

ED 316 878

CS 212 260

AUTHOR Davis, Wesley K.
 TITLE The Effects of Process-Centered and Form-Centered Instruction on the Coherence of College Freshman Writing.
 PUB DATE 90
 NOTE 52p.
 PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
 DESCRIPTORS Analysis of Variance; Coherence; Comparative Analysis; *Connected Discourse; Conventional Instruction; Discourse Analysis; *Freshman Composition; Higher Education; Instructional Effectiveness; *Process Education; *Teaching Methods; Writing Research
 IDENTIFIERS *Process Approach (Writing)

ABSTRACT

This comparative study evaluated the writing growth of 97 college freshman before and after instruction to determine if a process-centered mode of teaching had a more significant impact than a traditional form-centered mode of instruction on discourse coherence in composition. The study used a pretest/posttest, quasi-experimental design with both qualitative and quantitative analyses with statistical analysis. The analysis of overall coherence showed that the form-centered students had a statistically significant gain over the process-centered students, suggesting that writing instruction in discourse forms or structure had a significant effect on the form-centered students for learning "organizational schemata" to guide them in writing connected, coherent discourse. An analysis using the Discourse Matrix showed that the process-centered group made statistically significant gains over the form-centered group in the number and percent of T-units contributing to local and global coherence. Results indicate that combining traditional teaching of discourse forms with modern process-centered instruction may be of substantial benefit for the writing growth of college freshmen in discourse coherence. (Four tables of data are included. Sixty-seven references and three appendixes of the writing tasks and general instructions, the Holistic Coherence Scale, and a discourse matrix of a student writing sample are attached.) (MG)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED316878

The Effects of
Process-centered and Form-centered
Instruction on the
Coherence of College Freshman Writing

Wesley K. Davis, Ph.D.

Division of Humanities

Dalton College

213 North College Drive

Dalton, Georgia 30720

Phone: (404) 272-4433

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Wesley K. Davis

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as
received from the person or organization
originating it
 Minor changes have been made to improve
reproduction quality

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy

Running head: Process-centered and Form-centered Instruction

BEST COPY AVAILABLE

0422260

Abstract

This comparative study evaluated the writing growth of 97 college freshmen before and after instruction to determine if a process-centered mode of teaching had a more significant impact than a traditional form-centered mode of instruction on discourse coherence in composition. The study used the results from an earlier qualitative analysis (McAndrew, Williamson, & Swigart, 1986) to define the nature of process-centered teaching and form-centered instruction. The study also used a quantitative, pretest/posttest quasi-experimental design with statistical analysis (MANOVA). Based on Bamberg's Holistic Coherence Scale (1984), the analysis of overall coherence showed that the form-centered students had a statistically significant gain over the process-centered students, suggesting that writing instruction in discourse forms or structure (defined in the qualitative analysis) had a significant effect on the form-centered students for learning "organizational schemata" to guide them in writing connected, coherent discourse. An analysis using the Discourse Matrix (Coe, 1988; Nold & Davis, 1980) showed that the process-centered group made statistically significant gains over the form-centered group in the number and percent of T-units contributing to local and global coherence. This study suggests that combining traditional teaching of discourse forms with modern process-centered instruction may be of substantial benefit for college freshmen's writing growth in discourse coherence.

In writing instruction, faculty preference toward one teaching model or another has set instructor against instructor, often splitting individual English departments into those who teach "product-centered" writing by emphasizing essay "form," as well as "rules" of grammatical correctness, and those who teach process-based writing by emphasizing the student writer's personal discovery of meaning throughout the composing process; the traditional form-centered, rule-based faction of an English department teaches students to structure written products following conventions of standard written English, while the process-centered faction teaches students to use language as a way of creating meaning and clarity of expression for themselves and their readers (Arrington, 1986). Each opposing model identifies with particular teaching approaches of how a writer composes and learns to compose most effectively, as well as what a writer needs to know about composing.

The traditional form-centered paradigm is sometimes labeled "current-traditional rhetoric" (Berlin, 1982; Emig, 1982; Freedman & Pringle, 1980; Young, 1978;) or the "presentational" mode (Hillocks, 1984, 1986). This teaching method, Laine and Schultz (1985) explain, is oriented toward writing mechanics and discourse forms; it assumes that students are taught good writing through instruction on the rhetorical modes of discourse, methods of development in exposition, the study of models, outlines, word choice, topic sentences, and rules of grammar. Teachers operating under this orientation expect a five-paragraph theme to

be completed swiftly and in a predetermined manner. In preparing this formula essay, students are told to include an introduction, a body, and a conclusion. Laine and Schultz also report that this traditional rhetoric ignores the composing process, treats rhetorical invention as an algorithm (find a thesis and make an outline), and seldom encourages true writing done in an authentic voice, to a specific audience, and for a specific purpose.

According to Laine and Schultz (1985), the modern process-centered model of teaching views writing as a way to discover and create new meaning with a reader (Berlin, 1982; Berthoff, 1978; Dowst, 1983; Hillocks, 1984, 1986; Young, Becker & Pike, 1970). The writing process generates meaning and shapes understanding as a way of learning (Elbow, 1981; Murray, 1984). And Berlin (1982) emphasizes that for the new rhetoricians of this approach, truth and meaning are arrived at from the interaction of the writer, the subject and the audience, demonstrating the importance of the rhetorical stance in the writing process (Booth, 1963). Instead of teachers emphasizing formula essays written correctly, they engage their students in creating coherent meaning through the invention process, with such heuristic procedures as free writing (Elbow, 1973, 1981), particle-wave-field (Young, Becker & Pike, 1970), and the dramatistic method (Burke, 1945).

In this process-based approach, audience and purpose are key considerations of the rhetorical problem in a given writing context (Flower & Hayes, 1981a, 1981b), as students get feedback from peers and the teacher, for instance, in one-on-one

conferences or in an "individualized" mode of teaching (Hillocks, 1984, 1986). Students are also encouraged to compose or revise multiple drafts to achieve clear meaning. These teachers talk less about rules of grammar or discourse form and more about the composing process, in which students spend most of their time writing and sharing their work (Laine & Schultz, 1985).

In sum, what Hillocks (1986) has called the "natural process" movement, dating from the 1960's, continues to be a reaction against the dominant "presentational mode" (Hillocks' term for the traditional form-centered mode of instruction). According to Hillocks, the reason for the process movement's reaction is that the traditional mode of teaching emphasizes learning discourse forms or structures in writing from rigid models, such as the "five-paragraph theme," in addition to its emphasis on the "correctness" of products (pp. 247-248). Also central to this reaction against the traditional approach is the work of Emig (1971), emphasizing the need to attend to the process of writing as part of instruction (Hillocks, 1986).

The writing process, unlike the formal study of grammar and essay form, has been characterized as communication in meaningful contexts, similar in theory to the process of acquiring oral language. Krashen (1982) makes the distinction between language "learning" and language "acquisition," especially in the process of becoming a fluent speaker of a second language. Language learning is "conscious," formal knowledge about language. This kind of learning is what goes on when the language learner

consciously attends to discourse form, memorizes rules of grammar, and has a teacher correct his or her errors in speech. But Krashen believes that language acquisition is "subconscious," intuitive knowledge of language rules acquired by communicating in meaningful contexts, not by consciously learning rules of grammar and form--especially related to the writing process.

Theory and research posit that the contextualized nature of language acquisition begins with a "communicative function," a need to get something done with language, and then moves toward the acquisition of "form" revealing that function. This theory suggests a holistic approach to language acquisition related to writing (Etchison, 1986; Shuy, 1981), not a reductive approach in rules of form and grammar. A growing body of evidence also indicates that literacy--reading and writing--is acquired in the same way as spoken language (Harste, Woodward & Burke, 1984a, 1984b), implying that the acquisition of written language is through the process of communicating in meaningful contexts.

Consequently, research suggests a growing paradigm shift in the practice of teaching college writing (Emig, 1982), moving away from teaching writing-as-product toward teaching writing-as-process (Hairston, 1982). However, studies need to investigate further the effects of the traditional and modern modes of teaching on one important feature in texts written by college students--discourse coherence. Although studies have attempted to identify the underlying causes of coherence (e.g, McCulley, 1985), little research on local and global coherence in college

freshmen's writing quality has been reported in studies comparing these two instructional paradigms. In measuring the effects of these two teaching approaches for improving writing quality, coherence gives a more accurate assessment of students' writing growth for creating, developing and communicating meaning clearly to a reader, the principle discourse goal of any writer. Coherence is generally accepted as an integral part of written discourse; that is, coherence is essential if writing is to communicate its intended meaning to a reader, and teaching students to write coherently has been and continues to be an important aspect of writing instruction (Bamberg, 1983).

Accordingly, this current study compares traditional form-centered instruction with modern process-centered teaching to discover the impact each pedagogical model has on college freshmen's writing growth in local and global coherence. In exploring the implications for research and for the teaching of writing, the purposes of this comparative study include the following: (1) to define the nature of form-centered instruction and process-centered teaching in terms of the "foci of instruction" (Hillocks, 1984, 1986), the specific techniques used in each approach; (2) to measure growth in local and global coherence from pretest to posttest on the writing tasks of college freshmen; (3) to determine whether there are significant differences in the extent of growth on coherence between the two comparison groups of students experiencing either teaching treatment; and (4) to discover which of the two instructional

modes or "foci of instruction" have the greatest effect on the growth of college freshmen's expository and persuasive essays in discourse coherence. It is hypothesized that the process-centered group will show greater growth than the form-centered group on all measures of discourse coherence.

Method

Design

This study used a pretest/posttest, quasi-experimental design with both qualitative and quantitative analyses for the following purposes: (1) to assess the nature and effects of traditional form-centered writing instruction and process-centered teaching on the writing growth of 97 college freshmen, specifically on outcomes in local and global coherence; and (2) to discover statistical differences in the extent of growth on coherence between the two comparison groups of students.

Participants

During one 15-week semester, the college freshmen for this study composed writing samples collected from a larger data sample as part of an earlier evaluation of the English Department's general education writing program at Indiana University of Pennsylvania (McAndrew, Williamson, & Swigart, 1986). The present study used a sample of 97 Freshman Composition students, chosen because of their complete data sets (2 pretest and 2 posttest essays) collected from eleven classes:

Students from five classes (n = 49) had been taught traditional form-centered writing instruction; students from the other six classes (n = 48) had experienced the modern process-centered approach to teaching writing. On the first day of class, these students were told that they would be involved in a study of the English Department's writing program, but they had no knowledge of the present comparative study.

Instructional Procedure

The eleven composition classes in this study were selected because of their classroom pedagogy. An earlier qualitative study (McAndrew, Williamson, & Swigart, 1986) was conducted to define the classroom pedagogy of each instructional mode examined in this study. Three instructors taught the classes later identified as the traditional form-centered model, and three other instructors taught the classes described as the modern process-centered pedagogy. These six teachers had no knowledge of the present study's purposes, the variables on discourse coherence, and the hypothesis about expected results; therefore, this study did not affect the way these classes were taught. The characteristics describing each instructional mode were ascertained by surveying these instructors' attitudes about and approaches to teaching college writing. The qualitative study also analyzed the activities that the instructors and students performed in the context of four target classrooms representing one of the two teaching modes in this comparative study.

Data Collection

The data collected give a picture of the instructional modes' nature and effects (independent variable) on the growth and outcomes for the students' local and global coherence (dependent variables) in writing quality. In this study, only complete data sets of student writing (2 pretest and 2 posttest essays) were pulled from the larger data sample of the major university evaluation, after determining which of the eleven composition classes could be defined as either traditional form-centered teaching or modern process-centered instruction. Data were collected by the following investigators: two professors, each with a Ph.D. in English, having expertise in both qualitative and quantitative research; advanced graduate students in rhetoric/composition and linguistic research.

Qualitative data. The data collected earlier from qualitative study were used later to complement the quantitative methods in the present study. These data were useful in describing the nature of the two teaching modes. Qualitative data were gathered from four target classrooms by using the following procedures: (1) conducting two taped interviews with the instructors selected for the qualitative study on their professional background in teaching writing--philosophy, strategies, objectives, history, and attitudes in teaching--to confirm class designations on teaching modes; (2) filling out classroom observation grids (Pettigrew, Shaw, & Van Nostrand, 1981) for criterion validity; (3) taking detailed field notes on

the activities and behavior of the students and faculty in these writing classes; (4) collecting course materials and artifacts; (5) making entries into a retrospective log of the participant observer's subjective observations after each class period; (6) collecting students' writing; (7) collecting students' writing process logs showing their strategies and thinking on each essay they wrote; (8) collecting the instructors' written responses to their students' writing; (9) conducting taped interviews with six students from each class on their perceptions and experiences in a given class context. Each of these data sources supplied a unique perspective on the teaching and learning of writing in these classes, and the participant observer (also the author of the present study) was able to collect the necessary data later characterizing form-centered and process-centered instruction.

Quantitative data. Two pretest writing samples were taken from each student at the beginning of the semester before instruction began, and two posttest samples were taken at the end of the semester after instruction. The writing assignments for both the pretest and posttest were designed to produce two types of transactional writing, one expository (explanatory) and one persuasive (argumentative). The writing assignments were randomized so that each student would write on a different topic for each pretest and each posttest essay: one expository and one persuasive essay at the beginning of the semester and again at the end of the semester (Etchison, 1986). Writing tasks and instructions are given in Appendix A.

Writing sessions. The writing sessions were run similarly for both the pretest and the posttest. At the beginning of the semester before instruction, students were given the assigned writing tasks during the class period before they were to begin writing. Each of the six tasks had a specific topic, context, purpose, and audience. The students were told that they could think about the task, make notes and sketches if they wanted, and use notes or sketches during the actual writing of the essay. But they were instructed not to write out a draft before coming to class. Then the class period following the initial writing assignment was spent composing a draft of the essay. Students were allotted 45 minutes to write the first essay. At the end of that time, essays were collected. During the following period the essays were returned, and the students were given 15 minutes to revise them, at the end of which the essays were collected. The exact procedure was followed for the second pretest essay, only with a different writing task. This same procedure was then repeated for the two posttest essays at the end of the semester after the 97 college freshmen had experienced either traditional form-centered teaching or modern process-centered teaching.

Qualitative Data Analysis

The qualitative aspect of the study examined four classroom sites during the first semester of the academic year to help describe the nature of instructional experiences (McAndrew, Williamson, & Swigart, 1986). Each site was chosen for a

combination of two reasons: (1) The site had to represent a type of instruction that was typical of the majority of English Department faculty who taught the course, and (2) the professor had to be judged a superior instructor with that particular type of teaching model. Once the four class sites had been determined and justified, qualitative data were collected from each class by the participant-observer, and a research team was then formed: two English professors with expertise in qualitative as well as quantitative data analysis; and six advanced graduate students in rhetoric/composition and linguistics, one of whom was the author of the present study. First, the team of analysts described the main dimensions to be studied in the classroom sites: background, instructor, teaching, and students. The team then carried out a within-site and cross-site analysis of the target classes (Miles & Huberman, 1984). The results characterizing the two teaching approaches helped the principal researcher to survey and tease out those composition classes designated as either form-centered instruction or process-centered teaching of college writing.

Quantitative Data Analysis

Holistic assessment of overall coherence. This study used the "Holistic Coherence Scale" (Bamberg, 1984): (1) It assesses coherence holistically, rating the entire essay and not individual parts; (2) it assesses coherence using a list of features that creates both global and local coherence; and (3) it rates essays on a 4-point ordinal scale conceptualizing coherence

as a quality achieved with varying degrees of success rather than as a dichotomous variable (Bamberg, 1984).

Both raters were associate professors of English, each with a Ph.D. in Literature. Besides having at least ten years experience in teaching college composition, the raters also had previous experience and high agreement in holistic scoring. Rating sessions began with a training period of about 45 minutes for each writing task. The two raters were given a copy of Bamberg's "Holistic Coherence Scale" (See Appendix B). Once the raters had read and understood the criteria on her rubric, they were then given a set of anchor papers and asked to rate them on a scale of one to four according to the rubric. After rating the anchors, the readers then compared their scores and discussed their reasons for their scoring decisions based on the rubric, resolving any differences or disagreements in their scores. Once the raters reliably agreed ($r = .80$) on their scores and their rank ordering of a second set of anchors, then the rest of the essays for that particular writing task were scored. In cases where the two raters' scores differed by more than one score point on a given paper, the trainer served as a third rater by reading the paper to arbitrate the difference in the scores.

Analytic, quantitative assessment of coherence. To assess factors contributing to both local and global coherence, the "Discourse Matrix" (Coe, 1988; Nold & Davis, 1980) was used. It graphically illustrates the semantic structure of a written text and shows the degree to which writers are providing explicit

semantic cues to orient the reader to the gist of the discourse and its topic, contributing to global coherence; the matrix also shows the extent to which writers are making connections between propositions (embodied in T-units) for maintaining local coherence (cohesion) as well as global coherence. Thus, the matrix is a schematic representation of a reader's understanding of the text, and the matrix is useful for analyzing language in context and in the deep structure of discourse (Coe, 1988).

To draw the matrix, the principal researcher of this study represented each T-unit by a numbered circle, represented that T-unit's level of generality by the relative placement of the numbered circle on the page, and represented the logical semantic relationships by drawing a line connecting that numbered circle to another (See Appendix C). For examining local and global coherence in the writing samples, the T-units of each essay were mapped onto a matrix by following the work in the "Functional Sentence Perspective" (Danes, 1964; Halliday, 1974; Mathesius, 1928; Vande Kopple, 1982, 1983; Weil, 1887), the "given-new strategy" (Haviland & Clark, 1974; Clark & Haviland, 1977), topical structure analysis (Witte, 1983a, 1983b), the Discourse Matrix (Coe, 1988; Nold & Davis, 1980), and "The Generative Rhetoric of a Paragraph" (Christensen, 1967).

Lines drawn between the numbered T-units on the matrix indicated "local intersentential coherence." To illustrate irrelevant propositions violating the semantic requirements of the "Functional Sentence Perspective" and the "given-new

strategy," no lines were drawn between the numbered T-units representing those propositions, thus indicating deficiencies in local intersentential coherence (See Appendix C). Also examined was the propositions' relationship to the text's gist or the "macroproposition" (Kintsch & van Dijk, 1978). Top-level superordinate T-units representing the "gist sentences" (subtopics or main points) of the essay were isolated by placing them at the highest level of generality on the Discourse Matrix.

After the T-units were mapped onto the matrix, they were then classified into categories, totalled, and calculated for percent by dividing the total number T-units of the entire discourse into the number of T-units in each of the following categories: (1) propositions of T-units forming local intersentential coherence (cohesion); (2) top-level superordinate propositions of T-units constituting the set of gist sentences (subtopics) contributing to global coherence. Growth was measured on these variables in the essays by determining whether there were increases in the number and percent of these T-units' propositions in each of the categories.

Accuracy and reliability of the Discourse Matrix' quantitative analysis were checked by a colleague who had been trained in the analytic procedure prior to the study. This analyst had fifteen years experience teaching college composition and held two Master's degrees in English. She checked every tenth paper of the sample by performing the analysis with the Discourse Matrix to ensure a reliable quantitative assessment of

coherence across approximately 400 essays. Rate of agreement was 89.6%. Differences and disagreements in the ongoing analysis were resolved and clarified during conferences.

Statistical analysis. Statistical analyses on the variables were computed by using the Statistical Package for the Social Sciences (SPSS), specifically Multivariate Analysis of Variance (MANOVA). Significance tests of F statistics were done to determine whether significant differences existed between the two comparison groups in pretest-to-posttest change on the outcomes in the students' writing growth for local and global coherence.

Results

Qualitative Data

From the findings of the earlier qualitative study (McAndrew, Williamson, & Swigart, 1986), the composition classes embodying the traditional form-centered model were characterized by the following: (1) correctness in students' writing by teaching rules of grammar and mechanics; (2) instruction in standard written English by using a handbook, workbook, and a reader; (3) skills-oriented, teacher-centered classroom with the instructor in control of activities; (4) the use of writing models; (5) instruction in the rhetorical modes of discourse.

The classes embodying the modern process-centered model of teaching writing were characterized by the following:

(1) increasing students' efficiency with the writing process through prewriting, drafting, revising, and editing; (2)

emphasizing writing-as-process in a student-centered class with frequent peer and teacher collaboration and/or conferencing throughout; (3) promoting peer group activities based on current composition theory and research; (4) composing to create meaning with a reader; (5) encouraging active rather than passive learning on the part of both student and instructor.

Quantitative Data

The results of the quantitative (statistical) analyses from pretest to posttest present the outcomes of students' writing growth in local and global coherence. For significance tests (MANOVA), the total degrees of freedom (df) are based on a sample size of 100. But in this study the sample size was reduced to 97 because data sets were incomplete for three students. Levels of significance for the F statistics are based on the following P values (significance of F): (1) * $p < .05$, significant; (2) ** $p < .01$, highly significant; and (3) *** $p < .001$, very highly significant (See Table 1 for significance tests). The findings reported are based on the analyses of discourse coherence by using the following research instruments: (1) The Holistic Coherence Scale (Bamberg, 1984); and (2) The Discourse Matrix (Coe, 1988; Nold & Davis, 1980).

Insert Table 1 about here

Table 2 presents the pretest-to-posttest means and standard deviations (SD) for the change in Holistic Coherence Scores of both comparison groups. In the main effect for the method of teaching writing, there was a significant difference between the two groups in the change from pretest to posttest ($F = 6.55728$; $df = 1, 89$; $p = .01213$). Prior to instruction all students in the study began at the same level of overall writing coherence. However, following instruction the traditional form-centered group showed significantly greater growth (2.3 times greater) than the process-centered group of students in a combined mean score of overall writing coherence.

Insert Table 2 about here

Based on the Discourse Matrix, the analysis of change in the rate of T-units contributing to sentence-level, local coherence examined the mean percent of cohesive T-units in relation to the total number of T-units in each essay from pretest to posttest (See Table 3 for means and standard deviations). The difference between the two comparison groups in the rate of change for these T-units was statistically significant ($F = 5.08895$; $df = 1, 89$; $p = .02653$). At the beginning of the semester, both comparison groups started at virtually the same level in the percent of cohesive T-units. However, by the end of the semester the process-centered group

showed an increase which was greater by 2.4 percentage points or, more relevantly, a 14.3% greater increase over the form-centered group in the mean percent of T-units forming local coherence. The pretest-to-posttest changes for all 97 participants indicated that the students increased the number of T-units in local coherence by 17.1 percentage points. All students had a mean of 64.6 percent of cohesive T-units on the pretest and 81.7 percent of cohesive T-units on the posttest.

Insert Table 3 about here

Also from the matrix, the analysis of change in the rate of T-units contributing to global coherence examined the mean percent of top-level, superordinate T-units identified as the "gist sentences" (subtopics), constituting the macroproposition of each essay (See Table 4 for means and standard deviations). The statistical test (See Table 1) for the rate of change in the mean percent of "gist" T-units indicated a significant difference between the two comparison groups in the main effect for the method of instruction ($F = 13.38600$; $df = 1, 89$; $p = .00043$). At the beginning of the course the form-centered group started at a slightly lower level than the process-centered group in the mean percentage of "gist" T-units. By the end of the course, the increase was greater in the process-centered group by 4.3 percentage points over the traditional form-centered students.

More importantly, this increase in "gist" T-units for global coherence was nearly seven times greater in the process group than in the traditional group of students, who showed a very small increase in the percent change of this variable.

Insert Table 4 about here

Conclusions and Implications

Discussion

Overall discourse coherence. From the evidence of the statistical analysis, the traditional form-centered method of teaching had a more significant impact than the process-centered method on the overall writing coherence of the college freshmen. On the Holistic Coherence Scores from pretest to posttest, the significant difference between the two comparison groups ($p < .05$) favored the form-centered students. The gain by these students was 2.3 times greater than that of the process-centered students, rejecting in part the hypothesis that the process group would show greater gains on all measures of coherence.

One interpretation of the form-centered group's significant gain in overall coherence is that these college freshmen were exposed to instruction emphasizing essay "form" or discourse structure (e.g, the rhetorical modes of discourse). Perhaps these students learned "organizational schemata" for writing their expository and persuasive essays; this approach may have

given the students knowledge in overall, "generalized plans" to guide them in writing connected discourse (Hillocks, 1986).

Theory and research indicate that writers organize specific "details according to a discernible plan that is sustained throughout the essay" (Bamberg, 1984, p. 317), so that the reader can construct the text into a coherent whole. In global coherence, a written text must have an overall structure, plan, or schema that orders the propositions, if readers are to find coherence over the whole discourse (van Dijk, 1977, 1980).

Researchers have found that readers rely heavily on conventional structures known as scripts, frames, or schemata to organize experience or knowledge (Adams & Collins, 1979; Schank & Abelson, 1977). Despite their different forms, all schemata serve the same function: They help readers anticipate upcoming textual information, thereby enabling them to reduce and organize the text into an understandable, coherent whole (Bamberg, 1984). Studies on the composing process indicate that student writers appear to call on forms, generalized plans, or schemata (e.g., the five-paragraph theme) to guide them in writing connected, coherent discourse (Bamberg, 1984; Bereiter & Scardamalia, 1982; Emig, 1971; Hayes & Flower, 1980; Hillocks, 1986; Matsushashi, 1981; Meyer, 1982). Some theorists on composing argue that formal knowledge of text structure is inhibitive, but researchers studying story forms believe that these schemata are learned and that they guide the production of well-formed stories, suggesting that the writing processes of those with appropriate knowledge

are likely to be quite different from the processes of those without such knowledge (Hillocks, 1986, p. 234).

In this study, differences in writing processes between the two comparison groups may be the reason that the form-centered students made statistically significant gains in overall global coherence: These students may have instantiated into their composing processes procedural knowledge of written forms, plans, or schemata. It could be that the holistic raters of overall (global) coherence based their assessment on the schematic pattern or form into which the students had structured their ideas to help these readers organize the text into a coherent whole. Also worth noting is that prior to the writing sessions, the students were encouraged to develop an overall plan for their essays in the form of either notes or sketches, suggesting that the students may have relied on some kind of graphic representation (e.g., an outline) of their organizational schema for the writing tasks. The results of this study do imply that learning discourse forms may lead to better overall coherence.

The findings of this study also lend support to a theory suggesting that the "communicative function" of language runs concurrently with the "form" of language revealing that "function"--instead of form necessarily following function (Shuy, 1981). Creating a coherent text may require that the function or purpose and the knowledge of form work together simultaneously to guide a writer in composing connected discourse.

T-units in local coherence. In cohesion at the sentence level, the significant difference between the comparison groups ($p < .05$) favored the process-centered students, who showed a 14.3 percent gain over the traditional form-centered group in the mean percent of cohesive T-units contributing to local coherence. This finding lends some support to the hypothesis that the process-centered group would show a greater gain on this measure of coherence. However, the process students' 28.2% overall increase in cohesive T-units bore no direct relation to the group's low gain on holistic scores for overall coherence. But the traditional form-centered students' 24.7 percent increase in cohesive T-units may have been a contributing factor in their statistically significant gain over the process group on Holistic Coherence Scores. Formal knowledge in organizational schemata may have guided the form-centered group in writing connected discourse more efficiently at the local sentence level.

However, one explanation for the process-centered group's lack of correlation between Holistic Coherence Scores and the percent of cohesive T-units is that an increase in cohesion or local coherence does not necessarily result in overall global coherence (van Dijk, 1980; Witte & Faigley, 1981). Distinctions are being made between cohesion that creates semantic connections between propositions and structures that create discourse level or global coherence (Bamberg, 1984). Sources of cohesion may not have the same importance as the sources of coherence that work for the reader; cohesive linkage on its own cannot sustain

coherence over several sentences (Fahnestock, 1983). Theory and research in discourse analysis now view cohesion as part of what makes a text coherent, but insufficient by itself to create a coherent text overall. Both local and global levels of coherence do have the potential to affect the reader's ability to construct a text into a coherent whole; "but although effective writing will be coherent at both levels, attention to overall coherence must precede most concerns about local coherence" (Bamberg, 1983, p. 427). This research helps to explain the mixed and divergent results reported in this study on local coherence in relation to overall global coherence.

T-units in global coherence. For T-units reducing the text to its macrostructure (Kintsch & van Dijk, 1978), there was also a significant difference between the comparison groups ($p < .001$) in the pretest-to-posttest change for the mean percent of "gist" T-units or "subtopics" contributing to global coherence: top-level superordinate T-units on the Discourse Matrix (See Appendix C). Partly supporting the hypothesis of the study, the process-centered group showed a greater increase in "gist" T-units by 4.3 percentage points, an increase nearly seven times greater than that of the traditional form-centered group who had very little gain. But the process group's significant gain overall (17.1 percent) in "gist" T-units had no direct relation to the group's low gain on the Holistic Coherence Scores. One assumption would be that the more "gist" propositions a writer provides, the more semantic cues the reader will have to construct a coherent text.

In this study, however, the increase in the percent of "gist" T-units or "subtopics" may be viewed as counterproductive in forming a coherent text, because it suggests that too many different subtopics may lose focus and unity with the overall discourse topic and what is said about it (the macroproposition), an important factor in a well-formed, coherent text. In fact, other studies (Witte, 1983a, 1983b) have shown that in texts readers judged to be of high quality, good writers developed and elaborated on "fewer" topics, focusing consistently on a given discourse topic, distinguishing between topics that were crucial to the main idea of the text and those that were not, and inventing content more capably for those topics.

For this study, it could be argued that the holistic raters on overall global coherence responded in a similar way because the traditional form-centered students maintained more consistent focus on the overall discourse topic and elaborated more on fewer subtopics. It may explain their low gain in the percent of "gist" T-units, perhaps contributing to their significant gain over the process-centered group on Holistic Coherence Scores.

These divergent results between the two groups further suggest that an emphasis on essay form and organization in the traditional teaching approach may have been the single-most important factor causing the difference in the form-centered group's significant gain over the process-centered group on Holistic Coherence Scores. Perhaps this significant difference between the two groups was not in the number and the percent of

these T-units, but in the form or the organizational schema that the form-centered students used to position their sequence of T-units in the levels of the text's structure. In fact, the coherence of a text seems to depend partly on how closely the T-units' movement through the levels of discourse follow a pattern that the reader expects (Nold & Davis, 1980). Other studies also indicate that the "position" of superordinate propositions organized at the top level of a text's structure significantly affects the recall and comprehension of readers (Meyer, 1975; Meyer, Brandt & Bluth, 1980), an integral part of coherence.

Implications for Research

More research is needed on instruction in essay "form" or structure for constructing coherent texts. For instance, experimental studies could isolate the rhetorical modes of discourse, examining their effects on the coherence of college freshmen writing. Further studies could explore the strategies for producing discourse forms in terms of "organizational schemata," a skeletal framework of a text which researchers claim to guide writers in producing various types of coherent discourse (Bereiter & Scardamalia, 1982; Hayes & Flower, 1980; Hillocks, 1986). Psychologists have examined story schemata and how these elements are taught (Stein & Trabasso, 1982). More data is needed on the elements of discourse structure and the strategies to generate them through the analysis of discourse forms, case studies of writers, and experimental studies (Hillocks, 1986).

Implications for Teaching

The implications of this study seem to indicate that students would benefit from knowledge of various discourse forms to guide their own composing. To achieve greater coherence, students could instantiate this knowledge of organizational schemata into their writing process from instruction in such forms as the rhetorical modes of discourse or a schematic framework of a writer's overall plan through outlining strategies: (1) tree structures (Meyer, 1975); (2) clustering (Rico & Claggett, 1980); (3) mapping (Buckley & Boyle, 1983); (4) issue trees (Flower, 1981); and (5) the Discourse Matrix (Coe, 1988; Fahey, 1986; Nold & Davis, 1980).

Conclusion

Other studies have reported positive results of instruction in discourse forms, concluding that "it seems reasonable to recommend instruction in discourse structure as a valid instructional procedure and a matter worthy of further study" (Slater, Graves, Scott, & Redd-Boyd, 1988, pp. 57-58; Taylor, 1982; Taylor and Beach, 1984; Slater, Graves, & Piche, 1985; Berkowitz, 1986). Although teaching writing in the "natural process mode excludes the imposition of forms from sources external to the learner" (Hillocks, 1986, p. 242), the growing body of evidence suggests that students may benefit from learning procedures for instantiating knowledge of discourse forms into their composing process. If the traditional study of discourse

structure is essential for coherence, then it is reasonable to recommend this instruction for the modern process pedagogy.

This study also offers evidence to conclude that teaching discourse forms in process-centered instruction may benefit students in the composition classroom. This study also suggests areas for further research, areas that will help writing teachers understand the ways in which the traditional and modern movements of teaching composition can still find common ground to serve the teacher and the student in achieving the most important discourse goal: creating and negotiating coherent meaning with a reader.

References

- Adams, M., & Collins, A. (1979). A schema-theoretic view of reading. In R. O. Freedle (Ed.), New directions in discourse processing (Vol. 2, pp. 1-22). Norwood, NJ: Ablex.
- Arrington, P. (1986). The traditions of the writing process. Freshman English News, 14(3), 2-10.
- Bamberg, B. (1983). What makes a text coherent? College Composition and Communication, 34, 417-429.
- Bamberg, B. (1984). Assessing coherence: A reanalysis of essays written for the National Assessment of Educational Progress, 1969-1979. Research in the Teaching of English, 18, 305-319.
- Bereiter, C., & Scardamalia, M. (1982). From conversation to composition: The role of instruction in a developmental process. In R. Glasser (Ed.), Advances in instructional psychology, (Vol. 2, pp. 1-64). Hillsdale, NJ: Erlbaum.
- Berkowitz, S. J. (1986). Effects of instruction in text organization on sixth-grade students' memory for expository reading. Reading Research Quarterly, 21(2), 161-178.
- Berlin, J. A. (1982). Contemporary composition: The major pedagogical theories. College English, 44, 765-777.
- Bertoff, A. E. (1978). Forming, thinking, writing. Rochelle Park, NJ: Hayden.
- Booth, W. C. (1963). The rhetorical stance. College Composition and Communication, 14, 139-145.

- Buckley, M. H., & Boyle, O. (1983). Mapping and composing. In M. Myers & J. Gray (Eds.), Theory and practice in the teaching of composition: Processing, distancing, and modeling (pp. 59-66). Urbana, IL: National Council of Teachers of English.
- Burke, K. (1945). A grammar of motives. Englewood Cliffs, NJ: Prentice-Hall.
- Christensen, F. (1967). Notes toward a new rhetoric: Six essays for teachers. New York: Harper & Row.
- Clark, H. H., & Haviland, S. E. (1977). Comprehension and the given-new contract. In R. O. Freedle (Ed.), Discourse processes: Advances in research and theory, (Vol. 1, pp. 1-40). Norwood, NJ: Ablex.
- Coe, R. M. (1988). Toward a grammar of passages. Carbondale: Southern Illinois University Press.
- Danes, F. (1964). Functional sentence perspective and the organization of the text. In F. Danes (Ed.), Papers on functional sentence perspective (pp. 106-128). The Hague: Mouton.
- Dijk, T. van. (1980). Macrostructures: An interdisciplinary study of global structures in discourse, interaction, and cognition. Hillsdale, NJ: Erlbaum.
- Dowst, K. (1983). Cognition and composition. Freshman English News, 11(1-4), 11-14.
- Elbow, P. (1973). Writing without teachers. New York: Oxford University Press.

- Elbow, P. (1981). Writing with power. New York: Oxford University Press.
- Emig, J. (1971). Composing processes of twelfth graders. Urbana, IL: National Council of Teachers of English.
- Emig, J. (1982). Writing, composition, and rhetoric. In H. E. Mitzel (Ed.), The encyclopedia of educational research (pp. 2021-2036). New York: The Free Press.
- Etchison, C. (1986). A comparative study of the quality and syntax of compositions by first year college students using handwriting and word processing. (Doctoral dissertation, Indiana University of Pennsylvania, 1985). Dissertation Abstracts International, 47, 01A. (University Microfilms No. 86-06, 203)
- Fahey, S. (1986). Discourse matrix analysis: Empirical evaluation of a sample pedagogy. Unpublished master's thesis, Simon Fraser University, Burnaby, BC, Canada.
- Fahnestock, J. (1983). Semantic and lexical coherence. College Composition and Communication, 34, 400-416.
- Flower, L. (1981). Problem-Solving Strategies for Writing. New York: Harcourt Brace Jovanovich.
- Flower, L., & Hayes, J. R. (1981a). A cognitive process theory of writing. College Composition and Communication, 32, 365-387.

- Flower, L., & Hayes, J. R. (1981b, April). Process-based evaluation of writing: Changing performance, not the product. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles.
- Freedman, A., & Pringle, I. (1980). Writing in the college years: Some indices of growth. College Composition and Communication, 31, 311-324.
- Hairston, M. (1982). The winds of change: Thomas Kuhn and the revolution in the teaching of writing. College Composition and Communication, 33, 76-88.
- Halliday, M. A. K. (1974). The place of the functional sentence perspective in the system of linguistic description. In F. Danes (Ed.), Papers on functional sentence perspective (pp. 43-53). The Hague: Mouton.
- Harste, J. C., Woodward, V. A., & Burke, C. L. (1984a). Examining our assumptions: A transactional view of literacy and learning. Research in the Teaching of English, 18, 84-108.
- Harste, J. C., Woodward, V. A., & Burke, C. L. (1984b). Language stories and literacy lessons. Portsmouth, NH: Heineman.
- Haviland, S. E., & Clark, H. C. (1974). What's new? Acquiring new information as a process in comprehension. Journal of Verbal Learning and Verbal Behavior, 13, 512-521.

- Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. W. Gregg & E. R. Steinberg (Eds.), Cognitive processes in writing (pp. 3-30). Hillsdale, NJ: Erlbaum.
- Hillocks, G., Jr. (1984). What works in teaching composition: A meta-analysis of experimental treatment studies. American Journal of Education, 93, 133-170.
- Hillocks, G., Jr. (1986). Research on written composition: New directions for teaching. Urbana, IL: National Conference on Research in English.
- Kintsch, W., & Dijk, T. van. (1978). Toward a model of text comprehension and production. Psychological Review, 85, 363-394.
- Krashen, S. (1982). Principles and practices in second language acquisition. New York: Pergamon Press.
- Laine, C., & Schultz, L. (1985). Composition theory and practice: The paradigm shift. Volta Review, 87(5), 9-20.
- Mathesius, V. (1928). On linguistic characterology with illustrations from modern English. In J. Vachek (Ed.), A Prague school reader in linguistics (pp. 59-67). Bloomington: Indiana University Press, 1964.
- Matsuhashi, A. (1981). Pausing and planning: The tempo of written discourse production. Research in the Teaching of English, 15, 113-134.

- McAndrew, D. A., Williamson, M. M., & Swigart, F. H. (1986). Final report and recommendations of the English department's task force for the evaluation of the teaching of writing. Indiana: Indiana University of Pennsylvania.
- McCulley, G. A. (1985). Writing quality, coherence, and cohesion. Research in the Teaching of English, 19, 269-282.
- Meyer, B. J. (1975). The organization of prose and its effects on memory. Amsterdam: North-Holland Publishing.
- Meyer, B. J., Brandt, D. M., & Bluth, G. J. (1980). Use of top-level structure in text: Key for reading comprehension for ninth-grade students. Reading Research Quarterly, 16, 72-103.
- Meyer, B. J. (1982). Reading research and the composition teacher: The importance of plans. College Composition and Communication, 33, 37-49.
- Miles, M. B., & Huberman, A. M. (1984). Qualitative data analysis: A sourcebook of new methods. Beverly Hills, CA: Sage Publications.
- Murray, D. M. (1978). Internal revision: A process of discovery. In C. R. Cooper & L. Odell (Eds.), Research on composing: Points of departure (pp. 85-103). Urbana, IL: National Council of Teachers of English.
- Murray, D. M. (1984). Write to learn. New York: Holt, Rinehart, & Winston.

- Nold, E. W., & Davis, B. E. (1980). The discourse matrix. College Composition and Communication, 31, 141-152.
- Pettigrew, J., Shaw, R. A., & Van Nostrand, A. D. (1981). Collaborative analysis of writing instruction. Research in the Teaching of English, 15, 329-341.
- Rico, G. L., & Claggett, M. F. (1980). Balancing the hemispheres: Brain research and the teaching of writing (Bay Area Writing Project, Curriculum Publication No. 14). Berkeley: University of California, School of Education. New York: Carnegie Corporation. Washington, DC: National Endowment for the Humanities. (ERIC Document Reproduction Service No. ED 198 538)
- Schank, R., & Abelson, R. (1977). Scripts, plans, goals, and understanding. Hillsdale, NJ: Erlbaum.
- Shuy, R. (1981). A holistic view of language. Research in the Teaching of English, 15, 101-111.
- Slater, W. H., Graves, M. F., & Piche, G. L. (1985). Effects of structural organizers on ninth-grade students' comprehension and recall of four patterns of expository text. Reading Research Quarterly, 20(2), 189-202.
- Slater, W. H., Graves, M. F., Scott, S. B., & Redd-Boyd, T. M. (1988). Discourse structure and college freshmen's recall and production of expository text. Research in the Teaching of English, 22, 45-61.

- Stein, N. L., & Trabasso, T. (1982). What's in a story: An approach to comprehension and instruction. In R. Glaser (Ed.), Advances in instructional psychology (pp. 213-267). Hillsdale, NJ: Erlbaum.
- Taylor, B. M. (1982). Text structure and children's comprehension and memory for expository material. Journal of Educational Psychology, 74, 323-340.
- Taylor, B. M., & Beach, R. W. (1984). The effects of text structure instruction on middle-grade students' comprehension and production of expository text. Reading Research Quarterly, 19(2), 134-146.
- Vande Kopple, W. J. (1982). Functional sentence perspective, composition, and reading. College Composition and Communication, 33, 50-63.
- Vande Kopple, W. J. (1983). Something old, something new: Functional sentence perspective. Research in the Teaching of English, 17, 85-99.
- Weil, H. (1887). The order of words in the ancient languages compared to that of the modern languages (C. W. Super, Trans.). Boston: Ginn & Co.
- Witte, S. P., & Faigley, L. (1981). Coherence, cohesion, and writing quality. College Composition and Communication, 32, 189-204.
- Witte, S. P. (1983a). Topical structure and writing quality: Some possible text-based explanations of readers' judgments of student writing. Visible Language, 17, 177-205.

- Witte, S. P. (1983b). Topical structure and revision: An exploratory study. College Composition and Communication, 34, 313-341.
- Young, R. E., Becker, A. L., & Pike, K. L. (1970). Rhetoric: Discovery and change. New York: Harcourt, Brace, & World.
- Young, R. E. (1978). Paradigms and problems: Needed research in rhetorical invention. In C. R. Cooper & L. Odell (Eds.), Research on composing: Points of departure (pp. 29-47). Urbana, IL: National Council of Teachers of English.

Table 1
Significance Tests (MANOVA) for Pretest-to-Posttest Change in
Variables for Local and Overall Global Coherence

Variable	df	F	P
Holistic			
Coherence Scores	1	6.55728*	.01213
Cohesive T-Units			
for Local Coherence	1	5.08895*	.02653
Gist T-Units for			
Global Coherence	1	13.38600***	.00043

* p < .05

** p < .01

*** p < .001

Table 2

Pretest-to-Posttest Mean Holistic Scores and Standard
Deviations (SD) in Overall Writing Coherence

Method/Group	Time		Posttest (SD)	%Change
	Pretest (SD)			
Process-centered	9.8 (2.6)		10.6 (2.6)	+8.8%
Form-centered	9.8 (2.3)		11.8 (2.1)	+20.8%

Table 3

Pretest-to-Posttest Change and Standard Deviations (SD) for
Mean Percentage of Cohesive T-units Forming Local Coherence

Method/Group	Time		%Change
	Pretest (SD)	Posttest (SD)	
Process-centered	64.8% (6.1)	83.1% (7.1)	+28.2%
Form-centered	64.3% (8.9)	80.3% (4.3)	+24.7%

Table 4

Pretest-to-Posttest Change and Standard Deviations (SD) for
Mean Percentage of "Gist" T-Units in Global Coherence

Method/Group	Time		%Change
	Pretest (SD)	Posttest (SD)	
Process-centered	29.5% (3.9)	34.5% (8.4)	+17.1%
Form-centered	28.0% (5.4)	28.7% (5.9)	+2.4%

Appendix A

Writing Tasks and General Instructions

The general instructions for each writing task were as follows:

Below is a writing task that you will write in response to next class and the class after. You will have forty-five minutes (45) next class and fifteen minutes (15) the class after. Between now and next class, try to think of what you might write. In order to get ready, you might even jot notes or sketch out some possibilities on the assignment sheet. When you write next class, you will be required to write without additional notes or books; the only thing you may have on your desk, in addition to pen and paper, is the assignment sheet.

The three expository (explanatory) writing tasks included the following topics:

A. As a recent graduate from high school, you've had some time to reflect on your education during those years. Prepare the body of a letter to your high school principal in which you tell her/him what you think the strengths

and/or weaknesses of the program are. Explain them completely so that the principal will really understand what you thought were the highs and lows of your high school career.

B. The editor of your local paper has written an editorial blasting government statistics that use the "typical, average" family to make their points. Citing one study, he says that there is no family with 2.3 children and an annual income of \$16,249.23 1/2. He would like to gather some examples of "untypical" families and invites his readers to send him essays explaining how untypical their families are. Each family has its own unique traits. Write an essay for the editor explaining the ways in which your family is the untypical American family.

C. You are being considered as a candidate for a student foreign exchange program. If you are chosen, you will stay with a family for one year. In order to match you more closely to a compatible family, the program requires that you compose an essay which tells about your own family. Tell about your family's lifestyle. Do so in detail so the program directors will really know what your family is like.

The three persuasive writing tasks included the following topics:

D. Your parents want you to major in something practical, something like computer science or business management, so you'll be assured of a good living. You, on the other hand, want to major in one of the liberal arts, like music or theater arts. Write an essay for Parents Magazine in which you persuade parents to let their college-aged children make their own decisions and direct their own lives.

E. You are applying for a summer job. Part of the application asks for an essay explaining your qualifications and experiences. You know you are the best one for the job. Write this essay to convince the employer to hire you. If you persuade this employer, you'll have a fine summer job.

F. The radio station you have been listening to regularly from 9:00-11:00 p.m. has recently changed its programming and is now playing music different from the previous format. Write the body of a letter to the manager of the radio station, urging him or her to reconsider the decision to change the program format. Try to persuade the manager to play the kind of music you prefer. Be sure to state exactly what kind of music that is.

Appendix B

Holistic Coherence Scale

(Bamberg, 1984, pp. 317-318)

4 = Fully Coherent

Writer clearly identifies the topic.

Writer does not shift topics or digress.

Writer orients the reader by creating a context or situation.

Writer organizes details according to a discernible plan that is sustained throughout the essay.

Writer skillfully uses cohesive ties such as lexical cohesion, conjunction, reference, etc. to link sentences and/or paragraphs together.

Writer often concludes with a statement that gives the reader a definite sense of closure.

Discourse flows smoothly--few or no grammatical and/or mechanical errors interrupt the reading process.

3 = Partially Coherent

If writer does not explicitly identify the topic, he/she provides enough details so that readers can probably identify the specific subject.

Writer has one main topic but there may be minor digressions.

Writer provides some reader orientation, either by briefly suggesting the context or by directly announcing the topic.

Writer organizes details according to a plan, but may not sustain it throughout or may list details in parts of the essay.

Writer uses some cohesive ties such as lexical cohesion, conjunction, reference, etc. to link sentences and/or paragraphs together.

Writer does not usually conclude with a statement that creates a sense of closure.

Discourse generally flows smoothly although occasional grammatical and/or mechanical errors may interrupt the reading process.

2 = Incoherent

Some of the following prevent the reader from integrating the text into a coherent whole:

Writer does not identify the topic and the reader would be unlikely to infer or guess the topic from the details provided.

Writer shifts topics or digresses frequently from the topic.

Writer assumes the reader shares his/her context and provides little or no orientation.

Writer has no organizational plan in most of the text and frequently relies on listing.

Writer uses few cohesive ties such as lexical cohesion, conjunction, reference, etc. to link sentences and/or paragraphs together.

Writer creates no sense of closure.

Discourse flow is irregular or rough because mechanical and/or grammatical errors frequently interrupt the reading process.

1 = Incomprehensible

Many of the following prevent the reader from making sense of the text:

Topic cannot be identified.

Writer moves from topic to topic by association or digresses frequently.

Writer assumes the reader shares his/her context and provides no orientation.

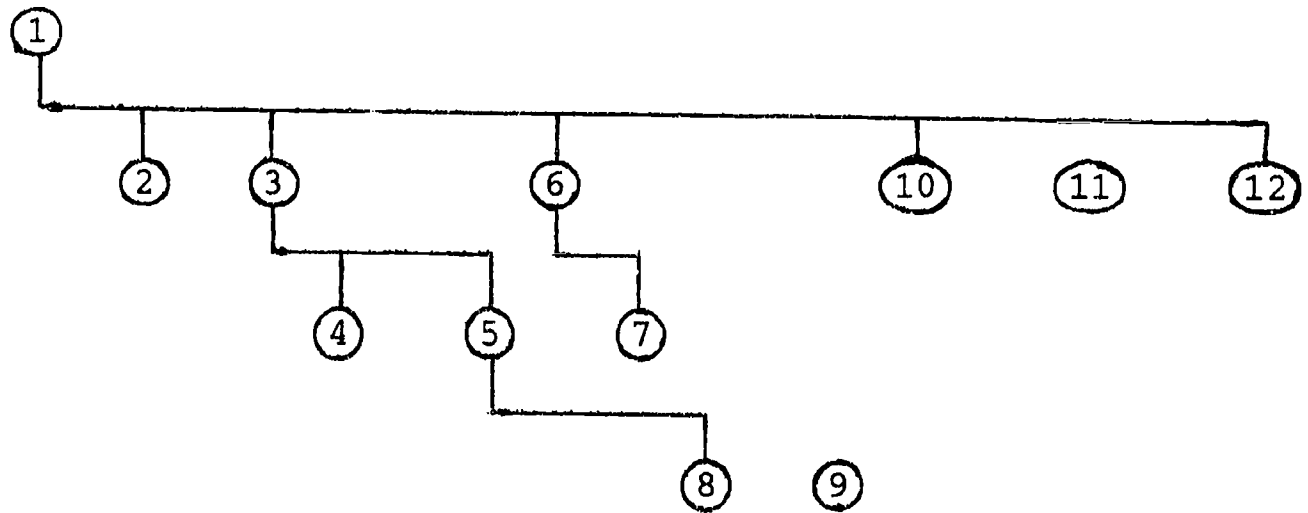
Writer has no organizational plan and either lists or follows an associative order.

Writer uses very few cohesive ties such as lexical cohesion, conjunction, reference, etc. and sentences do not seem connected or linked together.

Discourse flow is very rough or irregular because the writer omits structure words, inflectional endings and/or makes numerous grammatical and mechanical errors that continuously interrupt the reading process.

Appendix C

Discourse Matrix of a Student Writing Sample



Task E

(Applying for a Summer Job)

(1) Dear Sir, I was informed that there will be an opening for summer-employment with your company. (2) The type of work your company performs interests me very much.

(3) I have had four years previous experience with my father doing the same type of work as your company. (4) Those four years have taught me the trade I need to know in order to work efficiently. (5) They also have proved invaluable in hands on experience.

(6) Being a college student I can work well with people.

(7) I believe this will help me get along with customers as well

as fellow employees. (8) The practical experience I've gained from my father will help me be more productive to you. (9) There will be no training period needed for me.

(10) Transportation to and from work would be no problem.

(11) Also any work hours available will be suitable.

(12) I'm sure that working for your company will be a valuable asset in my future.