Although sentence combining practice has been shown to be an effective instructional technique for improving students' writing, scant attention has been paid to the appropriate sequence for such instruction. Studies of the natural development of oral and written language point out two general trends that should be considered in sequencing sentence combining instruction. First, language users develop basic sentences before they learn to elaborate on these sentences. Second, there is a general tendency to elaborate with full clauses first, followed by phrases and words that are derived from full clauses. The various syntactic structures that are normally included in sentence combining instruction can be classified into five categories: coordinates, adverbials, restrictive noun modifiers, noun substitutes, and free modifiers. Within each category, the structures can be further divided into three levels, which serve as guidelines for referencing structures across categories. Sentence combining practice with this sequencing can help students develop the syntactic skills they need to produce clear, lively prose, but should not be considered the only component of a comprehensive writing program. (Appendixes contain the sequences for each of the five syntactic structure categories.) (HTH)
A SEQUENCE FOR SENTENCE-COMBINING INSTRUCTION

Joseph Lawlor

ABSTRACT

Although sentence-combining practice has been shown to be an effective instructional technique for improving students' writing, scant attention has been paid to the appropriate sequence for sentence-combining instruction. This paper discusses the need for such a sequence and outlines several principles that should be considered. The paper also proposes a sequence for five different types of syntactic structures that are normally included in sentence-combining instruction: coordinates, adverbials, restrictive noun modifiers, noun substitutes, and free modifiers.
A SEQUENCE FOR SENTENCE-COMBINING INSTRUCTION

Joseph Lawlor

Sentence-combining practice has been shown to be an effective technique for improving the syntactic skills of student writers at all academic levels: elementary (e.g., Perron, 1974), middle school (e.g., O'Hare, 1973), secondary (e.g., Sullivan, 1977), and college (e.g., Disiker, Kerek, & Morenberg, 1978). Generally, these studies agree on the positive effects of sentence-combining practice: enhanced syntactic fluency and, for the most part, improvement in the overall quality of students' writing (Lawlor, 1980).

The basic format of sentence-combining exercises is very simple. Students are given a series of short "kernel" sentences, and are told to combine these sentences into a longer, more elaborate sentence. The important information from each short sentence must be retained in the longer sentence, thus requiring students to transform and manipulate the structure of the original sentences. The particular manipulations to be performed can be controlled through the use of sentence-combining "signals" (i.e., parenthetical cues, underlining), as in Figure 1.

Alex lived in a city.
The city was large.
The city was located in Northern California.

Alex lived in a large city that was located in Northern California. (THAT)

Fig. 1. Sample sentence-combining exercise; from Perron, 1974, p. 260.
Although a large body of research supports the value of sentence-combining practice, there is little agreement in the literature on what may be an important issue in sentence combining—the sequence for instruction. Which sentence-combining operations should be covered early in a sentence-combining program? Which should come next? And is there any justification for postponing certain structures until later in the program?

Unfortunately, the sentence-combining research doesn't offer much help in answering these questions. Both experimental programs and published sentence-combining textbooks reveal a wide disparity of opinion on the sequence for instruction (Lawlor, 1981). Various sentence-combining operations, such as noun-clause substitution, relative-clause embedding, and free modification, seem to be presented in a different sequence in each program. Kleén (1980) reports similar findings. She examined seven published sentence-combining textbooks and found no agreement across texts on the sequence for instruction.

This lack of agreement on the appropriate sequence for sentence-combining activities may stem from an assumption that underlies the technique. Authorities have speculated that sentence combining works because it exploits the linguistic abilities that students have already developed through oral language acquisition. According to this view, sentence combining doesn't really teach anything "new" about language; the technique merely asks students to apply their oral language ability to the written medium (cf., Strong, 1973, p. xiii). Consequently, the sequence for instruction would seem to be relatively unimportant because
students would not be likely to find one sentence-combining operation more "difficult" than another.

However, there are several reasons to suspect that the sequence for sentence-combining instruction may be more critical than we have considered it in the past. Studies of language development indicate that the process of acquiring syntax takes place over a longer period of time than we once thought (Hatch, 1969; Golub, 1969; Kennedy, 1970). In one review of the developmental research, Menyuk (1977) states that "some structures are acquired at a slower rate by some children but are acquired by all, while others are not acquired even by some adults" (p. 129). The evidence suggests that we can no longer assume that students at a certain "magic" age--6, or 9, or 12 years--are able to control all the syntactic manipulations available in their native language. In addition, students whose native language is not English may not bring the same oral language facility to sentence-combining instruction that native speakers do. And finally, there is some evidence that certain written syntactic structures occur rarely in oral language. For example, people do not ordinarily speak in the "cumulative" sentences advocated by Christensen (1968). Such structures are much more characteristic of the written medium, and students with limited reading experience may not be familiar with them (Mellon, 1979).

So perhaps sentence combining does indeed teach something "new" about language. And if this is true, then the sequence for instruction may be a critical factor. Studies of the natural development of oral and written language point out two general trends that ought to be
considered in sequencing sentence-combining instruction. First, language users develop basic sentences before they learn to elaborate on these sentences. When elaborations do appear, they occur first in the predicate phrase. For example, children will usually use relative clauses to modify direct objects before they use such clauses to modify subject nouns. Consequently, it makes sense to introduce sentence-combining operations in the predicate phrase first before introducing them in other sentence positions.

Second, there is a general tendency to elaborate with full clauses first, followed by phrases and words that are derived from full clauses. This suggests, for example, that relative clauses should be sequenced before reduced clausal structures such as participial phrases and appositives.

Specific recommendations for sequencing sentence-combining activities are presented in Appendixes A-E. For purposes of discussion, the various syntactic structures that are normally included in sentence-combining instruction have been classified into five categories: coordinates, adverbials, restrictive noun modifiers, noun substitutes, and free modifiers. Within each category, the structures are further divided into three levels. These levels do not correspond to grade levels; nor do they represent content that should be covered in a semester or a year of instruction. The levels are merely guidelines for referencing structures across categories. Thus, for example, in introductory sentence-combining lessons, instruction might include
compound sentences, single-word adverbs, single-word adjectives, and noun clauses as direct objects (all Level I structures).

Coordinates

Appendix A lists the sequence for coordinate structures. Coordination is a syntactic operation that appears very early in children's writing. Young writers tend to use many coordinate structures (especially compound sentences), while older writers use considerably fewer (Hunt, 1977). However, even within this category, there are indications that certain types of structures are coordinated at different developmental stages. For example, in one fourth-grade sentence-combining study, Miller and Ney (1968) found that compound prenominal adjectives were very difficult for their students to produce, and that error rates remained high even after several training sessions. Ney (1974) speculates that many of these fourth-graders were simply not "developmentally ready" (p. 158) for this type of sentence-combining operation. Consequently, it makes sense to introduce compound adjectives after structures such as compound direct objects and compound subjects.

Adverbials

The recommended sequence for adverbial structures is listed in Appendix B. In general, the use of adverbial sentence-combining operations is not associated with syntactic maturity (Hunt, 1965; O'Donnell, Griffin, and Norris, 1967). That is, younger and older
writers tend to use adverbials with about the same frequency. However, there are differences in the types of adverbials used at different levels. For example, time clauses appear very early in children's writing, perhaps reflecting an instructional emphasis on narrative writing. Nevertheless, there seems to be some justification for constraining how these clauses are introduced in a sentence-combining program. Hatch (1971) reports that kindergarten and second-grade students found sentences much easier to comprehend if the occurrence of a time clause in a sentence matched the temporal order of the events being narrated. For example, in the sentence I finished the test before the bell rang, finishing the test occurs before the ringing of the bell. Consequently, the clause order corresponds to temporal order. If this principle is violated, as in I finished the test after the bell rang, the sentence becomes much more difficult to process.

A different effect has been observed for adverb clauses of reason: Sentences are easier to process if the result is stated before the reason, as in We stopped for lunch because we were hungry (Weaver, 1979). Consequently, sentence-combining programs ought to introduce the simpler arrangement first, followed by the more difficult order.

Restrictive noun modifiers

Appendix C lists the sequence for restrictive noun modifiers. The use of these modifiers has been found to be a valid index of syntactic maturity. Relative clauses, in particular, account for much of the increase in the length of writers' sentences as they mature (Hunt, 1965). The recommended sequence for relative clauses reflects one of
the general principles discussed above. Relative clauses are first introduced in the predicate phrase (Level I) and then in the subject (Level II). Level II also includes phrasal modifiers, such as appositives and participials, again reflecting the general tendency to elaborate first with full clauses, followed by reduced-clause structures.

Level III includes one type of restrictive noun modifier that seems to appear at a late developmental stage: the prenominal participle. Gebhard (1978) compared the syntax used by three groups of writers: (1) college freshmen rated as poor writers, (2) college freshmen rated as superior writers, and (3) professional writers. She found that both the professional writers and superior freshmen used prenominal participles significantly more often than did the poor writers. Consequently, there is some justification for sequencing these structures late in a sentence-combining program.

Noun substitutes

Appendix D displays the sequence for noun substitutes—clauses and phrases that function as nouns in a sentence. Noun clauses appear fairly early in children's language, but they are almost always used as direct objects and complements, as in Level I (Kleen, 1980). At Level II, these clauses are introduced in the subject position. These are followed by infinitive phrases, once again reflecting the developmental trend from clause to phrase. Level III contains several nominal structures that seem to be characteristic of mature prose. These include noun clauses as objects of prepositions and verbals, gerunds and
gerund phrases, and the "deferred-subject" sentence, in which it replaces a noun substitute as the grammatical subject.

The final nominal structure listed at Level III is one that may be somewhat controversial—the derived noun phrase. Gebhard (1978) suggests that the use of such nominals contributes to a "strong, succinct prose style" (p. 221). Stotsky (1981) claims that these derived nominals are indeed characteristic of mature expository writing. However, authorities who are concerned about the readability of modern prose (e.g., Hake and Williams, 1981) are very critical of this nominal style. Nevertheless, it seems that derived noun phrases should be covered in sentence-combining instruction, but with cautions attached to satisfy readability considerations. Because of these complications, it makes sense to cover derived nominals relatively late in the instructional sequence.

**Free modifiers**

Appendix E lists the sequence for introducing free modifiers in a sentence-combining program. Such modifiers are associated with mature prose, particularly when they are used in sentence-final position in cumulative sentences (Christensen, 1967, 1968; Wolk, 1970). Christensen (1968) distinguishes free modifiers from the restrictive noun modifiers discussed above:

Free modifiers ... are modifiers not of words but of constructions, from which they are set off by junctures or punctuation. Grammatically, they are loose or additive or nonessential or nonrestrictive. The constructions used are prepositional phrases; relative and subordinate clauses; noun, verb, adjective, and adverbial phrases or clusters; and, one of the most important, verbid clauses or absolutes. (p. 577)
The sequence listed in Appendix E includes free modifiers at Level I and only. There are several reasons for sequencing these structures late in a sentence-combining program. As noted earlier, free modifiers (and cumulative sentences) are more frequent in written language than in oral language. Unless students have had considerable experience reading modern prose, they are likely to have difficulty with these structures. In addition, free modifiers are essentially stylistic options. Their use depends upon students having reached a cognitive stage in which they can view their written works as what Mellon calls "craftable artifacts" (1979, p. 21). Thus, instruction in this kind of nonrestrictive, free modification should be sequenced at a point where students are most likely to benefit from it. And that point is relatively late.

Conclusion

Sentence-combining practice can help students develop the syntactic skills they need to produce clear, lively prose. However, an effective writing program must certainly include instruction on other facets of the composing process, such as generating and arranging ideas, and revising and editing text. Consequently, sentence combining practice should be considered as an important component—but not the only component—of a comprehensive writing program.

The appropriate sequence for sentence-combining activities has received little attention from researchers and instructional designers. In proposing such a sequence here, the author is not suggesting that sentence combining must be bound to some rigid, unyielding instructional sequence. Certainly, more research is needed, and as our knowledge of
language development increases, the sequence for sentence-combining instruction must be modified. But even with the knowledge that is currently available about language development, certain trends are evident. And instructional developers should certainly take advantage of these trends as they design sentence-combining programs.
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Appendix A
Sequence for Coordinate Structures

Level I  Compound sentences.

Judy raked the lawn, and John watered the flowers.

Compound structures within the predicate phrase.

Ellen ordered a hamburger and a coke.

I finished my homework and went to bed.

The room was small and stuffy.

Compound subjects.

Susan and Dave went to the movies.

Level II  Compound prenominal adjectives.

The cold and hungry campers huddled around the fire.

Level III  Compound objects of prepositions and verbals.

The train stopped in large cities and small villages.

She expects to visit the museum and the cathedral.
Appendix B
Sequence for Adverbial Structures

Level I

Single-word adverbs.

Jack walked carefully.

Prepositional phrases of place/motion.

Maria hit the ball over the fence.

Adverb clauses of time: clause order matches time order.

I finished the test before the bell rang.

Adverb clauses of reason: result stated before reason.

We stopped for lunch because we were hungry.

Level II

Adverb clauses of time: clause order does not match time order.

We went to the library after class was over.

Adverb clauses of reason: reason stated before result.

Because my brother was late, we had to start without him.

Prepositional phrases of time.

Jim visited the zoo on Saturday.

Adverb clauses of condition.

We'll go on a hike if the rain stops soon.
Appendix B (continued)

Adverbial infinitives.

Rick is waiting to hear from you.

Level III. Prepositional phrases of cause, manner, and concession.

The picnic was cancelled because of bad weather.
The bomb exploded with a muffled roar.
Jerry learned to skate despite his handicap.

Adverbial clauses of concession and purpose.

Although the sun was shining, the air was very cool.

He fixed the door so that it wouldn't squeak.
Appendix C

Sequence for Restrictive Noun Modifiers

Level I  Single-word prenominal adjectives.
        Terry bought a new car.
        Relative clauses modifying object: relative pronoun
        as subject.
        The police caught the burglar who stole the
        jewels.
        Relative clauses modifying object: relative pronoun
        as object.
        I enjoyed the book that you gave me.
        Relative clauses modifying object: relative pronoun
        as possessive.
        We met a woman whose son is famous.

Level II  Relative clauses modifying subject: relative pronoun
        as subject.
        The team that wins this game will be the state
        champion.
        Relative clauses modifying subject: relative pronoun
        as object.
        The cookies that Jean baked are delicious.
Appendix C (continued)

Relative clauses modifying subject: relative pronoun as possessive.

The man whose car was stolen called the police.

Adjectival prepositional phrases.

The girl on the porch is my sister.

Post-nominal participial phrases: present and past.

My teacher is the woman talking to Pam.

We toured a castle built many years ago.

Restrictive appositive.

My friend Rita won the spelling bee.

Null-pronoun relative clauses.

Steve read the story you wrote.

Post-nominal infinitive phrases.

We had no reason to doubt his story.

Level III Prenominal participles: present and past.

That barking dog kept us awake all night.

These cans are made of recycled aluminum.
Appendix D

Sequence for Noun Substitutes

Level I  Factive noun clauses as direct objects.

Mary thought (that) you were here.

Interrogative noun clauses as direct objects.

Pete knows where the treasure is buried.

Level II  Factive and interrogative noun clauses as subjects.

(The fact) that we are out of time worries me.

How the gold disappeared is a mystery.

Infinitive phrases.

Maria wants to meet Dr. Peters.

(For us) to arrive early would be a good idea.

Wh word + infinitive phrases.

Bob learned how to dance.

Where to find the money is the problem.

Level III  Factive and interrogative noun clauses as objects of verbals and prepositions.

Nancy needs to know what we have decided.

Despite the fact that John is not very tall, he is a good basketball player.

Gerunds and gerund phrases.

Pete enjoys swimming.

Running a business is hard work.
Appendix D (continued)

It extraposition with noun clauses, infinitives, and gerunds.

It surprised me that he was such a good student.
It took a long time to find the solution.
It was nice seeing my old friends.

Derived nouns and noun phrases.

Carelessness causes many fires.
The citizens were enraged by the attempted assassination of the prime minister.
Appendix E
Sequence for Free Modifiers

Level I

Level II

Level III Nonrestrictive relative clauses.

This satellite will orbit Jupiter, which is the largest planet in the solar system.

Nonrestrictive appositives.

The mayor, Ann Green, spoke to the reporters.

Participial phrases.

Ted stood on the bridge, staring at the river below.

The Scrap-Iron Kid fell to his knees, stunned by a left hook.

Adjective clusters.

The mule, stubborn and orner, refused to move.

Prepositional phrases.

Martin walked softly, like a cat stalking a bird.
Appendix E (continued)

Nominative absolutes.

The deer stood quietly, its antlers silhouetted against the setting sun.