THE EFFECTS OF SENTENCE-COMBINING PRACTICE ON SYNTACTIC MATURITY AND WRITING QUALITY IN ESL STUDENTS IN FRESHMAN COMPOSITION

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Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF EDUCATION
May, 1989

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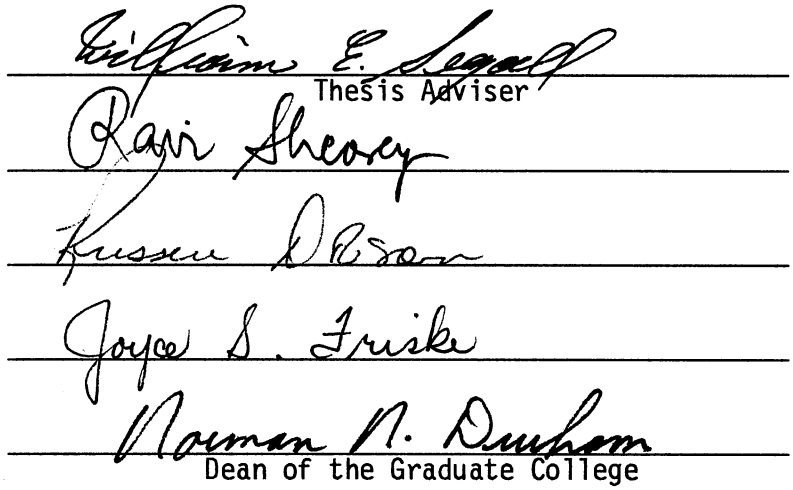
Thesis Approved:



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ACKNOWLEDGMENTS

The completion of this graduate program requires that I acknowledge many debts owed to my faculty advisers, graduate teaching assistants, and my family. Many thanks to Dr. Segall, my major adviser, for his understanding and patience. I am thankful for Dr. Sheorey's advice and support over a period of many years. To Dr. Dobson and Dr. Friske, who served on my committee, I express deep appreciation and pray that I have not imposed too much.

I also express my gratitude to the graduate teaching assistants in the ESL Freshman English Composition Program, who were willing to put up with inconveniences to aid my study. I hope you all--Jeff Beall, Duane Ratzlaff, Lamont Weeks, and Melita Mihailovich--enjoy long and successful teaching careers.

Finally, I thank my wife Julie for raising our two sons between the hours of ten and two many weekday nights while I battled to complete endless word counts and tabulations for the statistical analyses. I also thank my father and mother for their belief that education does matter. I honor their memory and pray that I will always do so as a part of their legacy to the world.

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CHAPTER I

INTRODUCTION

Sentence combining, the practice involving the joining of so-call "kernel" sentences into larger, more complex sentences, has enjoyed considerable popularity in language teaching circles since initial research in the sixties and early seventies (Hunt, 1965; Mellon, 1969; O'Hare, 1973). Once considered a minor exercise in the overall approach to language teaching, sentence combining has been accepted as a major tool in improving the composition skills of both first language and second language learners. The degree of acceptance can be witnessed in the production of classroom texts devoted exclusively to sentence-combining practice. Among the texts for native English speakers are: Sentence Combining: A Composing Book (Strong, 1973) and The Writer's Options: College Sentence Combining (Morenberg, Daiker, and Kerek, 1979). For ESL students, one text--Sentence Combination, Volume II (Pack and Henrichsen, 1980)--has become a standard text in many ESL classrooms. Undoubtedly, these texts represent the final step in the practical application of Chomsky's (1957) theory of generative-transformational grammar and Christensen's (1967) concept of generative rhetoric.

In order to understand the pro's and con's of sentence combining in regard to ESL students, it is necessary to first note the importance of three major research studies in the 1960's that form the basis of sentence combining's widespread acceptance. Hunt's (1965) study, entitled Grammatical Structures Written at Three Grade Levels, involved one

of the most exhaustive attempts ever made to analyze the syntactic structures written by students in the fourth, eighth, and twelfth grades. From Hunt's analysis of 1,000 word samples from 18 students at each grade level, a framework was provided for the development of syntactic maturity in the writing of first language speakers of English.

In analyzing the data, Hunt (1970, p. 732) coined the term "T-unit," which he defined as the "minimal terminal unit" consisting of "one main clause plus any subordinate clause or nonclausal structure that is attached to or embedded in it." Substituting the T-unit for the older index of words per sentence, Hunt provided the key statistical unit which would be used in future research into syntactic growth. Using number of words per T-unit, number of words per clause, and number of clauses per T-unit, Hunt claimed three statistically significant measures for analyzing student writing. In addition, he used professional writing samples from The Atlantic and Harper's, analyzing these samples as examples of "superior adult writing" (Hunt, 1965). Hunt's tables for syntactic maturity in children and superior adults were readily accepted as the norm by most researchers. More importantly, the T-unit became the key index in virtually all research that supported the value of sentence-combining exercises.

Hunt's success inspired Mellon (1969) to investigate the possibility that syntactic growth, as measured by T-units, might be enhanced by overt instruction in transformational grammar, coupled with sentence-combining exercises of each transformation taught. Working with seventh grade first language speakers, Mellon gave the students in his experimental group instruction in transformational grammar, while the control group studied traditional grammar. Although many researchers have criticized the extreme complexity of the transformational notations taught to

seventh graders (O'Hare, 1971), Mellon did report significant growth in syntactic maturity, based on the development tables created by Hunt (1965). Mellon concluded that "it was the sentence-combining practice associated with grammar study, not the grammar study itself, that influenced syntactic growth" (p. 74).

A following study by O'Hare (1971) completed the triumvirate of studies that led to the widespread acceptance of sentence combining. Focusing on sentence combining without the encumbrance of grammar study, O'Hare sought to make sentence combining a "student-centered" activity which would "produce a positive, acceptance classroom atmosphere . . . stressing the spirit of inquiry, . . . encourag[ing] syntactic experimentation and build[ing] confidence" (p. 34).

O'Hare's (1971) study affirmed the value of sentence combining in the eyes of many instructors and researchers. The results demonstrated a substantial gain in overall syntactic maturity for the experimental group with a gain of over six words per unit; whereas, the control group showed virtually no gain in words per T-unit. In fact, utilizing Hunt's normative tables, the seventh graders in the experimental group were shown to be nearly equivalent to twelfth-graders in terms of syntactic maturity. O'Hare went one step further than Mellon (1969), concluding that the essays of the experimental groups were also superior in terms of overall quality as holistically judged by experienced English instructors. Thus, O'Hare was able to reject Mellon's belief that sentence combining was unrelated to the teaching of writing, and asserted that sentence combining "in a very real sense taught writing" (O'Hare, 1971, p. 68).

From these three studies, sentence combining gained a widespread following. Study after study among native English speakers strengthened the pro-sentence-combining forces. Combs (1976a) replicated both

Mellon's and O'Hare's studies and concluded that sentence-combining practice not only improved the quality of writing, but also was retained by students for more than eight weeks. Morenberg, Daiker, and Kerek (1979) rejected some of Ney's (1976) claims that sentence combining did not enhance syntactic growth. They argued that their research among freshmen at the University of Miami demonstrated that sentence combining not only enhanced syntactic maturity, it also led to improved attitudes among students toward composition classes. The bandwagon of support continued throughout the seventies and into the eighties, including studies by Ross (1971), Swan (1978), Menedez (1978), Stewart (1978a), Pedersen (1978a), Tomlinson and Strachley (1978), Jones (1979), Faigley (1979), Morenberg (1980, 1981), and Escoe (1981). Among native language learners ranging from minority groups to students of all ages, sentence combining was broadly supported.

Parallel to its acceptance in teaching native speakers of English, sentence combining quickly achieved acceptance among instructors, researchers, and students in ESL. Crymes (1971) demonstrated that sentence-combining exercises involving nominalizations increased the ESL students' use of nominalizations in student compositions. As early as 1975, Angelis endorsed sentence combining as an effective means to correct syntactic and rhetorical errors in ESL classes. Similarly, Perron (1974), Klassen (1977), Ney and Fillerup (1980), and McKee (1982) discovered that sentence-combining practices were quite effective in promoting accelerated syntactic growth in ESL classes.

Despite the obvious widespread acceptance of sentence combining as an important technique for enhancing the composition of students, serious questions persisted as to exactly what benefits were derived from sentence combining. Christensen (1968), in an early criticism of the

sentence-combining movement, attacked the key assumption underlying Hunt's indexes of words per T-unit, words per clause, and clauses per T-units and Mellon's use of these indexes:

> A mature style must say much in little, agreed, but a mature style must be easy to decode. The long clause is not the mark of a mature style but of an inept style--easy writing that's curst hard reading.

For Christensen, the question was simple: is a longer sentence, a longer T-unit containing more embedded clauses, an example of mature style and of improved quality in writing? Noting Mellon's own finding that a group of teachers who holistically graded the essays favored the control group over the experimental group, Christensen concluded that the answer was no.

Furthermore, Christensen (1968) took Hunt to task for Hunt's use of articles from The Atlantic and Harper's as examples of superior adult writing. In his own examinaton of numerous articles from Harper's, as well as professional and amateur writers, Christensen (1968) discovered that: (1) professional writers tended to place free modifiers at the end of sentences (unlike amateur writers) and (2) that professional writers wrote shorter base (main) clauses than amateur writers. Christensen's conclusions seemed to point to the fact that measures of syntactic maturity do not equate with a mature style, and that sentence combining does not necessarily equate with quality.

In another criticism, Marzano (1976) argued that the causal relationship between sentence-combining practice and improved quality is rather weak, pointing out that "there is still no sound research which shows that sentence-combining causes good quality" (p. 59). Marzano faulted the sentence-combining movement for failing to validate its

research, even though he saw distinct advantages to sentence-combining practices.

The problem of validating the use of the T-unit has concerned other researchers as well. While acknowledging the value of the T-unit as a measure of syntactic maturity, Kerek (1979) raised some important questions about the universal use of the T-unit: "The main danger of quantification, especially of an aspect of writing ability, is that we easily read too much into the numbers, and come to think of objectively measured SM growth as an end in itself" (pp. 6-7). Kerek further criticized the sometimes arbitrary nature of T-unit analysis, noting that in one study by Ross (1971), freshman essays gleaned of all garbles and ineffective clauses were found to be comparable to Hunt's figures for skilled professional writers. The difficulty arises from the confusion of writing quality with measures of syntactic maturity. Kerek (1979, p. 10) suspected that "these two types of 'maturity' are not only not at all coterminous, but are not even directly related."

This question of methodology and so-called objective measurements in sentence combining and rhetoric involves far more than the mere enhancement of one means to improve writing. Rather, the use of the T-unit and the wide acceptance of Hunt's concept of syntactic maturity are products of the movement to utilize quantitative measurements in making traditionally humanistic fields such as the social sciences and the language arts accountable. In his criticism of the sentence-combining movement's embrace of syntactic maturity and the quantification of writing through the use of the T-unit, Holzman (1983) noted the rise of scientism:

> It may well be that composition, which as rhetoric is the most ancient of the humanistic disciplines, is about to follow the path taken by its sister, philology, toward a pattern of research based on mathematical models and statistical analysis. A pitfall on the path to scientific knowledge is the

> 'scientism' . . . [which] designates the practice of the forms of science for their own sake, or for the sake of wearing those gorgeous cloaks of reality. We may be able to avoid the problem of scientism attendant on this journey by a critical approach to our own discipline . . . seeking to place our research on a firm foundation through a continuing interrogation of its procedures. We may even decide . . . that the social scientific way is not the path we want to follow after all (p. 74).

Hunt's choice of the articles in The Atlantic and Harper's as examples of superior adult writing cannot be considered scientific in any sense of the word. Rather, the choice was arbitrary. The concept of syntactic maturity and the T-unit appear to fit the precepts of scientism.

Ultimately, the question of quality in composition cannot be sidestepped by focusing on a mathematical model of clause and T-unit length. Reverence for the T-unit by composition researchers attempting to prove or disprove the value of sentence combining is a serious flaw. As Holzman (1983, p. 76) pointed out, "the T-unit became the composition research equivalent of such linguistic terms as the 'morpheme' or the 'quarks' of theoretical physics." Implicit in the use of the T-unit is a scientific assumption: that the definition of the T-unit is the same for all researchers at all times. Since this is not true, "research using it cannot be independently duplicated and verified" (Holzman, 1983, p. 76).

The use of a scientific methodology with units of dubious value calls into question a great deal of the research into sentence combining. Furthermore, the assumption that lengthened clauses and T-units are, indeed, better writing, calls into question the goals of such research. In examining the effects of sentence combining on a group of ESL freshmen at a large southwestern university, the T-unit was used as an evaluative technique to ascertain syntactic growth. Then, two separate evaluations, holistic scoring and Davidson's Test of Subordination, were utilized to

cross-validate syntactic growth scores. The question of quality was addressed through these three measurements in the course of this study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Two major lines of research were reviewed in this chapter: (1) literature related to studies of syntactic development and sentence combining among first language speakers of English and (2) literature related to studies of sentence-combining effects on ESL learners. The focus was generally on college-level students whenever possible. Because of the great number of studies in this area, numerous studies were only briefly mentioned. An additional review of recent criticism of both sentence combining and T-unit analysis has also been included.

Literature Related to Syntactic Norms and Sentence-Combining's Effects on Native Speakers of English

Hunt's (1965) landmark study (Grammatical Structures Written at Three Grade Levels) set the standards for sentence-combining research over the past two decades. Hunt introduced the T-unit as a precise tool for measuring language development and established norms for the various stages of language development in native speakers. Examining large writing samples from 54 students in three different grades (fourth, eight, and twelfth), Hunt systematically analyzed the writing in terms of words per clause, words per T-unit, and clauses per T-unit. In addition to these samples, Hunt exmained several articles from the magazines, The

Atlantic and Harper's to provide information regarding examples of superior adult writing.

Central to Hunt's (1965) study was the use of the T-unit, defined by Hunt as the smallest unit of language "grammatically capable of being terminated with a capital letter and a period" (p. 21). In a further clarification of the T-unit, Hunt later defined it as "one main clause plus any subordinate clauses or non-clausal structure that is attached to or embedded in it (Hunt, 1970, p. 4). Hunt found the T-unit, the minimal terminal unit, significant in distinguishing among the various writing samples he examined and quite superior to other syntactic measurements. The two main advantages of the T-unit were that it (1) preserved the combined effects of increased clause lengths and additional subordination and (2) accounted for efforts at subordination without discounting coordination (Hunt, 1965). From his studies, Hunt concluded that the T-unit was most effective in distinguishing the writing of elementary students; whereas, the clause length seemed most effective in working with the writing of older students and adults.

Numerous studies followed Hunt's work, seeking to establish the various stages of writing development utilizing the T-unit as the basic unit of measurement. O'Donnell, Griffin, and Norris (1967) established the normal levels of syntactic fluency through their analyses of writing samples from both skilled adults and students in various grades. In a follow-up study in 1970, Hunt attempted to control for subject matter. Using O'Donnell, Griffin, and Norris' "aluminum" passage, Hunt confirmed earlier findings. A summary of these studies (Hunt, 1965, 1970; O'Donnell, Griffin, and Norris, 1967) is presented in Table I. A gradual increase in both clause length and in the ratios of clauses per T-unit can be observed as grade levels increase.

TABLE I

MEAN SCORES ON THREE INDICES OF SYNTACTIC FLUENCY: STUDIES OF HUNT (1965, 1970) AND O'DONNELL, GRIFFIN, AND NORRIS (1967)

Study	Grade 3	4	5	6	7	8	10	12	Average Adult	Skilled Adult
Hunt (1965)										
W/T		8.51				11.34		14.40		20.30
W/C		6.60				8.10		8.60		11.50
C/T		1.29				1.42		1.68		1.74
Hunt (1970)										
W/T		5.42		6.84		9.84	10.44	11.30	11.85	14.78
W/C		5.19		5.76		6.79	7.35	7.85	8.40	9.95
C/T		1.04		1.18		1.43	1.41	1.44	1.47	1.51
O'Donnell, Griffin, & Norris (1967)										
W/T	7.67		9.34		9.99					
W/C	6.50		7.40		7.70					
C/T	1.18		1.27		1.30					

Note: W/T = Words per T-unit; W/C = Words per Clause; C/T = Clauses per T-unit.

In attempting to establish measurements of syntactic fluency for older students and adults, Stewart (1978a) conducted a study of syntactic maturity of students from grade 10 to adults in their sixth year of university work. Utilizing Strong's (1973) sentence-combining materials and O'Donnell, Griffin, and Norris' (1967) "aluminum" paragraph, Stewart analyzed the writing of 126 high school students in New Brunswick, Canada, as well as university students at the University of New Brunswick. Scores on clause length, T-unit length, and clauses per T-unit were tabulated and carefully analyzed. From his study, Stewart arrived at a most significant conclusion regarding the comparison of twelfth grade students with university students: "The average twelfth grader at the time of his graduation is about as mature syntactically as he will ever be" (barring further education on the university level) (Stewart, 1978a, p. 42). Still, great difficulty persisted regarding attempts to establish norms for university-level students, due to educational and regional differences.

Hunt's 1965 study not ony encouraged a belief that a scientific measurement of writing quality was possible, it also convinced many researchers that sentence combining was a valuable approach to the improvement of writing skills. Obviously, the traditional grammar approach had never demonstrated success; a preoccupation with lengthening the T-unit became the focus of much new research.

Because the number of ERIC documents related to the field of sentence combining is in the hundreds, the review of literature focused upon key articles and research projects impacting most upon this dissertation. Most of these research articles investigated the effect of sentence-combining practice in terms of Hunt's preferred measurements--words per T-unit, words per clause, and clauses per T-unit.

Bateman and Zidonis (1964) laid the basis for investigations into the generally held belief that sentence-combining practice would enhance syntactic maturity. Based on their conviction that generative-transformational transformations could be taught to students in order to improve the complexity of their writing, Bateman and Zidonis selected a ninth-grade class at the University School of Ohio State University. The experimental group were taught specially prepared material covering 46 transformational rules. Bateman and Zidonis concluded that instruction in transformational rules reduced the occurrence of errors and increased the average structural complexity scores of the experimental group to 9.32, well above the 3.79 average score for members of the control group. Although this study has been subjected to numerous criticisms of its methodology, its impact on accelerating research into the field of sentence combining is undeniable.

A most significant study on the heels of Bateman and Zidonis (1964) was Mellon's (1969) Transformational Sentence-Combining. Mellon chose to investigate the effects of transformational sentence-combining instruction on a population of 247 seventh graders in four schools in the Boston area. Mellon's central purpose was to find out whether students exposed to sentence-combining practice based on Chomsky's (1957) theory of generative-transformational grammar and Bateman and Zidonis' study would show statistically significant increases in sytactic maturity as defined by Hunt's developmental model.

Mellon's (1969) subjects were divided into five experimental classes receiving three treatments and five control classes which studied traditional grammar. Two additional classes studied no grammar at all but did study additional literature lessons. The treatment period extended over a full academic year. The treatment for the experimental classes

consisted of both formal instruction in transformational grammar and problems in combining short kernel sentences into longer, more complex units. In the usual lesson, students were given a group of short sentences and were directed to write them into a single sentence. A variety of three rhetorical modes, narration, exposition, and description, were used for the nine compositions written by the classes during the first four weeks and the last four weeks of the academic year. Mellon then compared the growth of the experimental group with Hunt's Normative Developmental Tables and with pretests and posttests of the control groups.

The first 10 T-units of each student's essays were analyzed utilizing the 12 factors of syntactic fluency which were used by Hunt's (1965) study. In his analysis of the results, Mellon found that the experimental group achieved significant growth in syntactic fluency at the .01 level on all 12 factors. These factors included: sentence length; T-unit length; subordination-coordination ratio; and the number of embedded structures per hundred T-units, including the number of noun clauses, noun phrases, relative clauses, conjunctions uniting T-units, adverbial clauses (time, place, and manner), relative phrases, clustered modification, and depth of embedding (Mellon, 1969). In comparing his results to Hunt's normative tables of syntactic development, Mellon found that the experimental classes showed from 2.1 to 3.5 years of growth; whereas, his control classes did not manage even a year's growth. Mellon also noted that the experimental group gained a mean of 1.27 words per T-unit, compared to a gain of 0.26 words per T-unit for the control group. Thus, Mellon concluded that transformational sentence-combining practice did significantly enhance syntactic fluency.

Mellon's (1969) study had, and continues to have, major impact on the controversy of sentence combining in the classroom. One major

criticism voiced by many concerned the cause of the improvement in the writing of the experimental group. Was the improvement due to the teaching of transformational grammar or to the sentence-combining practice sets worked out by the student? O'Hare (1973) noted that students were required to learn complex transformational grammar shorthand such as "T:rel, T:gerund, T:der-NP, T:infin, . . . [and] learn concepts like passive infinitive phrase, appositive noun phrase, participial compound, . . .," which they were never asked to apply consciously in combining practice (p. 11). Obviously, the question of causes and effects is confused by the heavy emphasis Mellon placed on formal instruction in transformational grammar at the expense of sentence-combining practice. It appears that manipulation of kernel sentences may not require the deep formal knowledge of transformational rules, no more than a detailed knowledge of formal traditional grammar leads to improved syntactic fluency.

In a major criticism of Mellon's (1969) widely acclaimed study, Christensen (1968) found serious faults with both Mellon's and Hunt's (1965) studies for their preoccupation with syntactic growth, asking "Is the kind of growth stipulated with the kind of growth we want? (p. 575). Noting that holistic graders actually rated the post-treatment compositions of the control group superior to the experimental group in Mellon's study, Christensen warned against the dangers of teaching children to write unwieldy sentences full of long noun clauses which result in "lumpy, soggy, pedestrian prose that we justly deride as jargon or gobbledegook" (p. 575). A mature style, as outlined by Christensen, has very little to do with a high number of words per T-unit, but a great deal to do with keeping the independent clauses short by using an extensive variety of free modifiers. Hunt's definition of the T-unit failed

to distinguish between the independent clauses and its modifiers, tending instead to lump all words together as part of an extended T-unit. Thus, quantity was mistaken for quality in Hunt's definition and Mellon's use of the T-unit. A mature style, thus, could not be defined in the quantifiable terms advocated by Hunt and Mellon.

Mellon's study served as the impetus for numerous explorations into the value of sentence combining. Because of Mellon's (1969, p. 106) conclusion that "clearly . . . sentence-combining practice associated with the grammar study, not the grammar itself . . . influenced sytactic fluency," O'Hare (1971) decided to determine whether a simplified version of Mellon's complex transformational rules would significantly improve students' syntactic maturity. O'Hare decided to edit Mellon's complex examples and transformational shorthand to make the material more digestible for the seventh grade students involved in the experiment. For example, Mellon (1969) gave the following exercise:

> Problem:
>
> The children clearly must have wondered SOMETHING
> The bombings had orphaned the children.
> SOMETHING was humanly possible somehow. (T:th)
> Their conquerors pretended SOMETHING. (T:infin-T:exp)
> Chewing gum and smiles might compensate for the losses. (T:fact)
> The losses were heartbreaking.
> They had so recently sustained the losses (p. 22).

O'Hare's (1971) version appears more palatable:

> The children clearly must have wondered SOMETHING.
> The bombings had orphaned the children. (WHOM)
> SOMETHING was humanly possible somehow. (WHY)
> Their conquerors pretended SOMETHING. (IT-FOR-TO)
> Chewing gum and smiles might compensate for the losses. (THAT)
> The losses were heartbreaking.
> They had so recently sustained the losses. (WHICH) (p. 29)

The solution for both exercises is as follows:

> The children whom the bombing had orphaned clearly must have wondered how it was humanly possible for their conquerors to

> pretend that chewing gum and smiles might compensate for the heartbreaking losses which they had so recently sustained (O'Hare, 1971, p. 29).

In addition to studying the effects of sentence-combining practice on students' abilities to write syntactically mature sentences, O'Hare also sought to make an overall evaluation of the quality of the students' pre and posttreatment composition scores. As in Mellon's study, a class of 83 seventh graders was divided into two experimental and two control groups. The experimental groups and the control groups shared the same language arts curriculum, which included units in literature, composition, dramatics, language study, and reading, with the only exception being the sentence-combining practice used with the experimental groups. The experimental groups spent approximately 75 minutes each week in sentence-combining practice, which consisted of student-led discussions, choral readings of corrected sentences, and workbook exercises. Sentence-combining homework took up about 30 minutes each week. As much as possible, O'Hare (1973) sought to parallel Mellon's study without referring to formal transformational grammar rules.

O'Hare (1973) analyzed five compositions per student on the basis of six factors of syntactic maturity: T-unit length, clauses per T-unit, clause length, and the number of noun, adjective, and adverbial clauses per 100 T-units. To control for variations between the control groups and the experimental groups, O'Hare used a system of matched pairs based on gender, I.Q. scores obtained from the California Test of Mental Maturity, and on initial pretest composition scores based on words per T-unit. O'Hare also used a panel of experienced composition teachers to do holistic grading of 30 pairs of matched subjects. Judgment of compositions was based on a vote for the best of the two compositions.

O'Hare's results, like Mellon's, showed significant gains for the experimental group in terms of the six factors of syntactic maturity. The most dramatic gain was an increase in words-per-T-unit, from 9.63 to 15.75 in the experimental groups; whereas, the control groups only increased from 9.69 to 9.96 words per T-unit. All six factors were significant at the .05 level for the experimental group; the control group exhibited no significance on any of the six. Using Hunt's normative tables for syntactic maturity, O'Hare (1973) found that the seventh graders in the experimental group were writing at a level equal to Hunt's projection for twelfth graders, a gain of nearly five years in syntactic maturity. In addition, the holistic judgments of compositions by the panel of judges consistently found the experimental group compositions superior to the control group essays at a .001 significance level.

In discussing the implications of the results of the study, O'Hare (1973, p. 68) concluded that "significant qualitative and syntactic gains can be achieved in approximately eight months." More dramatic, however, was O'Hare's conclusion that Mellon had been wrong in claiming that "sentence-combining practice had nothing to do with the teaching of writing" (Mellon, 1969, p. 79). Arguing that sentence-combining practice is not dissimilar to football practice, O'Hare (1971) asserted:

> Surely the coach at practice is teaching football. Similarly, students exposed to sentence-building exercises, even in an 'a-rhetorical' setting, are in a very real sense being taught writing. . . . Mellon's study was clearly concerned with the teaching of writing skills. It is, therefore, difficult to understand how sentence-building exercises can be defined out of the teaching of writing (pp. 68-69).

Furthermore, O'Hare countered some of Christensen's (1968) arguments that sentence-combining practice might lead to choppy or run-on sentences. For O'Hare (1971, p. 69), "Sentence combining helps the writer enlarge the 'practical possible' so that it can be utilized during the composing

process." Thus, the student, as a result of intensive sentence-combining practice, can become a "syntactic authority," able to deal with choppy and run-on sentences more effectively (O'Hare, 1971, p. 70).

More importantly, in the broader context of the relationship of form to content, O'Hare (1971) reached the following conclusion:

> Does . . . form . . . generate content? It was evident . . . that the post-treatment compositions written by the experimental group had much more detail, more 'meat' to them. The treatment group seemed to 'see' more clearly. They had more to say. Perhaps, the syntactic manipulative skill the students had developed . . . invited or attracted detail. Perhaps knowing how does help to create what (p. 72).

This conclusion had broad ramifications for the whole philosophy concerning the value of sentence combining in the classroom. Sentence combining had evolved from a classroom exercise into a powerful complement for teaching the writing process. Sentence combining appeared to be the key component to rapidly improving student writing, far superior to the traditional approaches of traditional grammer, coupled with lectures on essay structure.

The impact of Mellon's (1969) and O'Hare's (1971) studies on the heels of Hunt's (1965) landmark work was considerable. Numerous studies concluded that sentence-combining practice was quite effective in improving the syntactic fluency of experimental populations, with a wide range of ages being tested. Among these studies were Vitale's et al. (1971) work with minority elementary students, Perron's (1974) study of fourth graders, Comb's (1976a) replication of Mellon's and O'Hare's findings with seventh graders, Jones' (1979) study of black college freshmen, and Sullivan's (1977) use of sentence combining with high school students.

Additional studies took place at the college level, especially with freshman English classes. Morenberg, Daiker, and Kerek (1979); Stewart

(1978b); and Faigley (1979) reported favorably on the value of sentence-combining practice as an important tool in teaching writing. By the early 1980's, sentence combining enjoyed wide advocacy, as witnessed by the appearance of numerous textbooks based solely on sentence-combining practice. Among these were Strong's (1973) Sentence Combining: A Composing Book; Morenberg, Daiker, and Kerek's (1979) The Writer's Options: College Sentence Combining; and Pack and Henrichsen's (1980) Sentence Combination: Volume II. Numerous other texts incorporated sentence-combining exercises as part of their material.

Research Related to Sentence-Combining Research Among Speakers of English as a Second Language

Research into the value of sentence-combining practice in teaching learners of English as a second language is still in its infancy when compared to the more than 25 years of research with native speakers of English. For example, the review of ERIC revealed only 23 articles containing both sentence combining and English as a Second Language as descriptors. Yet the field has not lacked for interest, as witnessed by both the increase in research and the popularity of sentence combining as a major component in numerous texts.

One of the first articles concerning sentence combining and ESL instruction was Crymes' (1974) A Bibliographical Introduction to Sentence Combining, which was intended as a background document for ESL researchers and instructors seeking to apply sentence combining as a pedagogical technique. The next year saw the publication of "Sentence-Combining, Error Analysis, and the Teaching of Writing" (Angelis, 1975). This article marked the first advocacy of sentence-combining as a useful

strategy for overcoming language difficulties of foreign students on the university level. Angelis focused on the use of sentence-combining practice as an effective means of eliminating certain types of syntactic and rhetorical errors. For example, to combat the confusion over the use of "although" and "but" in the same sentence, Angelis gave ESL students at Texas A & M the following exercise:

1. I am not at home.
   My eating habits haven't changed.

   COMBINE

   Although I am not at home, my eating habits haven't changed.

   OR

   I am not at home but my eating habits haven't changed (p. 12).

Angelis observed that such exercises allow ESL students to see the repetition in English sentences by breaking longer sentences into their component parts and, thus, making it easier for students to learn syntactic structures (Angelis, 1975).

An intensified effort to assess the effects and possible value of sentence combining followed in the late seventies and the early eighties. Larkin and Shook (1978), in a follow-up experiment with Cantonese speakers, sought to determine whether sentence-combining practice alone would increase the number of words per T-unit and the number of relative clauses produced. Although the loss of subjects led to inconclusive results, the general belief that sentence combining must be useful for ESL students persisted.

Kameen's (1978) study made a broad attempt at systematically classifying the types of sentence-combining exercises needed in the ESL classroom. Among the three major types were: (1) mechanical exercises, (2)

meaningful exercises, and (3) communicative exercises. The distinction among the three was a matter of increasing complexity with fewer cues and more possible correct solutions as the student progressed from the first to the third types.

Two major experiments involving ESL students and sentence combining took place soon after Kameen's (1978) article was published. Sharma (1979) sought to replicate, in part, Hunt's (1965) attempt to assess writing proficiency. Classifying ESL students from a variety of language backgrounds as low intermediate, high intermediate, and advanced, Sharma used student rewrites of Hunt and O'Donnell, Griffin, and Norris' (1967) "aluminum" paragraph to ascertain the level of syntactic development for each student. Using a number of evaluating criteria including words-per-clause, clauses, words, coordinate clauses per T-unit, words per error-free T-units, preposed adjectives, passives, and preposition phrases, Sharma concluded that the number of error-free T-units and the number of words per error-free T-unit were the two factors most valid in determining the syntactic developmental level of the subjects.

In another experiment the following year, Ney and Fillerup (1980) designed a study to determine the effects of limited sentence-combining practice on ESL students in a freshman English class on the university level. Twenty-four students were divided into control and experimental groups. The experimental group received the same type of instruction, including free writing, logical development of paragraphs, and other skills as did the control group, with the sole exception that the experimental group received sentence-combining practice. This practice consisted of decomposition and recomposition homework practices, coupled with 15 minutes of in-class explanation of sentence-combining per class period on a triweekly basis. Ney and Fillerup found that the

experimental group showed greater syntactic development than did the control group when compared, using Hunt's T-unit analysis, but when the groups were compared using holistic scoring the control group appeared to be superior in quality.

In the proceeding discussion of these apparently contradictory results, Ney and Fillerup (1980) explained the dramatic improvement in the syntactic development of the experimental group (as measured by T-unit analysis) as a result of the low syntactic competency of the subjects prior to the treatment and cited the fact that ESL subjects tended to vary widely in syntactic development. More interesting was the explanation of the second finding. Ney and Fillerup cited a previous experiment by Ney (1976) in which sentence-combining practice did not appear to improve the overall quality of student writing in native English speakers. For Ney and Fillerup (1980), the phenomena was obviously explained:

> Students in writing classes should receive instruction in other aspects of writing such as paragraph construction, coherence, diction, and the study of models in prose writing. In other words, good writing requires much more than the ability to construct syntactically elaborate sentences (p. 20).

In reviewing the continuing debate regarding sentence combining, Ney and Fillerup concluded that "ESL freshman students can benefit from sentence combining activities in small doses" (p. 23). The researchers, however, stopped short of endorsing the more dramatic approach in which sentence-combining practice becomes the primary focus of the class.

Ney (1981), in another article, argued the critical importance of context as a major factor in the effectiveness of sentence-combining practice. He cited two bases of evidence for this contention. First, the work of Smith and Combs (cited in Ney, 1981) gave evidence that the instructions given to students can have the same effect as the sentence-combining exercises in improving student writing. Second, citing the

theoretical work of Gallagher (1976), Ney concluded that memorization of words and phrases precedes rule-governed language use and that presenting sentence-combining practice within a literary context enhances this primary memorization process. By providing students with short sentences within context from major literary words such as Crane's The Red Badge of Courage, and Faulkner's "The Bear" from Go Down Moses, the instructor makes it easier for students to hold the ideas in their minds while manipulating the sentences.

Additional research with ESL college freshmen by McKee (1982) sought to investigate the effectiveness of open sentence-combining practice coupled with group discussion versus the more traditional grammar approach, which involved discussion without practice. Two groups studied English over an eight-week period. The control group studied traditional English grammar through the completion of text exercises, the discussion of grammar rules, the correction of errors, and the writing of compositions. The experimental group completed a free-writing assignment based on a particular structure and did open-writing exercises using a variety of structures. The results showed that the experimental group made substantially greater progress in producing syntactically mature sentences as measured by T-units than did the control group. In addition, McKee found that the control group committed more errors after the traditional grammar study than they did in pretreatment evaluations. As a result, McKee concluded that sentence combining benefited all the students in the experimental group, "offering different things to each student, and [meeting] the needs of all" (McKee, 1982, p. 43).

In an early attempt to combine Ney's (1981) argument for context in sentence combining and Christensen's (1968) advocacy of generative rhetoric, Mellon (1969) designed a sentence-combining course for ESL students

in an intensive English language program. Christensen's 12-step approach to sentence skills formed the basis of the coursework. Hunt's "The Chicken," a narrative sentence-combining task, was used as a pretest, while Broadhead and Berline's "The Nightingale" was used as a posttest. In both tests, students had to rewrite short strings of sentences. As in many other research studies, Mellon employed the T-unit as a key unit in determining that sentence combining enhanced the syntactic maturity of the treated classes.

More recent studies have focused on the implementation of sentence combining within the curriculum with the assumption that sentence combining is here to stay and is not just a passing fad. Gass (1982) discovered that how students acquire language and how language is presented in textbooks are incompatible. Gass compared two approaches of sentence-combining instruction. In the first approach, Gass designed a set of exercises which began with easy exercises and became increasingly more difficult. In a second set of exercises, Gass used exercises that were considered moderately difficult to begin work with the experimental group. The control and experimental groups consisted of low-intermediate level students in an ESL course. From the analysis, he concluded that more difficult structures actually improved the students' ability to produce ESL structures.

Reid (1982) designed a curriculum for intermediate composition students of ESL based on the organizing principle of levels of specificity. Reid's course objective was for students to write well planned, coherent paragraphs acceptable to the standards of academic coursework in American universities. Especially important to Reid were the two guiding principles that students should write about what they know and that students should write for a specific audience. Students began with the process of

narrowing a topic and then identifying the structure of prepared paragraphs. Finally, once students have demonstrated competency in knowing the importance of specific details, Reid had students work on arranging their own paragraphs for specific audiences. Various modes of development were taught, including comparison and contrast, cause and effect, and example paragraphs. Sentence-combining practice is a fundamental part of the process of writing and rewriting the paragraphs, as students study properties of unity and coherence in analyzing and then write their own paragraphs.

In another application of sentence combining to the overall goal of teaching ESL students, Yoshida (1983) focused on process-oriented writing. He claimed that ESL students and remedial writing students who are native speakers share a common problem of writing in a linear fashion with preconceived ideas and of reaching conclusions without sufficient development of details. To teach ESL students critical composition skills, Yoshida advocated writing techniques that are used with remedial native speakers. Among these were free-writing, a technique for producing a student's own writing without concern for correctness, and problem-solving, a technique in which writing is approached as a problem involving the determination of intended audience and the desired outcome. Sentence combining is a major exercise but does not enjoy the spotlight within Yoshida's proposed program.

Criticisms of Sentence Combining and Its Evaluation

Serious questions regarding the value of sentence-combining practice were raised as early as 1967 by Christensen (1968) in an article entitled "The Problem of Defining a Mature Style." In addressing the question of

resolving the long-standing dispute between rhetoric and grammar, Christensen warned against the danger of teaching students to write "pretzel prose," a kind of "contorted academic prose" produced by overconcern with syntactic maturity (Christensen, 1968, p. 573). He found serious flaws in both of the key studies (Hunt, 1965; Mellon, 1969) that initiated the sentence-combining movement.

In reviewing Hunt's (1965) study of syntactic structure development by elementary and high school students, Christensen (1968) questioned Hunt's assertion that the three types of subordinate clauses can be considered equal. Christensen argued that noun clauses "vary with the subject or topic," while "movable adverbial clauses show no pattern, varying with neither subject nor age" (p. 574). Furthermore, while agreeing that adjective clauses written by twelfth graders demonstrate adult-level frequency, Christensen asserted that this does not equate with the skilled adult writing also included by Hunt in the study. Christensen (1968, p. 574) insisted that "the added length of T-units written by skilled adults comes from the added <u>length</u> of the clauses."

Christensen (1968) further took issue with Mellon's 1969 attempt to prove the value of sentence-combining practice based on transformational grammar. According to Christensen, Mellon's assumption that nominal and relative clauses were the mark of syntactic maturity was seriously flawed. Although, as Christensen noted, Mellon's subjects did double their level of syntactic growth, "The difference was not noted by the teachers who read, College Board fashion, the pre-post compositions . . . [and] . . . rated the compositions of the control group higher" (p. 575). Because experimental subjects with enhanced syntactic development rated lower than the control group in holistic evaluation, Christensen

seriously questioned the entire basis of the developmental studies based on Hunt's T-unit.

Mellon and Hunt's preoccupation with lengthened clauses and T-units as a sign of growth bore the brunt of Christensen's criticism. Warning against the danger of mistaking the jargon of a long noun clause as an example of skilled writing, Christensen (1968) insisted:

> We should not in our grammar and composition scores focus on tying syntactic knots. . . . A mature style must say much in little . . . but a mature style must be easy to decode. The long clause is not the mark of a mature style but of an inept style--the easy writing that's curst hard reading (p. 575).

Christensen advocated the need to examine the writing of professional writers for the goal of mature syntactic growth rather than looking to children for examples of syntactic growth.

Christensen (1968) concluded that the greatest error present in these studies was the tendency to "lump together two quite different classes of constructions" (p. 576). In effect, he argued that the types of constructions were not clearly defined, and distinguished between bound modifiers which are words, clauses, or phrases whose position in the sentence is tightly restricted and limited to a single word and free modifiers which are words, phrases, or clauses that are loose, additive, or nonrestrictive elements ranging from adverbial clauses to prepositional phrases and subordinate. Christensen remarked that the free modifiers are essential since "they give the skilled writer the devices for keeping clauses short," the key to skilled writing (p. 577).

Hunt, in a letter to Christensen (1968), admitted that the difficulty in defining such terms as "clause" or "nominal" leads to quite different analyses of writing:

> You count as a clause something quite different from what I count as a clause, and count as a nominal something quite different from what I count as a nominal. So when confronted with

> identical sentences, you say the clauses and nominals are short, whereas I say the clauses and nominals are long (Christensen, 1968, p. 578).

Christensen expounded on this point, giving the example of two ways of analyzing examples of the writing of skilled adults. In the analysis, Christensen noted that skilled writers actually produced base clauses that were short when compared to the base clauses of twelfth graders. The difference, noted by Christensen, lies in the tendency of the researcher using T-unit analysis to place a premium on number of words in a clause or sentence while virtually ignoring the kinds of clauses being examined. Citing his own example of skilled adult writing, an article entitled "Love, Life, and Selling Out in Poland" by Halberstam, Christensen concluded that the most significant characteristic of skilled adult writing was the use of free modifiers at the end of the sentence after the base clause. Christensen rejected the popular belief that the T-unit would be useful in defining writing quality.

Marzano's (1976) opposition to the claims of sentence-combining enthusiasts and their free use of the T-unit as a validating measure came to a head in a landmark pount-counterpoint article in 1976. Marzano claimed that the "sentence-combining movement is gaining momentum with little validation" (p. 58). Furthermore, in reviewing the works of Mellon and O'Hare, Marzano decided to check the validity of T-unit analysis by running a holistic analysis alongside the word counts. Marzano found that the correlation between the two evaluations was a rather weak .51, with this correlation accounting for only 25% of the variance in overall quality. Like Christensen, Marzano concluded that the addition of modifiers to an initial base clause seemed to be the key to improvement. Marzano also insisted that Christensen's advocacy of generative rhetoric to improve writing through a clear plan of increasingly complex

modification was certainly superior to the burdensome sentence-combining exercises created by Mellon and Hunt.

Although strongly supportive of sentence-combining as an effective means to enhance writing quality, Kerek (1979) raised several questions about the application of T-unit methodology. Three major difficulties were cited. First, Kerek noted that much student writing consisted of garbles, fragments, ellipses, ill-formed constructions, direct discourse, and speaker tags which Mellon (1969) and Hunt (1965) handled in an inconsistent fashion. Sometimes fragments were ignored in T-unit counts while at other times fragments were changed into sentences and included in the count. Kerek (1979) argued:

> The point is that as soon as we apply T-unit analysis--try to determne SM--beyond a relatively narrow range of writing habits, we no longer have a standard counting procedure, and . . . must resort to arbitrary criteria; the problem is . . . we may go on comparing our results as if we had all arrived at them in the same way (pp. 5-6).

Two other dangers were also pointed out by Kerek (1979). First was the tendency on the part of researchers to "read too much into the numbers" resulting from quantification (p. 6). Of even greater concern was the issue of whether T-unit analysis reveals genuine growth or whether it just measures "a more transitory, half-conscious adjustment of style in response to intensive sentence-oriented instruction" (Kerek, 1979, p. 9). Kerek noted that Mellon (1969) had begun to rethink the issue of growth in syntactic maturity by zeroing in on the "expansion and elaboration of restrictive modifiers embedded in dominant nominals" as a narrow definition of true growth (p. 9). Kerek concluded that syntactic maturity and maturity as a writer were two quite different things and that quantification did not equate to quality.

Further doubts of sentence combining's value were raised by Pedersen (1979). Acknowledging the broad number of studies supporting sentence-combining practice, Pedersen contended that research had not yet demonstrated that sentence combining enhanced the grammatical, semantic, conceptual, or logical fluency of students' writing. He argued that the challenge for the eighties was to develop better sentence-combining materials and to design more effective ways to measure the impact of this practice on student writing.

In a most thorough review of sentence-combining's evaluation through T-unit analysis, Gaies (1980) concluded that the T-unit was valuable, but did have certain drawbacks, especially when dealing with ESL students. Among those were: (1) its inappropriateness with low proficiency writers and (2) its limited ability to discriminate when applied to ESL subjects. Gaies further insisted that the preference on the part of some researchers to promote the use of error-free T-units in analysis was most inappropriate when dealing with ESL students.

Smith (1981), in discussing the value of sentence-combining practice, pointed out that such practice is essentially "abnormal . . . [differing] remarkably from asking students to create their own sentences" (p. 80). Smith emphasized that sentence combining taught as a mechanical practice led to artificial improvement which should not be mistaken for a lasting improvement in writing. In fact, Smith argued that claims about rapid improvement of student writing should not be the point at all. Rather, Smith focused on the value of sentence combining as a diagnostic device for teachers and researchers alike.

Further attempts to maintain realistic expectations in regard to sentence combining were addressed by Crowhurst (1983). Noting the early enthusiasm of many researchers to equate sentence combining with the

teaching of writing, Crowhurst pointed out that numerous studies (Kerek, 1979; Combs, 1976a) had found that student improvement eroded over a period of time. Furthermore, Crowhurst warned that sentence combining could lead to the production of long, awkward sentences. Of particular interest was a study cited by Crowhurst which involved a Chicago high school class. As measured by T-unit analysis, Hake and Williams (1980) found that while competent student writers who remained competent increased their T-unit length, incompetent student writers who remained incompetent <u>also</u> increased their T-unit length. Ironically, incompetent students who became more competent saw a decrease in their T-unit length. Crowhurst, discussing these somewhat contradictory results, emphasized that methods other than sentence combining can be effective in increasing syntactic fluency.

Crowhurst (1983) addressed the most pertinent issue of writing quality and sentence combining. Acknowledging the mixed results, Crowhurst speculated that variations in sentence-combining format (cued versus open) and the teaching abilities of the instructors probably accounted for much of the confusion in results. As for the claims of writing quality improvement as a result of sentence-combining practice, Crowhurst (1983) stated:

> But even if the cautious conclusion be made that sentence-combining instruction sometimes results in increases in both syntactic fluency and in overall quality, the question of casuality remains. It should not be inferred from the fact that the two co-occur that increases in syntactic fluency and in overall quality are related. Studies other than those of sentence combining suggest that syntactic fluency, especially as measured by the two most commonly used measures--T-unit length and clause length--is a poor predictor of composition quality (p. 67).

Thus, Crowhurst cast serious doubt on the value of sentence combining as measured by T-unit analysis.

In taking to task many researchers for their devotion to the T-unit, Crowhurst noted the numerous inconsistencies in studies utilizing the T-unit as a prime evaluating device. The first difficulties arose from the failure of researchers to take into account the fact that T-unit length is dependent on the type of discourse. As Crowhurst noted, Hunt's own 1965 study reported considerable variation among narratives by such writers as Hemingway and Faulkner. Even attempts to control for types of discourses may not be successful. Rosen (cited in Crowhurst, 1983) found wide variation in T-unit length from low to high competency writers, depending on the type of discourse required in essay assignments. Crowhurst (1983) concluded that

> T-unit and clause length are poor predictors of composition quality [and that] . . . improvement of writing quality [resulting] from sentence-combining instruction should not be attributed to mere lengthening of clauses and T-units (p. 69).

Crowhurst also concluded that sentence combining only leads to improved writing quality within the framework of a thorough writing program in which various types of rhetorical strategies are discussed.

Certainly the greatest challenges to sentence combining and the use of the T-unit have come most recently. Holzman (1983) went beyond the technical aspects of discourse mode and variations of T-unit analysis to attack the smug certainty that accompanied the growth of the sentence-combining movement. Holzman particularly focused on the pitfall of scientism, "the practice of the forms of science for their own sake" (p. 74). Central to Holzman's criticism was the application of mathematical models and statistical analysis to a humanistic endeavor such as rhetoric. Especially vexing to Holzman was the contention of many sentence-combining researchers that the T-unit constituted a viable

absolute measurement of composition skills, much like the meter or the gram in the physical sciences.

Of course, the T-unit bore the brunt of Holzman's (1983) criticism, since it had become widely accepted on the basis of only two major studies: Hunt (1965) and Mellon (1969). Holzman was especially critical of the universal deference given to the T-unit:

> The coinage of the term [T-unit] was one of Hunt's most important contributions to composition research. The 't-unit' became the composition research equivalent of such linguistic terms as the 'morpheme' or the 'quarks' of theoretical physics. And yet the 't-unit' cannot be strictly defined--researchers will usually agree on the number of 't-units' in a writing sample, but not always--and therefore research using it cannot be independently duplicated and verified. Empirical science is based on the principle of the independent replication of results. The difficulty of strictly defining the 't-unit' limits usefulness as a measure, yet the term continues to appear in literature (p. 76).

For example, Holzman cited the work of Hunt as arbitrary for the use of magazine articles from The Atlantic and Harper's as examples of skilled writing. Holzman noted that quality was a relative term that changed over time according to the fashion and tastes of each era. Attempts, therefore, to define "skilled adult" writing by choosing from a limited sample was in itself an act violating scientific principle. Noting that numerous studies of a variety of discourse had shown wide varieties in T-unit length among skilled writers (Kucera and Francis, 1967), Holzman asked if authors of detective novels were less skilled adult writers than were the authors of government reports. He concluded that "It would be better to choose another standard of skill than clause length" (p. 75).

Of course, the central issue is the definition of terms. Holzman (1983) pointed out that in creating the T-unit, Hunt "united it in the minds of many in the profession with a literary ideal" (p. 76). By combining statistical methodology with the goal of a mature style in

writing, Hunt created a new icon for the teachers of composition. Faigley (1979) noted the tremendous impact of Hunt and his T-unit on the sentence-combining movement and its impact on teachers of composition: "Hunt's normative measures have supplied both the rationale for college sentence-combining experiments and the yardstick for measuring success" (p. 292).

The impact on instructors and researchers alike was substantial. Above all, the conviction became widespread that longer T-units and longer clauses were signs of better writing and that sentence-combining practice was a means to this end. This assumption, together with the enthusastic belief that sentence-combining effects could be scientifically proven, led to claims that sentence combining could be the sole basis of composition coursework. Rose (1981), in examining the history of sentence combining, found that dedication to sentence combining has remained steadfast since World War II, even though the theoretical rationale has undergone numerous changes.

This dedication, however, has been challenged by numerous studies. Faigley (1979) concluded from his study that teachers do not equate increased clause length with enhanced quality. Holzman (1983) warned that three assumptions underlying many of the followers of sentence combining were not warranted by the facts. Among these were that: (1) sentence combining worked for all or most students, (2) sentence combining significantly quickened the development of writing skills, and (3) statistical studies of sentence combining's impact could demonstrate enhanced quality in student writing through mathematical formulas.

Summary

After the work of Hunt (1965) and Mellon (1969), a groundswell of

support for sentence-combining practice began. Underlying the movement were the assumptions that: (1) sentence combining's benefits could be empirically demonstrated utilizing somewhat refined definitions of Hunt's T-unit and (2) sentence combining's impact could be deduced by cross-checking student writing with tables of normal syntactic growth (i.e., syntactic maturity) as developed by Mellon (1969) and O'Donnell, Griffin, and Norris (1967). Numerous studies among native English speakers on the elementary, junior high, high school, and college levels seemed to confirm that longer, more complex sentence structure resulted from sentence-combining practice.

It is significant to note that many researchers and the educational establishment at large assumed that the production of more complex sentence structure meant experimental student writing had improved in maturity and quality. Numerous terms such as "syntactic growth," "syntactic maturity," and "syntactic fluency" were bandied about with the T-unit as the basic universal unit for measuring the complexity of writing. Beginning with Christensen (1967), serious questions were raised about the expectations many instructors held for sentence combining as a new-found panacea for effectively improving writing. Researchers such as Kerek (1979) and Gaies (1980) admitted that the T-unit was not an easy measure to apply to garbled writing or run-on sentences. In the eighties, Smith (1981), Crowhurst (1983), and Holzman (1983) broadened the attack on sentence combining to consider the questionable assumptions about the use of the T-unit in statistically proving improved quality in writing. Serious philosophical differences with the followers of the sentence-combining cult were quite sharp. Obviously, Christensen's (1967) early fears about the confusion of enhanced complexity of sentence structures with a mature style were being realized.

ESL researchers and instructors, like their first-language counterparts, became strong supporters of sentence combining as a quick means to improve writing. However, the ESL researchers and instructors also carried the same burden of proof as their first-language counterparts. In the desperate search for a faster and better way to teach English, many assumptions about the goals of sentence combining and its relative effectiveness were left unchallenged. The key, the use of the T-unit, became critical in any assessment of ESL writing improvement. Whether working with first- or second-language speakers, the problem of statistical definitions of something as complex as writing cannot be avoided.

It was hoped that the results of this study would add to the body of evidence regarding the effects of sentence combining on ESL students at the university level and the evaluation of these effects. Most important was the need to determine if quality can be quantifiably identified through the use of the T-unit and then cross-validated through other types of evaluation such as standardized examinations and holistic grading. This study was expected to determine, in some small fashion, the relative benefits of sentence combining and, perhaps, some of the myths that have grown up around it.

CHAPTER III

METHODOLOGY

Introduction

The rapid rise of sentence-combining's popularity during the past three decades has left a seriously unresolved issue: does sentence combining positively affect the quality of writing? Unfortunately, this issue remains unresolved as a result of disagreements of definitions, measurements, and the validity of these measurements. Fundamentally, the argument revolves around the search for an operational definition for quality. Proponents of sentence combining rest their case on the T-unit. Hunt (1965), Mellon (1969), and O'Hare (1971) incorporated the T-unit as the valid statistical unit for demonstrating the effectiveness of sentence combining. Critics such as Christensen (1968), Smith (1981), Crowhurst (1983), and Holzman (1983) have challenged the statistical and qualitative assumptions inherent in the widespread acceptance and use of the T-unit.

Statement of the Problem

The problem of this study was twofold: the comparative effectiveness of sentence-combining practice on freshman ESL students as opposed to the more traditional essay-oriented approach, and the validity of sentence-combining scores based on the use of the T-unit evaluation to measurement improvement in writing quality. Of special interest was the

use of standardized tests and holistic grading as means to validate the T-unit evaluation of student essays.

Purposes of the Study

The primary purpose of this study was to determine if an additional half hour of sentence-combining practice each week would have a significant influence on the effectiveness of the writing of a group of college-level ESL students enrolled in a regular freshman English class at a large southwestern university. The secondary purpose was to ascertain whether the statistical analyses of students' essays through the use of the T-unit analysis could be coordinated with other measures of student improvement, including scores on Davidson's (1978) test of subordination and holistic grading. Specific purposes of this study were as follows:

1. To determine whether there is a significant difference in the amount of improvement between the control and experimental groups of college ESL freshmen in regular freshman English classes, as measured by the following: (a) words per T-unit, (b) words per clause, (3) clauses per T-unit, and (d) Davidson's Test of Ability to Subordinate.

2. To determine whether there is a significant difference between the scores assigned to final student essays from both the control and the experimental groups in terms of correlations involving the following: (a) words per T-unit and holistic scoring, (b) words per clause and holistic scoring, (c) clauses per T-unit and holistic scoring, and (d) Davidson's Test of Ability to Subordinate and Holistic Scoring.

Hypotheses

The investigations included the following hypotheses:

Hypothesis one. There is no significant difference in amount of improvement (.05 probability) between the control and experimental groups of ESL college freshman English composition in terms of the improvement in syntactic fluency, as measured by the following: (1) words per T-unit, (2) words per clause, (3) clauses per T-unit, and (4) test scores on Davidson's Test of Ability to Subordinate.

Hypothesis two. There is no significant correlation in terms of Pearson Product Moment between the holistic grading of students' post-treatment essays and the three following measurements: (1) words per T-unit, (2) words per clause, and (3) clauses per T-unit.

Description and Selection of Experimental and Control Populations

The study compared the writing performances of two groups of ESL students enrolled in freshman composition at a large southwestern university during the fall semester of 1986. The original sample included 72 subjects, but due to numerous circumstances, only 67 completed the course. It was not possible to randomly assign students to the classes.

Two of the four classes involved were designated as the experimental group, but two were designated as the experimental group, and two were designated as the control group. Both the control and experimental classes met for three hours a week between the hours of 10:00 a.m. and 3:00 p.m. Since it was not possible to control for the effect of teacher personality by having the same teachers teach one experimental and control group, an attempt was made to select teachers who shared similar backgrounds. All four teachers had at least one full year of experience teaching in the freshman composition program. In addition, all four were teaching assistants working toward their master's degrees in TESL.

Finally, all four teachers followed the same syllabus, which required a series of nine essays during the semester from each student. The only exception was the experimental treatment for two of the classes.

Description of Control and Experimental Procedures

The effectiveness of sentence-combining practice was compared to the effectiveness of the traditional grammar-essay curriculum in improving the quality of student writing in two groups, each group consisting of two classes. The experimental group consisted of 31 students, while the control group consisted of 36 students. The two experimental classes received one-half hour of sentence-combining instruction once a week, while the two control classes studied traditional grammar. In all other respects the classes followed the same departmental syllabus which required a series of essays over the 16-week period.

Research Design

Because randomization of assignments of teachers and students was not possible, the following research design, as illustrated in Table II, was employed: Davidson's Test of Ability to Subordinate (DTAS); holistic essay rating (HE); three-T-unit measurements (TU), namely: words per T-unit, words per clause, and clauses per T-unit.

Control Group

The two control group classes of freshman English followed the guidelines of the departmental syllabus. The additional textbooks for the course were: Refining Composition Skills (Smalley and Rutten, 1982), and a dictionary of the student's choice. Instruction was included on

the folowing topics: formal grammar and usage, paragraph development, and the writing of eight essays involving the following types of development: descriptive, example, comparison-contrast, classification, cause-and-effect, and argumentation. In addition, some grammar and dictionary exercises were required. A four-page schedule of the 16-week assignments is included in Appendix A.

TABLE II

EXPERIMENTAL DESIGN: SENTENCE COMBINATION INVESTIGATION

Treatment	Pretests	Treatment	Posttests
Control Group	DTAS		DTAS
	HE		HE
	TU		TU
Experimental Group	DTAS	SC	DTAS
	HE	SC	HE
	TU	SC	TU

Experimental Group

The experimental classes followed the same syllabus and class schedule as the control classes except that one-half hour was set aside at the end of each week for an in-class discussion of sentence combining,

followed by an exercise sheet that was partially completed in class and finished over the weekend as a homework assignment. The instructors took up the homework without comment on the next class period.

The sentence-combining materials given to the experimental groups were prepared by the writer. A total of 10 packets were prepared over the following topics: compounding (four packets) and subordination (five packets). Instructions on the use of the materials and their presentation to the subjects included: (1) a brief oral presentation by the instructor, (2) oral practice with the students, (3) students doing in-class sentence-combining practice on the board, and (4) the completion of take-home assignments to be handed in at the beginning of the next period. A list of all materials and instructions given to the experimental group is listed in Appendix A. Obviously, instructors were given some latitude in the presentations of the material. The researcher maintained weekly contact with the instructors of the experimental group.

Pretests and Posttests

Essays

In every class, both control and experimental, a diagnostic pretest was given to all subjects. Since the choice of topic was predetermined by the department as a whole, no changes could be made regarding the topic to suit the purposes of this investigation. The posttest essay, essentially, the final for the course, offered students a choice of three topics: (1) "Adjusting to Life at an American University," (2) "The Most Serious Problem in My Country," or (3) "My Best Traits." It was noted that these topics easily elicited substantial writing sample for analysis.

Davidson's Test of the Ability to Subordinate

As the only available instrument which measured the students' ability to manipulate kernel sentences, Davidson's Test of Ability to Subordinate (Davidson, 1978) was the obvious choice as a standardized instrument for measuring syntactic maturity. The validity of the test is derived from an examination of the types of syntactic structures that make up the test. Among these are prenominal adjectives, adverbs, prepositional phrases, infinitive phrases, participial phrases, gerund phrases, adverbial clauses, relative clauses, and noun clauses (Davidson, 1978). Statistically, the reliability of the test is reported by Davidson as .79. The test consisted of 45 items from the aforementioned categories.

T-Unit Analysis

Syntactic analysis of pretest and posttest essays was performed by the experimenter on each essay. Procedures which were utilized by Kerek (1979) were used in calculating measurements of syntactic maturity (i.e., T-unit analysis). Originally developed by Hunt (1965) and further refined by O'Hare (1973), these procedures were followed as closely as possible. A T-unit was defined as one main clause and any additional clausal or nonclausal attached to or embedded within it. A clause was defined as a group of words containing a subject and a verb with tense agreement. In cases where excessively long noun clauses were produced by awkward use of relative markers such as "which" or "where," only the first relative clause was credited. Any other attempt to count the extra clauses or to reconstruct the sentence was considered inappropriate. In

cases where coordinators such as "and" or "but" united independent clauses that could otherwise be separated, the independent clauses were counted as two T-units instead of one.

Additional difficulties were also anticipated. Garbled or unintelligible phrases or words were not uncounted. In cases where participial phrases or absolutes were missplaced, these missplaced clauses were counted as belonging to the T-unit where they properly belonged. Minor items such as contractions (weren't or isn't) were counted as separate words. Also, hyphenated words were counted as two words.

T-unit analysis consisted of three factors of measures which have been recommended by Kerek (1979) and Stewart (1978a). The first factor consisted of T-unit length or words per T-unit. The second factor was clause length or words per minute. The final factor was the ratio of clauses to T-unit or clauses per T-unit. In the case of each of these factors, the statistic for each was expressed as a mean. The T-unit length is considered by most researchers as the most important of the three factors (O'Donnell, 1976).

Holistic Evaluation

Numerous researchers in sentence combining have used holistic grading in attempts to demonstrate the relationship between improvements in syntactic maturity and improved writing quality (Mellon, 1969; Morenberg, Daiker, and Kerek, 1979; Stewart, 1978a; Faigley, 1979; Ney and Fillerup, 1980; Tomlinson, 1980). Support of holistic evaluation has grown over the past two decades in response to the need to assess quality. Kerek (1979) claimed that holistic grading was the best approximation to the actual work of grading a paper. Perkins (1983, p. 652) declared that "of all composition evaluation schemes available today, holistic scoring has

the construct validity when overall attained writing proficiency is the construct to be assessed."

Four graders were trained using the five-point scale developed by Perkins (1982). Since the greatest threat to holistic grading procedures is reliability, the four graders discussed the guidelines taken from Perkins (Table III). An intergrader reliability index of .77 was achieved in a review of sample essays used during the training exercise.

TABLE III

GRADING PROCEDURE GUIDELINES

Points	Descriptors
5	Excellent: The essay matches the top standard of native writers.
4	Very Good: The essay exhibits only a few minor problems.
3	Good: The essay communicates something of the writer's ideas, but with frequent interference; and/or there is clear communication, but with rather simple presentation.
2	Poor: The essay exhibits serious problems; only half or less of the elements are coming through; the reader has to struggle.
1	Bad: The essay is almost incomprehensible, difficult to process, and/or is excessively simple.

Source: K. Perkins, "An Analysis of the Robustness of Composition Scoring Schemes" (1982).

Summary

The present study examined the effects of sentence-combining practice on 67 ESL freshmen enrolled in the freshman English course at a large southwestern university during the fall semester, 1986. Thirty-six subjects were in the control group; 31 were in the experimental group. Control classes studied traditional grammar while writing nine essays during the semester; the experimental classes studied sentence combining while also writing nine essays during the semester.

Pre and posttreatment analysis of both the control and experimental groups was conducted by the following forms of evaluation: Davidson's (1978) Test of Ability to Subordinate, words per minute clause, words per T-unit, and clauses per T-unit. In addition, a holistic evaluation of the final essays was done and correlated with the results of the above four types of evaluation of the final essays. A report of these findings is included in Chapter IV.

CHAPTER IV

ANALYSES AND PRESENTATION OF DATA

This study measured the syntactic fluency of pre and posttreatment work through four types of measurement: Davidson's (1978) Test of Ability to Subordinate, words per T-unit, words per clause, and clauses per T-unit. In addition, a holistic evaluation of the final essay was conducted and coordinated with the aforementioned measurements. Sixty-seven ESL freshman students at a large southwestern university formed the basis for this experiment, with 36 in the control group and 31 in the experimental group.

Analyses of Data

The findings of the present study were ascertained by analyses of data from pretreatment and postreatment essays written by subjects in both groups. Syntactic fluency was measured by words per T-unit, words per clause, and clauses per T-unit. Davidson's (1978) Test of Ability to Subordinate was also administered before and after the sentence-combining treatment. Finally, a holistic evaluation was also done on the final essay in order to study the coordination between holistic scores and the three meausres of syntactic fluency.

Since the sample could not be randomly selected, a preliminary statistical evaluation of the control and experimental groups was undertaken utilizing an independent groups T-test. In terms of scores on Davidson's Test of Ability to Subordinate and on the three meausres of syntactic

fluency, the control and experimental groups were not found to be significantly different. The null hypothesis was not rejected utilizing a two-tailed nondirectional test with a confidence level of 95% (less than .05 probability).

Treatment of Hypotheses

Hypothesis one was analyzed using an independent groups T-test, with .05 as the level of significance for a two-tailed test. Hypothesis two was analyzed using the Pearson product-moment correlation coefficient between variables. Statistically significant coefficients for the experimental and control groups were converted to Z scores, then were compared to ascertain if significant differences existed. The .05 level of significance was chosen as the point to reject the null hypothesis. After the completion of the analysis of the data, conclusions were drawn from the findings.

Hypothesis One

Hypothesis one stated that there is no significant difference in the amount of improvement between the two groups, the control (no sentence combining), and the experimental (sentence combining), in terms of the following four measurements: (1) words per T-unit, (2) words per clause, (3) clauses per T-unit, and (4) scores on Davidson's Test of Ability to Subordinate. To test hypothesis one, each of the three factors of syntactic fluency and the scores on Davidson's test were analyzed. Differences between the two groups were compared using the independent groups T-test. The .05 level of significance was chosen for the value of t in a two-tailed, nondirectional test for the rejection of the null hypothesis. The results of these four analyses are displayed in Table IV.

TABLE IV

COMPARISON OF AMOUNT OF IMPROVEMENT AS MEASURED BY THREE FACTORS OF SYNTACTIC FLUENCY AND DAVIDSON'S TEST: EXPERIMENTAL AND CONTROL GROUPS

Factor	Means: Control Experimental	Degrees of Freedom	T-Statistic	Significance (.05 Level)
W/T	-2.07422 -0.56064	65	-1.03919	NS
W/C	-0.60639 1.48484	65	-1.06196	NS
C/T	-0.45167 -0.25355	65	-1.15247	NS
Sub	3.30556 1.38710	65	2.16138	S

Note: W/T = words per T-UNIT, W/C = words per clause, C/T = clauses per T-unit, Sub = Davidson's (1978) Test of Ability to Subordinate

Values for the independent groups t-test revealed that the null hypothesis was not rejected in regard to the three measures of changes in syntactic fluency: words per T-unit, words per clause, and clauses per T-unit. It was noted, however, that the t statistic was significant in the case of the improvement in scores on Davidson's Test of Ability to Subordinate. Thus, in the case of this last measurement, the null hypothesis was rejected with a confidence level of .95. Part D of hypothesis one failed. Interestingly, both groups saw a reduction in the number of words per T-unit and the number of clauses per T-unit; however, these reductions were not significant. It was noted that the mean gain on the

Davidson test for the control group (3.31) was more than twice the gain posted by the experimental group (1.39).

In summary, the results of the comparison of the changes taking place in each group as a result of traditional grammar instruction versus sentence practice was a mixed bag. While the number of words per clause, words per T-unit, and clauses per T-unit were not significant, Davidson's Test of Ability to Subordinate seemed to point out a significant level of improvement for the control groups instead of the experimental group. Because of this result, more questions were raised. For example, it seemed appropriate to more closely examine the data to determine whether or not both groups had improved in one or all three of the measures of syntactic fluency.

In order to ascertain whether or not significant areas of improvement had occurred within one or both groups, the same independent groups t-test was used to compare the control and experimental groups internally. The pretreatment control group was analyzed by the independent group t-test with the postreatment control groups; similarly, the same t-test was run comparing the pretreatment experimental group with the posttreatment experimental group. In essence, this permitted a matched subjects design. The results are displayed in Tables V and VI.

The control and experimental groups showed significant changes when compared within their own groups in two of the three factors of syntactic fluency each. The control group demonstrated significant change in two measures, words per T-unit and clauses per T-unit. In both cases, the change was a reduction in the number of words per T-unit and the number of embedded clauses. The experimental group, on the other hand, demonstrated significant changes in terms of the number of words per clause and the number of clauses per T-unit. The experimental group saw the

TABLE V

COMPARISON OF PRE- AND POST-CONTROL SCORES:
THREE FACTORS OF SYNTACTIC FLUENCY

Factor	Means: Pre/Post	Degrees of Freedom	T Statistic	Significance (.05 Level)
W/T	18.3197 16.1894	70	2.25084	S
W/C	11.6869 12.7031	70	-1.58372	NS
C/T	1.6969 1.3033	70	2.72296	S

Note: W/T = words per T-unit, W/C = words per clause, C/T = clauses per T-unit

TABLE VI

COMPARISON OF PRE- AND POST-EXPERIMENTAL SCORES:
THREE FACTORS OF SYNTACTIC FLUENCY

Factor	Means: Pre/Post	Degrees of Freedom	T Statistic	Significance (.05 Level)
W/T	18.0826 17.4942	60	0.449496	NS
W/C	11.2219 12.7268	60	-2.134570	S
C/T	1.6271 1.3777	60	3.03021	S

Note: W/T = words per T-unit, W/C = words per clause, C/T = clauses per T-unit

number of words per clause increase; whereas, the number of clauses per T-unit decreased as was the case in the control.

Although no null hypotheses were originally proposed, a close inspection of this data utilizing the T-test was certainly required. Generally speaking, an inspection of the data in Tables V and VI revealed remarkably similar patterns. Apparently, the general tendency was toward a reduction in most of the measures of syntactic fluency. Both the control and experimental groups showed a slight increase in the number of words per clause during the semester, but only in the case of the experimental group was this increase considered significant enough to lead to the rejection of a null hypothesis. The movement among both groups was toward shorter, more compact sentences with fewer embedded clauses. Most ironic was this last finding. The expectation that either a traditional grammar class or a class using sentence-combining practice would lead to more clauses per T-unit was dashed.

Finally, it would seem that the comparison within groups demonstrated that the observed improvements occurred for both groups. As a result, the comparison in Table IV showed no significant differences between the control and experimental groups in terms of the amount of change. The suggestion was thus raised that both sentence combining and the more traditional grammar approach were equally successful in affecting student writing. Without further support, the Davidson test alone would not seem to be adequate to demonstrate that the control group's subordination score was significant, although from a statistical standpoint the result could be considered significant. Further research focusing on a more detailed analysis of a much greater body of data would be needed to determine whether or not sentence combining on a once-a-week

basis is sufficient to have a greater impact on ESL student writing than the traditional grammar approach.

Hypothesis Two

Hypothesis two stated that no significant correlation would be found between the following pairs of measurements: (1) words per T-unit and holistic scoring, (2) words per clause and holistic scoring, (3) clauses per T-unit and holistic scoring, and (4) Davidson's (1978) Test of Ability to Subordinate scores and holistic scores.

For each case, the Pearson product correlation was calculated. In keeping with the procedure for the Pearson correlation, a null and alternative hypothesis was stated as follows for each of the above situations: $H_0: p = 0$ (null hypothesis), $H_1: p \neq 0$ (alternative hypothesis). The results of the computer run Pearson Product Moment Correlation Coefficient are listed in Table VII.

As shown in Table VII, no significance existed between any of the three measures of syntactic fluency and the holistic grades assigned to the papers. In each of these cases the null hypothesis was not rejected, since the scores for each factor were less than .250 for the critical value of r, using an alpha level of .05, 67 degrees of freedom, and a two-tailed test. Only in the case of Davidson's (1978) Test of Ability to Subordinate was a significant value for r ascertained ($r = .53142$, $df = 67$, $p < .05$, two-tailed test). To account for the strength of the relationship between these two measures, the r value was squared, yielding a value of .28 for r^2. Therefore, the proportion of variability in holistic grades associated with variations in scores on Davidson's Test of Ability to Subordinate is .28. Whereas attempts to draw curves between each of the syntactic fluency scores and the holistic grading score

led to no discernible linear relationship, the subordination test score and the holistic scores were found to be linear. The Pearson correlation of .53 resulted in a scatterplot, indicating a definite positive relationship between the holistic scores and the scores from Davidson's Test of Ability to Subordinate.

TABLE VII

PEARSON CORRELATION OF THREE FACTORS OF SYNTACTIC MATURITY AND HOLISTIC SCORING

Factor	Factor/Holistic Pearson r	Degrees of Freedom	Significance ($r < .250$, 67 df, $p < .05$, two-tail)
W/T	.03929	67	NS
W/C	-.01020	67	NS
C/T	.12748	67	NS
SUB	.53142	67	S

Note: W/T = words per T-unit, W/C = words per clause, C/T = clauses per T-unit, SUB = Davidson's (1978) Test of ABility to Subordinate

Summary

The data analyzed and presented in this chapter were derived from an investigation of two major hypotheses that are often critical in forming the basis of sentence-combining studies. The effects of sentence-combining instruction and sentence-combining practice on the writing

quality of ESL freshmen students at a large southwestern university was determined using five major types of measurement: (1) words per T-unit, (2) words per clause, (3) clauses per T-unit, (4) Davidson's (1978) Test of the Ability to Subordinate, and (5) holistic grading. The analysis designated that the posttest syntactic fluency scores (words per T-unit, words per clause, and clauses per T-unit) of students who took sentence-combining practice would not be significantly different from the scores of students who studied traditional grammar. Also, the analysis designated that a coordination of these three measures of syntactic fluency with scores on holistic grading and Davidson's Test of the Ability to Subordinate would lead to a finding of no significance.

Analysis of the effects of sentence-combining practice led to the conclusion that in terms of the comparison of the amount of improvement for each group, no significance existed. However, an analysis within each group comparing the pre and posttest scores led to the conclusion that both groups had improved to some degree. Both the control and experimental groups improved significantly in terms of the ratio of clauses to T-units. Interestingly, it was noted that the control group improved in terms of the number of words per T-unit; whereas, the experimental group significantly improved in terms of the number of words per clause.

When the data from the initial sentence-combining process was analyzed using the additional measures of holistic grading and the Davidson's Test of the Ability to Subordinate, a much different picture emerged. Attempts to coordinate holistic grading with the three measures of syntactic fluency failed and the null hypotheses was not rejected. Only Davidson's Test of the Ability to Subordinate could be coordinated with the holistic grades on a significant basis. Conclusions and recommendations are reported in Chapter V.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The primary purpose of this investigation was twofold: (1) to determine the effects of sentence-combining practice in an oft repeated format for investigating these effects and (2) to determine whether these observed effects could be validated by other measures of writing improvement, a standardized test and holistic grading. Data were obtained from pre and posttreatment essays written by the students in class that were subjected to three measurements of syntactic fluency--words per T-unit, words per clause, and clauses per T-unit--and holistic grading. In addition, the Davidson (1978) Test of the Ability to Subordinate was administered for further data. These data were then subjected to the scrutiny of statistical test--the independent groups T-test and the Pearson Correlation T-test--to ascertain what, if any, improvement in writing quality had been obtained by the subjects in both groups.

Findings

Hypothesis one was tested using the three measures of syntactic fluency and the test scores from Davidson's examination using the independent groups T-test. The results were not significant when the control and experimental groups were compared; however, a within-groups comparison with its respective pre and posttest measurements led to the finding that both groups had improved in different ways. The control and

experimental groups both improved in the ratio of clauses to T-units. The two groups differed in two other ways, since the control improved in terms of number of words per T-unit while the experimental group improved in number of words per clause. Thus, hypothesis one failed to be rejected, yet it was noted that the reason for failure to reject was that both groups had improved at roughly the same rate.

Hypothesis two failed to be rejected for three of the four coordination analyses being conducted. The null hypotheses was not rejected when the three measures of syntactic fluency--words per T-unit, words per clause, and clauses per T-unit--were coordinated with the holistic grading scores. Hence, no significance was found between any of the three measures of syntactic fluency (quantitative scores) and holistic grading (qualitative scores). The null hypothesis was only rejected in the case of the relationship between holistic scoring and the scores on Davidson's (1978) Test of Ability to Subordinate. Part d of hypothesis two was rejected, since a significant correlation existed.

Conclusions

The following conclusions may only be applicable to ESL freshman college students enrolled in basic freshman English. Based upon these findings, the following conclusions were reached:

1. Sentence combining does not work more effectively than traditional grammar instruction in promoting syntactic fluency.

2. Commonly accepted quantified measurements of syntactic fluency such as: (a) words per T-unit, (b) words per clause, and (c) clauses per T-unit do not reflect the quality of writing as measured by holistic grading.

3. A discrete point standardized test (Davidson's Test of the Ability to Subordinate) coordinates more closely with holistic grading scores than do attempts to quantify writing quality through counts of the three measures of syntactic fluency.

Implications and Secondary Observations

Serious questions were raised by this investigation regarding the way in which many researchers have demonstrated that sentence-combining practice is superior to more traditional methods of instruction in the teaching of writing. Since this investigation involved second language students of English, it seemed appropriate to confine remarks in this section to addressing concerns in sentence-combining research as it is applied to ESL students on the university level who enroll in freshman English classes. Especially important is the need to realize that ESL students, who often come from a diverse linguistic and cultural background, may vary widely in their abilities in different skills such as oral and written expression, a phenomena not dealt with by researchers working with native speakers of English. Obviously, research into native speakers' improvements using sentence combining was not necessarily applicable to second language students. Assumptions of syntactic maturity and stages of syntactic development that had been carefully developed by Hunt (1965, 1970) and O'Donnell, Griffin, and Norris (1967) did not apply to ESL students.

While acknowledging that language production in the form of an essay is the most valid measure of genuine language ability, the conclusions reached in this study pointed to the inherent weakness in attempts to assess written expression through T-unit analysis. Not only is the process of counting words, clauses, and T-units laborious and time consuming, it

is also frought with problems. Garbled words, run-on sentences, or confused syntax made precise assessment a matter of guesswork at best. Kerek's (1979) research with sentence-combining practice with native speakers pointed out difficulties that were equally applicable to ESL students. These difficulties were:

1. Garbled words and fragmented sentences are difficult to handle consistently.

2. Statistics which are obtained from T-unit analysis tend to be overemphasized.

3. It cannot be certain whether changes in student writing reflect genuine growth as a writer or whether the changes are merely an adjustment in style stimulated by sentence-combining practice.

The concern for the value of sentence combining on ESL as well as native speakers turned on issue of quantity versus quality. Christensen's (1968) early concerns about the confusion of measurements of syntactical complexity with true maturity and quality have been echoed by numerous researchers, and undoubtedly are equally applicable to sentence-combining research among ESL students. Smith (1981) warned that sentence-combining practice led to artificial improvement, not to written competency. Similarly, Crowhurst (1963) noted that T-unit length was extremely dependent on the type of discourse and concluded that the T-unit and clause measurements were a poor predictor of writing quality. Serious doubts raised by these researchers were reflected in the results of this investigation. Attempts to link three of the most popular measurements of syntactic fluency to writing quality failed. Ironically, only the Davidson's (1978) Test of the Ability to Subordinate coordinated significantly with the holistic grades assigned to the essays. In a sense, the value of a discrete-point examination was reaffirmed by an

intuitive evaluation such as holistic grading; whereas, the much lauded T-unit measurements were not.

It is essential to return to the central question of quality versus quantity. T-unit analysis represents an attempt to quantify writing performance which has traditionally been evaluated intuitively by a mature writer (i.e., instructor, professor). Underlying the application of T-unit analysis is the assumption that a system devoid of human inconsistency and error can systematically and precisely gauge the quality of one of the most complex human activities--writing. Furthermore, this assumption asserts that any reasonable grader can be taught the system and that the results will always be the same. While this investigator did not deal with the question of consistency in T-unit analysis, it did challenge the result: T-unit measurements did not coordinate with other accepted evaluations of equality.

Holzman's (1983) article dealt with the key issue: could the mathematical precision of the natural sciences be usefully applied to rhetoric, the most ancient of humanistic disciplines? As Holzman pointed out, the T-unit itself was not intrinsically bad, but the pervasive attempts to make the T-unit and its concomitant measurements the central focus of evaluations of writing quality is detrimental. This investigation only underlined this point. Any attempt to quantify human behavior must be viewed with skepticism. A great chasm exists between science, a self-evaluating, ongoing process, and what Holzman (1983, p. 74) called "Scientism . . . the practice of the forms of science for their own sake." A love of statistical analysis cannot form the basis for ascertaining the true measure of writing quality. Ideas are neither weighed nor measured as one might evaluate a prize cow at the county fair. The issue of quality versus quantity persists, but those teachers and

researchers assessing writing must be wary of scientism or risk divorcing themselves from the very roots of their own discipline.

Recommendations for Further Study

The following recommendations are offered as a result of this investigation:

1. Since the comparison between the amount of improvement in the control and experimental groups was statistically insignificant, it is recommended that another study be conducted analyzing the ways in which improvements occurred in each group in such categories as relative clauses, noun clauses, conditionals, and adverbial phrases.

2. Since holistic evaluation failed to significantly coordinate with the three measures of syntactic fluency, it is recommended that another study investigate the holistic evaluation of specially prepared sample essays demonstrating different types of syntactic structures to discover whether certain types of syntactic structures have greater influence on holistic graders than others.

3. Because of the tendency on the part of most researchers to favor investigations involving large numbers of students, it is recommended that the future focus of such studies be longitudinal in nature, emphasizing the development of a few students' writing in greater detail over a longer period of time.

4. The general assumptions involving the application of statistical models to humanistic disciplines such as rhetoric must be reexamined. Researchers must be cautious in permitting computer analyses to dominate their assessments of quality. Quantification for its own sake has no place in determining quality.

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APPENDIXES

APPENDIX A

CLASS ASSIGNMENTS FOR EXPERIMENTAL AND CONTROL GROUPS

ENGLISH 1013 SYLLABUS

Note: Instructors of English 1013 will try to follow the syllabus given below as closely as possible. They do, however, reserve the right to make some minor changes, if necessary, to meet individual class needs.

Week 1. Introduction to English 1013. English 1013 is not a course in the fundamentals of English grammar or pronunciation. The primary focus of the course is on improving students' abilities to write paragraphs and longer compositions. Grammar exercises are, however, assigned from time to time, and students whose writing reveals serious grammatical problems are referred to the Writing Lab for extra help.

A short lecture on the major problems involved in learning to write in a second language.

Detailed discussion of course requirements and policies. Students are informed of their obligations regarding attendance, promptness, policies on late-work and revisions, etc. Information about Writing and Audio Labs is provided.

Assignment #1 (diagnostic essay)--to be written in class on the third class day. The topic will be provided by the instructor.

Read Chapter I in Refining Composition Skills. (From hereon in this syllabus, the mention of a chapter indicates the reading assignment for that week.)

Week 2: Discussion of the graded diagnostic essay. The instructor will grade this essay rigorously and in great detail so that the student can understand precisely what his/her strengths and weaknesses are at the beginning of the course. The essay must be thoroughly revised, rewritten, and returned to the instructor, along with the original, at the next class meeting.

Discussion of "Guide to Grading ESL Compositions" and major conventions to be followed in writing formal assignments in university courses.

Introduction to English paragraph structure (as discussed in Chapter I). Homework: selected exercises from Chapter 1.

Week 3: Structure of the standard expository paragraph (Chapter 4)--the use of generalizations, details, and examples in expository writing.

Discussion of parallelism.

Verb tense review (Chapter 2) and the use of articles (Chapter 4)--students should learn these materials on their own. Instructors may choose to give homework on these units.

Week 4: Introduction to dictionary skills.

Dictionary quiz (in-class).

Paragraph structure continued (instructors may choose to discuss the descriptive paragraph, Chapter 3.)

Assignment #3 (in-class)--the expository paragraph. Students will be expected to follow the standard expository paragraph model introduced in class.

Homework: read Chapter 5.

Week 5: Introduction to the standard organization of the essay (Chapter 5). Once the organization is introduced in class, students are expected to use it in all essay assignments made hereafter.

Introduction, thesis statement, developmental paragraphs, transitions within and between paragraphs, conclusion--all discussed in detail.

Grammar-and-Punctuation Test #1 (based on grammar materials in Chapters 1 through 4 and Audio Lab punctuation (Conventions) tapes, Lessons 1 through 10.) Students are responsible for learning these materials on their own; instructors will be glad to help during their office hours.

Assignment #4 may be made late this week or early next week.

Week 6: Assignment #4 (out-of-class)--based on Chapter 5--to be handed in this week.

Personal conferences with the instructor.

Week 7: The example essay (Chapter 6) and the process essay (Chapter 9).

Homework: process paragraph.

Week 8: Assignment #5 (in-class)--example or process essay, at the option of the instructor.

Revision of assignment #5 (in-class).

Freshman progress reports due this week.

Week 9: Grammar review: participial phrases (p. 232) and conditional (p. 240)--students should learn these materials on their own.

The comparison and contrast essay (Chapter 7).

Assignment #6 (out-of-class)--due next week.

Week 10: Comparison and contrast continued--transitions for comparison and contrast (pp. 174-183).

(Assignment #6 due.)

Grammar-and-Punctuation Test #2 (in-class)--based on grammar materials in Chapters 6, 7, and 9 and punctuation lessons 11 through 20.

Week 11: The classification essay (Chapter 8).

Grammar Review: correlative conjunctions (p. 206) and articles (p. 213).

Homework: classification paragraph.

Week 12: The cause-and-effect analysis essay (Chapter 10).

Assignment #7 (in-class)--cause-and-effect.

Revision of #7 (in-class).

Week 13: The argumentative essay (Chapter 11).

Assignment #8 (out-of-class)--argumentation; due next week.

Week 14: Argumentation continued, if necessary.

Listening Comprehension Test.

Personal conferences with the instructor (#2)--thorough discussion of assignment #8.

Week 15: Punctuation-and-Grammar Test #13 (in-class)--based on grammar materials in Chapter 8, 10, and 11, and Puncutation Lessons 21 through 30.

Review and catch-up.

Week 16: Final examination week--assignment #9. (The final examination is not graded by the course instructor, but by another instructor of English as a second language in the English Department.)

NOTE: In addition to the assignments and tests mentioned above, instructors may choose to give short quizzes or homework assignments to meet individual class needs.

APPENDIX B

SENTENCE-COMBINING INSTRUCTIONS AND EXERCISES

HOW TO CONDUCT THE EXPERIMENTAL SENTENCE-COMBINING TREATMENT

Please note: the sentence-combining is not meant to be all inclusive. The main idea is to touch upon three or four ways to shift words in order to combine the given sentences. Do not overkill the exercise by giving dozens of examples beyond the scope of the sheet. If you do, the exercise will take the whole hour. I suggest doing it in the last twenty or twenty-five minutes on Friday's.

1. Go over the examples on the first page. Essentially, this can be oral. You may want to give a couple of oral examples to go with the ones presented. Emphasize any "Warnings" or exceptions, but do not split hairs. If it takes over a minute to explain one example, the explanation tends to be counterproductive. Obviously, language is not neat and even. Citing too many exceptions will cause students to miss the whole point.

2. After spending 10-15 minutes on the example sheet, have student put the in-class exercises on the chalkboard. Note that I have approximately 4-6 in-class exercise sentences to be combined. Students who are not chosen to put these on the board should do all the sentences at their seat.

3. After discussing the examples on the board, assign the remaining exercises to be turned in on Monday (preferably) to you. Record the fact that they turned in the exercise so that I might have a record of any student who did not take part. (I would need to eliminate any student who consistently failed to do the take-home work.)

4. If you desire, you can grade the homework and return it to them. I suggest that you avoid complicated comments on the homework. Just give a yeah or nay and, perhaps, five points for the effort.

Since I have also been a T.A. at OSU, I know how little time you have for classes you teach. So keep it simple. Hopefully, the small amount of sentence-combining exercises will improve the writing of your students.

SENTENCE COMBINING: COMPOUNDING

The most common way to combine related sentences is by compounding them by using AND, OR, or BUT. Study the following examples and do the sample exercises at the top of the next page in-class. Then do the take-home exercises and turn them in to your teacher at the next class period.

1. Different Subjects/Same Predicate:

Ahmed studies at UCLA. Mario studies at UCLA. Joe studies at UCLA.	Ahmed, Mario, and Joe study at UCI

2. Same Subject/Different Predicates:

Birds can dive underwater. Birds can hunt underwater. Birds cannot breathe underwater.	Birds can dive and hunt underwate but cannot breathe underwater.

3. Compound Predicate Adjective:

J.R. Ewing is ruthless. J.R. Ewing is handsome. J.R. Ewing is dynamic.	J.R. Ewing is ruthless, handsome, and dynamic.

4. Compound Objects:

Ravi enjoys novels. Ravi enjoys short stories.	Ravi enjoys novels and short stori

5. Adverbs of time (same category):

Karen checked her watch in the mornings. Karen checked her watch in the evenings.	Karen checked her watch in the mornings and evenings.

6. Verbs having the same Auxiliary Words:

Women may work as executives. Women may prosper as company presidents.	Women may work as executives or prosper as company presidents.

7. Adjectives of the Same Category:

Voters choose state judges. Voters choose county judges. Voters choose district judges.	Voters choose state, county, and district judges.

WARNING: In order to be compounded, the combined elements of the sentences MUST BE OF THE SAME CATEGORY OR CLASS. (Nouns with nouns; predicate adjectives with predicate adjectives; verbs with verbs etc...)
Can the following sentences be compounded into a single sentence?

Omar Sharif is an actor. Omar Sharif is now in Egypt. Omar Sharif is quite handsome.	No! Actor is a noun. "In Egypt" is a preposition of place. Handsome is an adjective.

Do the in-class exercises on the following page. Then compare your answers with your classmates. Do the take-home exercises before the next class period and turn them in at the next class period.

SENTENCE COMBINING: COMPOUNDING

In-Class Exercises: Combine the following sentence groups using AND,OR, or BUT. Make sure the combined elements are of the same category.

1. Animals need oxygen.
   Animals need water.
   Animals need mild temperatures.

2. Reagan is a clever politician.
   Reagan is an excellent manager.
   Reagan is an outstanding speaker.

3. Italy ships olive oil to Canada.
   Spain ships olive oil to Canada.
   Greece does not ship olive oil to Canada.

4. In Brazil rivers are important.
   In Russia rivers are important
   In China rivers are important.

5. Everyday doctors can diagnose illness.
   Everyday doctors can treat disease.
   Everyday doctors can stop suffering.

Take-Home Exercises: Combine the following sentence groups using AND, OR,or BUT. Again make sure the combined elements are from the same category. Turn in these exercises on a separate sheet of paper at your next class period.

6. Germany produces steel products.
   Germany exports steel products.
   Germany imports steel products.

7. Iran has several ports.
   Iraq has several ports.
   Afghanistan has no ports at all.

8. John looked in the closet for his book.
   John looked in the bathroom for his book.
   John looked in the kitchen for his book.

9. Mr. Lim is studying to be a doctor.
   Mr. Chin is studying to be an engineer.

10. Matilda dresses stylishly.
    Matilda dresses tastefully.

11. Students should not drink beer.
    Students should not drink wine.
    Students should drink plenty of milk.

12. The instructor offered to change the grade.
    The instructor offered to give another test.
    The instructor offered to write a letter to the registrar.

SENTENCE COMBINING: COMPOUNDING

Here are some additional exercises in compounding using AND, OR, and BUT. Study the examples on the worksheet from last week and prepare this entire page of exercises to be handed in on Monday to your teacher.

1. Paul prepared the salads.
   Maria prepared the salads.
   Raul prepared the salads.

2. The registrar must certify transcripts.
   The registrar must assess transfer credits.
   The registrar must maintain all academic records.

3. In Japan, the status of women has undergone many changes.
   In Japan, the status of women has not changed regarding the workplace.

4. Korea developed new uses for plastic.
   Korea manufactured plastic furniture for the home.

5. Reggie found nickels on the floor.
   Reggie found dimes under the rug.
   Reggie found dollar bills in the sofa.

6. On Thursdays, class was held in the library.
   On Tuesdays, class was held in the library.

7. Dustin Hoffman has starred in movies.
   Dustin Hoffman has starred in plays.
   Dustin Hoffman has starred in comedies.

8. You may go take a shower downstairs.
   You may go take a shower upstairs.
   You may go take a shower in the basement.

9. Chiropractors treat back injuries.
   Chiropractors treat neck injuries.
   Chiropractors are not able to prescribe medicine.

SENTENCE COMBINING: COMPOUNDING USING AND, OR, BUT, YET, SO, FOR, NOR, (;).

Even if sentences have no identical parts, they may still be compounded. The sentences MUST be related. Of course, such compounded (and related) sentences have equal weight. One sentence is not more important than the other. Examine the following examples.

1. AND (to coordinate)

The professor researched the subject. His wife collected the information.	The professor researched the subject and his wife collected the informati

2. OR (to show choice)

You can go to the lawyer's office. The lawyer can go to your office.	You can go to the lawyer's office,or he can go to your office.

3. BUT (to show contrast)

Muhammed attended Notre Dame. His brother went to Boston College.	Muhammed attended Notre Dame, but his brother went to Boston College.

4. YET (to show contrast)

Russia generally denies exit visas. Gorbachev recently changed this policy.	Russia generally denies exit visas, yet Gorbachev recently changed this policy.

5. SO (to show reason or purpose)

Maria wanted to become a doctor. She studied biology in college.	Maria wanted to become a doctor, so she studied biology in college.

6. FOR (shows cause or reason)

The students failed the calculus test. They had forgotten to bring calculators.	The students failed the calculus tes for they had forgotten to bring thei calculators.

7. NOR (Note: NOR is used only in negative sentences that are compounded. The NOR represents the negative marker in the second sentence. The auxilary word must be placed in front of the subject in the second sentence as in Yes/No questions.)

Pierre couldn't read Spanish. Pierre couldn't speak English.	Pierre couldn't read Spanish,nor could he speak English.

8. (;) A SEMI-COLON is used to show that two sentences are closely related. A comma (,) cannot be used to connect two sentences in English.

President Carter negotiated a new treaty. The Democratic Senate rejected it.	President Carter negotiated a new treaty; the Democratic Senate rejected it.

SENTENCE COMBINING: COMPOUNDING

In-class Exercises: Combine the following sentence groups using AND, OR, BUT, FOR, YET, SO, NOR, or (;). Several correct answers are possible

1. Reagan accepted the senate vote.
   The House rejected Reagan's position.

2. You must go to the meeting tonight.
   You cannot vote for a new president.

3. The most dangerous shark is the Great White Shark.
   The Great White Shark rarely attacks humans.

4. Muhammed's sister cannot obtain a visa.
   His brother was accepted at the first interview.

5. The car has a flat tire.
   I will not be able to attend the meeting.

6. The professor couldn't adjust to the rigorous climate.
   He couldn't eat the food of the primitive tribesmen.

7. Mr. Ling visited Kuala Lumpur last year.
   His wife traveled to Penang in East Malaysia.

Take-Home Exercises: Combine the following sentences using the same words as in the above exercises. BE AWARE THAT THERE ARE SEVERAL POSSIBLE ANSWERS. Turn in your work to your instructor at the next class period. Use a separate sheet of paper.

8. Mr. Baker attended Harvard Law School.
   He wanted to become a judge.

9. Mr. Chin offered to purchase the new company.
   He threatened to put the new company out of business.

10. Bacteria can easily be controlled by antibiotics.
    Antibiotics have become useless against some common bacteria.

11. Soccer strengthens the leg muscles.
    Racquetball strengthens the arm muscles.

12. Football is the most popular sport in Texas.
    Basketball is the king in Massachusetts.

13. International commerce depends on free trade practices.
    Trade deficits occur anyhow.

14. Muhammed Ali was the greatest boxer in history.
    Many people remember him for his mouth.

SENTENCE COMBINING EXERCISES: COMPOUNDING

In-class exercises: Combine the following sentence groups using AND, OR, BUT, FOR, YET, SO, NOR, or (;).

1. Dr. Robinsion attempted to save the patient.
   The patient died from massive bleeding.

2. Benjamin believes that the war will end next year.
   Benjamin's brother is not afraid of the military draft.

3. The officials did not accept the excuses the students gave.
   The officials did not believe that the vandalism was accidental.

4. You may want to go to the movies this afternoon.
   You may want to go to the beach this afternoon.
   You may want to stay home and watch television this afternoon.

5. Jose is positive that he must leave home to get a good education.
   Jose is very hesitant to leave home since his father is ill.

Take-home Exercises: combine the following sentences using the same coordinating words as in the above exercises. Turn in your work on Monday.

6. The students did not want to ask for permission to leave.
   The students did not want to leave without asking for permission.

7. Dr. Robinsion managed to reach home before midnight.
   He decided to stay up late and watch the late movie.

8. The five girls have not arrived for work.
   Their cars are parked outside the company building.

9. President Reagan lifted his hand to his ear.
   President Reagan pretended that he could not understand the reporters` questions.

10. The best players on the soccer team have not signed contracts.
    Their sports agents have told them to hold out for more money.

11. You can attend Oklahoma State University for two years.
    You can attend Oklahoma State University for four years.

12. The earthquake in central Turkey damaged the capital city of Ankara.
    The earthquake in central Turkey damaged many small villages.

SENTENCE COMBINING: Half-Sentences

Related sentences which have the same subject and the same established time may be combined by making one of the sentences into a half-sentence and attaching it to the main sentence. See the following steps:

1. First, a sentence which contains an auxiliary word such as AM, IS, ARE, WAS, or WERE is made into a half-sentence by dividing the sentence between the aux-word and the verb. Then remove the first part of the sentence which contains the subject and the auxiliary word. Look at this example.

   The basketball was flying through the air.
   The basketball shattered the front window of the house.

   The basketball was / flying through the air.

   Delete the first part of the sentence. The remaining part becomes th the half sentence. Your combined sentences now become:

   Flying through the air, the basketball shattered the front window of the house.

2. Remember that and -ed verb may be used to begin the half-sentence if the original sentence was a passive sentence. For example:

   The Xerox Company was founded in 1947.
   The Xerox Company is the leader in the field of automatic copiers.

   The Xerox Company was / founded in 1947.
   (Delete this part)

   The result is: The Xerox Company, founded in 1947, is the leader in the field of automatic copiers.

   PLEASE NOTE:

a) The half-sentence modifies the subject of the main sentence.
b) The half-sentence may be place either in front of the subject of the main sentence or immediately after it. The half-sentence cannot follow the pronoun IT.
c) BOTH sentences must have the same subject and the same established time.

Do the following combinations and look at the answers at the bottom of the page.

1. The children were playing soccer in the park.
   The children discovered a gold coin.

2. The television was damaged by lightning.
   The television was sold at the auction.

ANSWERS:

1. Playing soccer in the park, the children discovered a gold coin.
   The children, playing soccer in the park, discovered a gold coin.

2. Damaged by lightning, the television was sold at the auction.
   The television, damaged by lightning, was sold at the auction

In-class Exercises: Combine the following sentences by making one of the sentences a half-sentence. Remember that IT cannot be the subject of the main sentence.

1. Mr. Lin was combing his hair in the bathroom.
   Mr. Lin dropped his glasses in the sink.

2. The book was autographed by Mark Twain.
   It originally belonged to my grandfather.

3. Mr. Tat enjoyed singing in the rain.
   Mr. Tat was often hit by lightning.

4. The Chevrolet was stolen last night.
   The Chevrolet was parked near your house.

5. Sugar constitutes the diet of most ten-year-olds.
   Sugar is damaging to developing teeth.

6. The movie starlette was lost in the publicity.
   The movie starlette disappeared into obscurity.

Take-home exercises: Following the instructions above, combine the following sentences.

7. The history professor was refusing to change the student's grades.
   The history professor left the meeting in a huff.

8. Mr. Reagan assailed the lack of concern over the budget deficit.
   Mr. Reagan appeared on television last night.

9. The ketchup leaked through the towel.
   The ketchup ruined the new carpet.

10. The secretary was offering to give up her vacation.
    The secretary even declined a raise in pay.

11. The meeting led to a new agreement on nuclear arms.
    It also prepared the way for Gorbachev's visit to the United States.

12. Pepper and garlic are spices that lower blood pressure.
    Pepper and garlic are preferred by Spanish cooks.

13. The text was first published in Paris.
    The text represented the first attempt to link evolution with flying saucers.

14. James managed a pizza restaurant in El Paso.
    James showed a profit for two consecutive years.

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    Pepper and garlic are preferred by Spanish cooks.

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    The text represented the first attempt to link evolution with flying saucers.

14. James managed a pizza restaurant in El Paso.
    James showed a profit for two consecutive years.

SENTENCE COMBINING: APPOSITIVES

A common use of relative clauses (actually a variation) is the appositive. An appositive merely means that you are re-naming the noun without the use of all the words that you normally need in the relative clause. You can, thus, eliminate "that," "which," or "who." You can also eliminate any verb form of "to be " used in the relative clause. For example, to combine the following two sentences using last week's exercise, you would write:"The photograph which was a family heirloom was destoyed in the fire."
The photograph was destroyed in a fire.
The photograph was a family heirloom.

If you are just re-naming the first noun, you can eliminate the words "which was." Thus you will write:

The photograph, a family heirloom, was destroyed in the fire.

Try another example:

John maintained that his brother was innocent.
His brother was an accused criminal.

You could write: John maintained that his brother, an accused criminal, was innocent.

IT IS NOT NECESSARY TO WRITE A FORMAL RELATIVE CLAUSE. YOU MAY EVEN KEEP THE ADJECTIVES THAT MODIFY THE NOUN THAT IS USED AS AN APPOSITIVE.

Do the following exercises and check your answers at the bottom of the page.

1. Gandhi offered to help the Third World.
   Gandhi was the leader of India.

2. The professor insisted that we buy his textbook.
   His textbook was a blue book on ancient Greek.

3. The history class was a requirement for graduation.
   The history class was a five-credit course.

4. The manager at Pizza Hut was robbed by a man and woman.
   The manager was an expert in karate.

5. Mario cleaned his dormitory room trash can.
   The can was a pile of newspapers and old pizza boxes.

Two options

1. Gandhi, the leader of India, offered to help the Third World.
2. The professor insisted that we buy his textbook, a blue book on ancient Greek.
3. The history class, a five-credit course, was a requirement for graduation.
4. The manager at Pizza Hut, an expert in karate, was robbed by a man and a woman.
5. Mario cleaned his dormitory room trash can, a pile of newspapers and old pizza boxes.

In-class exercises: Combine the following sentences by using appositives. Remember that the relative pronoun "that""which," or "who" is eliminated along with the form of "to be."

1. Health Care Plus can be valuable for international students.
   Health Care Plus is a medical insurance plan.

2. Pele may play for the New York soccer team next year.
   Pele is the greatest soccer player in the world.

3. The ancient Chinese invented gunpowder and the wheelbarrow.
   The ancient Chinese were very practical people.

4. Paul Newman and Tom Cruise are starring in a new movie.
   The movie is Easy Money.

5. Ronald Reagan lost his visa to Iceland.
   Ronald Reagan is the world's oldest President.
   Iceland is the world's oldest nation.

Take-home exercises: Do the same as above. Note that the appositive must sometimes follow after the short prepositional phrase that follows the main noun. (See the Pizza Hut example on the first page)

6. Mikail Gorbachev is one of the world's best dressed Communists.
   Mikail Gorbachev always visits his tailor before a summit.

7. French Fries and a hamburger are the essential ingredients of the American diet.
   French Fries and a hamburger are invaluable sources of cholesterol.

8. Margaret Thatcher rarely wears more polka dots than Lady Diana.
   Lady Diana is the reigning queen of British fashion.

9. Mr. Park bought a Plymouth Nova.
   The Plymouth Nova is the poorest selling car in Venezuela.

10. The rise of Nazism in Germany was an attempt to revitalize colonialism.
    Nazism was an incoherent doctrine based on racism and tribalism.
    Colonialism was already a dying cause.

11. The British rock groups tend to experiment with music.
    The British rock groups are the Eurthymics and Genesis.

12. The best bottle of wine can be found in Bordeaux, France.
    The wine is the product of generations of work.

Answers to Take-Home exercises for Appositives.

6. Mikail Gorbachev, one of the world's best dressed Communists, always visits his tailor before a summit.

7. French Fries and a hamburger, the essential ingredients of the American diet, are invaluable sources of cholesterol. (These may be switched around.)

8. Margaret Thatcher rarely wears more polka dots than Lady Diana, the reigning queen of British fashion.

9. Mr. Park bought a Plymouth Nova, the poorest selling car in Venezuela.

10. The rise of Nazism in Germany, an incoherent doctrine based on racism and tribalism, was an attempt to revitalize colonialism, already a dying cause.

11. The British rock groups, the Eurthymics and Genesis, tend to experiment with music.

12. The best bottle of wine, the product of generations of work, can be found in Bordeaux, France.

Answers to Take-Home exercises for Appositives.

6. Mikail Gorbachev, one of the world's best dressed Communists, always visits his tailor before a summit.

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SENTENCE COMBINING: RELATIVE CLAUSES

When two sentences have a common noun, one sentence may be used to modify the noun in the other sentence. The modifying sentence is changed to a relative clause and positioned after the noun that it modifies. To do this a relative pronoun (who, whom, which, that, where) is used in the place of the noun in the relative clause. Examine the following examples.

1. Who (used with human subjects)

The professor offered to buy the book. The professor teaches at Oxford.	The professor who teaches at Oxford offered to buy the book.

2. Which (for nonhuman subjects and Objects)

The plane crashed into the old house. The plane belonged to Dr. Smith.	The plane which belonged to Dr. Smith crashed into the old house.
Maria gave the money to the bank. The bank refused to accept the payment.	Maria gave the money to the bank which refused to accept the payment.

3. Whom (used with human objects)

The lawyer failed to show up for court. Melody had hired the lawyer.	The lawyer whom Melody had hired failed to show up for court.
The students forgot to pick up their parents at the airport. Ravi knew the students.	The students whom Ravi knew forgot to pick up their parents at the airport.

4. That (used with both human and nonhuman subjects and objects)

The officials gave the award to Marcos. The officials represented the Red Cross.	The officials that represented the Red Cross gave the award to Marcos.
Henry offered to rent the house. The house had been damaged by the storm.	Henry offered to rent the house that had been damaged by the storm.

5. Where (for place)

We visited the hospital. I was born at that hospital.	We visited the hospital where I was born.

SENTENCE COMBINING: Relative Clauses

In-class exercises: Combine the following sentences using relative clauses and the correct relative pronouns (who, whom, which, that, where). Note that THAT can be used in place of who and which in some cases.

1. The doctor visited my mother.
   The doctor came to our house last night.

2. The watch was broken by the little boy.
   The little boy had been playing in my room.

3. Muhammad and Kumar wrecked the van.
   The van belonged to OSU.

4. Elvis Presley gave his friends expensive gifts.
   His friends lived in Tennessee.

5. The President refused to meet the ambassador.
   We had seen the ambassador last week.

6. The police found the river.
   The body had been found in the river.

Take-Home exercises: Combine the following sentences using the same words as in the above exercises. BE AWARE THAT THERE MAY BE SEVERAL POSSIBLE ANSWERS. Turn your work in to your instructor at the next class period. Use a separate sheet of paper.

7. His sister jogged through the park.
   Two people had been robbed in that park.

8. The attorney arranged to meet his client.
   The judge had criticized the attorney.

9. Myra managed to avoid seeing her ex-husband.
   Myra worked as public relations executive.

10. Caffeine stimulates the senses.
    Caffeine damages the heart and liver.

11. The immigration lawyer cancelled the meeting.
    The meeting would have been on Tuesday.
    The lawyer had been in an accident.

12. The typewriter was repaired by my brother.
    My father called my brother yesterday.
    The typewriter had been dropped by my sister.

13. Mr. Chin served the best Chinese food in Hong Kong.
    Mr. Chin had once been a cook in the army.

SENTENCE COMBINING: Noun Clauses

A complete sentence can take the place of a noun in some cases. The complete sentence must be changed to a noun clause by placing one of the following introducer words in front. Once a noun clause is formed it may be used anywhere in the sentence as a subject, an object, or as a complement.

Here are some common introducers:

that	if	whether or not	whichever
how	why	whether ...(or not)	wherever

Examples:	COMBINED (using noun clauses)
Mary accepted the job. (Something) surprised her son.	<u>That Mary accepted the job</u> surprised her son. (Subject of sentence)
John lost his car. We couldn't believe (manner)	We couldn't believe <u>how John lost his car</u>. (Object of verb "believe")
A student may or may not get an education. (Something) is related to his motivation.	<u>Whether a student may or may not get an education</u> is related to his motivation. (Subject)
The pizza is burned. It appears (something).	It appears <u>that the pizza is burned</u>. (Complement of linking verb)

Try to combine the following sentences using one of the introducers above. Answers are at the bottom of the page.

1. Professional athletes play sports for money.
   (Something) appears widespread.

2. We failed to reach the train on time.
   My parents were afraid (of this).

3. The professor couldn't understand (manner).
   You missed five questions on the test.

4. You can swim or not swim.
   (Something) depends on your determination.

Answers: 1. That professional athletes play sports for money appears widespread. (or) It is widespread that professional athletes play sports for money.

2. My parents were afraid that we failed to reach the train on time.

3. The professor couldn't understand how you missed five questions on the test.

4. Whether you swim or not depends on your determination.
   Whether or not you swim depends on your determination.
   (Note: parallel structure in English allows you to delete second "swim" in first sentence)

In-Class Exercises: Do the following sentence combining exercises using the eight introducer words on the previous page. Note: More than one correct answer is possible.

1. Some students enjoy computer programming.
   (Something) has always been a mystery to me.

2. They enjoy staying up all night in front of a terminal.
   (The reason for something) is unknown to psychologists.

3. They may or may not be hynotized by the green screen.
   (Something) depends on your point of view.

4. Psychologists cannot determine (something).
   They are addicted to the machine.

5. These students like to go (places).
   A computer is present.

6. These students will use (something)
   Models of computers are available.

Take-Home Exercises: Follow the same directions as above. Remember that several answers may be possible."It" may be used in some cases.

7. I didn't know (something).
   Ronald Reagan is your pen pal.

8. It seems (something).
   Soccer is more difficult than American football.

9. Americans like to eat so much meat everyday.
   Visitors to the U.S. cannot understand (the reason).

10. You cook snake meat to make it tender.
    We would like to know (the manner).

11. You are able to finish the project.
    (Something) depends on the time you have to spare.

12. You select a brand of refrigerator.
    (Something) determines the annual payment on your account.

13. The President doesn't realize (something).
    The Russians refuse to accept Star Wars defense systems.

14. My boss is willing to move.
    The company will send my boss (places).

SENTENCE COMBINING: Subordinate Clauses

Sentences may be combined so that one sentence is essentially dependent upon the other sentence. To make one sentence a subordinate clause you must place one of the following subordinators at the beginning of the sentence:

Time : after, as, as long as, before, next time, now, once, the next time, until, till, when, whenever, while,

Cause or Reason : as as long as, because, now(that), since, so(that)

Condition : Else, if, in case, that, unless, whatever, where, whether

Contrast : Although, Even though, though

As you might have noticed, the two sentences combined into a single sentence using subordination do not have equal value. The sentence that has the subordinator at the beginning is generally considered to have less emphasis. One exception is in sentences which deal with cause or reason. The subordinated sentence actually received more emphasis if it deals with a cause or reason. Look at these examples. (The most important, most emphasized part of the sentence is underlined.)

Time: Before the game, we went to the old Manley Theatre.

John promised to work until the next accountant is hired.

Whenever you are in town, please eat at the Golden Corral Steak House.

Cause or Reason: (Generally here the subordinated clause receives emphasis)

Since you failed the examination, you must repeat the class.

The building collapsed because cheap concrete was used in the construction.

As long as the Republicans control the Senate, Reagan will enjoy victories.

Condition:

Unless you go to court, you will have to pay a huge fine for speeding.

The President will lose the nomination if he campaigns in California.

In case you decide to leave, please turn off the computer terminal.

Contrast:

Although the rate of inflation is down, the economy is still sluggish.

IBM tried to take over Xerox even though Xerox's financial condition is weak.

Omar tried to date Maria though his brother loved her.

In-class Exercises: Please combine the following sentences into a single sentence using a subordinator from the previous page. Note that the sentences in 1-5 are all part of a single paragraph.

1. Many people do not believe in witches and vampires.
   Many people do believe in ghosts.

2. Someone dies a very violent death.
   A ghost may begin to haunt the area.

3. Some experts claim that ghosts haunt houses.
   The ghosts are spirits of people who did not want to die.

4. Parapsychologists are often consulted.
   A ghost does not seem to go away.

5. Many people are afraid of ghosts in their attic.
   They see a sliver of moonlight reflected in a small window.

Take-home Exercises: Please combine the following sentences in the same manner as above. Note that all sentences are part of a single paragraph.

6. In 1939 Hitler attacked Poland.
   Hitler believed that France and England would do nothing.

7. Hitler began the war.
   Hitler concluded a nonaggression pact with Russia. (earlier)

8. England and France promised to protect Poland.
   Hitler attacked Poland. (condition)

9. During September of 1939 Nazi troops smashed Poland. (time)
   France and England did absolutely nothing.

10. All of Germany's military force was concentrated in Poland.
    France and England made no attempt to attack Germany in the west.

11. The United States could not enter the war.
    Many people in the United States opposed getting involved in Europe's problems.

12. By May of 1940 Hitler had completed his eastern conquests. (time)
    He turned his military forces loose on a fearful France.

VITA

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