that have nominalizations as simple sentences with adjectives and verbs. Later, students could begin to write their own sentences with nominalizations. Lessons on nominalization would be for advanced level ELLs and SELs.

### **Abstraction**

Academic texts are also more abstract than conversational texts. Nominalizations make texts more abstract. Normally, speakers or writers communicate ideas in a concrete way. The syntax reflects the way we experience events. For example, when we say, “The soldiers treated the prisoners humanely,” the order of the words follows the common subject-verb-object pattern. English speakers expect sentences to follow this pattern of actor, action, and thing acted on. That is, someone does something to someone or something. However, when the verb is turned into a noun, the result is a long noun phrase, “The soldiers’ humane treatment of the prisoners” that expresses an abstract idea rather than describing an action.

In the passage about fossil fuels, nominalizations also make the text more abstract. If we write, “When people burn fossil fuels, the process releases carbon dioxide into the atmosphere.” the result is a concrete sentence. Someone does something with a certain result. However, by using the nominalized form “Burning fossil fuels,” the authors make this an abstract concept with no people involved.

The use of passives also makes academic texts abstract. The passage on fossil fuels contains several passives, such as “When

petroleum products and coal are burned, smoke is given off that contains small particles called particulates.” This is much more abstract than a sentence like, “When people burn petroleum products and coal, the process creates smoke that contains small particles called particulates.” In active sentences the grammatical subject is the person or thing that does the action, but in a passive sentence, the grammatical subject is acted upon rather than being the one acting. If we say “People burn coal and petroleum products,” the grammatical subject, “people,” is the actor, but in the passive construction, “Petroleum products and coal are burned,” the grammatical subject, “petroleum products and coal” is having something done to it. They are not acting but being acted on, and the result is a more abstract construction.

### **FEATURES OF ACADEMIC TEXTS IN DIFFERENT DISCIPLINES**

In addition to these general characteristics of academic language, the academic texts in each discipline have specific features that make it difficult for ELLs and SELs to comprehend or produce them. Math textbooks are difficult to read because they contain mathematical symbols and expressions, diagrams and other figures, and natural language. In addition, many common words, such as *point*, have meanings specific to math. Math also has complex expressions, such as *least common multiple* and *negative exponent*. Further, ELLs and SELs often fail to notice the difference between expressions like *divided into* and *divided by*, but the difference is important for understanding the operation to be completed. Science also contains diagrams and other figures as well as technical vocabulary. In history texts, students are required to read primary documents that contain archaic language.

Language arts contains academic language as well. The syntax of stories is often quite different from conversational syntax. For instance, consider the sentence, “Once upon a time, in a far distant land, there lived a man who had three beautiful daughters.” Conversational English would be quite different, “A man with three beautiful daughters lived in a distant land.” Even stories for young students have sentences like, “Up jumped the gingerbread man, and down the road he ran.” Here, *up* and *down* are moved to positions in front of the verbs, whereas in conversational language they would follow the verbs.

More advanced literature often contains long, complex sentences. For example, in *The Wings of the Dove* Henry James (1902) wrote the following sentence, “The fact bloomed for him, in the firelight and lamplight that glowed their welcome through the London fog, as the flower of her difference; just as her difference itself—part of which was her striking him as older in a degree for which no mere couple of months could account—was the fruit of their intimate relation” (p. 340). Although his sentences are extremely long and complex, literature contains many examples of sentences like these, and students need to learn to read literature with this complex syntax. In addition, the technical vocabulary used to analyze literature, such as *hyperbole*, *setting*, and *plot* do not appear in literature, so students cannot acquire this vocabulary by simply reading literary texts.

As these examples show, whereas academic texts in general may be characterized as containing technical vocabulary and being lexically dense and abstract, each academic discipline has its own features that make understanding oral presentations and reading and writing texts difficult for SELs and ELLs. When teachers teach both academic language and academic content, ELLs and SELs have more chances to succeed. Often teachers do teach the technical vocabulary of their disciplines, but it is also necessary to teach academic grammar and syntax.

### REFLECT AND APPLY

Look over a textbook that is being used in your school with your students. Choose a passage from the textbook, and analyze it as we have done for lexical density, technical vocabulary, and abstraction. What did you discover? What kinds of difficulties might your students have with the text?

## CONCLUSION

As views of grammar and syntax have changed, the way teachers teach grammar and syntax have also changed. There was a shift from a heavy emphasis on traditional grammar teaching for ELLs and SELs to little or no teaching of grammar or syntax. Currently, there is a move back to having teachers write language objectives and to teach grammar with an emphasis on the grammar of academic language.