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THE EFFECTS OF PRIOR KNOWLEDGE, PRIOR INTEREST, AND LEARNING ON WRITING

By

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ABSTRACT

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This study examined the effects of prior-knowledge, learning through writing, and various affective factors and writing activities on the written product. The research questions were: Do students with high prior-knowledge on familiar composition topics write better papers? Do those students who learn a lot through writing, write better compositions? Do interest, confidence, engagement, and a strong opinion on these subjects help writers write better papers? Do high motivation, active research on the topic, and more learning about the topic help writers with low prior-knowledge learn more via the experience and thus write better papers? Forty-three college freshmen wrote one composition on the topics of 'body language,' 'presidential candidates,' and 'clothes.' Before and after writing each paper the students took a free-association knowledge test on the content of the topic and filled out a questionnaire. The teachers' grades for each composition were recorded and trained graders scored the them on overall writing quality (holistic score), coherence, sophistication, content, interest, syntactical complexity,

and mechanical errors. The raters also scored the knowledge tests for degree of organization and fluency. Composition ratings and responses to the questionnaires were correlated using the Pearson-Product Moment Correlation Coefficient. A T-Test analysis compared the composition means between the high- and lowknowledge groups and the high- and low-interest groups, etc. The correlation and T-Test Analysis showed that although priorknowledge and interest apparently positively affect the quality of the students' compositions, high prior-knowledge was not a necessary and sufficient condition for good writing. This study also indicated that those with low prior-knowledge do not necessarily learn during the writing process. With regard to the students' questionnaire responses, this study indicated that neither the writing activities nor any of the affective variables, excluding prior-interest, were associated with the quality of the writing. Finally, a regression analysis supported the main conclusions that prior-knowledge and prior-interest were the most significant variables studied in this project on the written product. Suggestions are offered for teaching and further research.

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CHAPTER ONE

INTRODUCTION

Writing begins with all that we have known since we were born, and perhaps with a lot of knowledge that was born in us. We write, first of all, to discover what we know and then what we need to know. (Murray 1984:3)

How does what we know, to use Murray's terms, interact with what we write, and do we discover what we need to know by the effort of writing? These are the questions that prompted this research. Writing appears to be a recursive process of recalling or gathering information, organizing it, translating it into words and editing the text before showing it to another reader. How do writers learn or construct meaning as they engage in this process?

Reading research has shed much light on how personal experiences influence the construction of meaning and the organization of new information (Langer, 1980; Langer and Nicholich, 1981; Langer, 1983). Recently writing research has become concerned with common and individual writing processes and the variables that affect those processes, but only quite recently have studies on the effects of prior knowledge on writing been undertaken (Langer, 1984; Chesky, 1984; DeGroff, 1986).

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Chesky (1984) examined compositions of students who wrote on a topic about which they had little knowledge, "Tobacco Price Supports," and compositions of other students who wrote on a topic on which they were well-informed, "Problems with Teachers." He found that when students wrote about something about which they knew a lot, they wrote quantitatively more and qualitatively better, and they were more involved in their writing and enjoyed the task more than when they wrote about something about which they knew very little or cared little about. Langer (1984) went to a history class to study writing tasks which were used to test the students' understanding of course material. She found that different kinds of writing seemed to require different kinds of knowledge. Those students with high scores on her organization measure for background knowledge of the topic wrote good comparison and contrast papers; whereas students who had high-knowledge fluency scores but not necessarily well-organized knowledge scores wrote good papers on argumentative topics. DeGroff (1984) tested students' prior knowledge of baseball and then evaluated the quality of the students' first drafts, the students' comments made during the conference, and the students' final drafts. She found that the content in the papers and the comments of the students with high prior knowledge were more elaborate and richer than the content of the students with low prior knowledge.

Newell (1984) explored the issue of learning. His study examined what students learned from different writing tasks. He tested prior-knowledge and then asked the students to read a passage and then to write in one of the following formats: notetaking, answering comprehension questions or writing an essay. After the writing activities, the students took a post-knowledge test. The findings suggest that essay writing helps students learn the concepts from the reading passage more than taking notes or answering comprehension-type questions.

Much research has been done in measuring apprehension toward writing and its effect on the writers' written text. But little has been done to measure the effect of interest on writing quality. Chesky's (1984) study indicated that students enjoy writing about topics with which they are familiar rather than on topics about which they know little. In related research, Kellogg (1987) measured the amount of effort writers used in two experiments comparing high and low knowledge writing tasks. He found that, overall, highknowledge writers used less effort than low-knowledge writers. An additional and surprising finding was that the high knowledge writers put more effort into the more engaging writing task than they did in the less engaging task even though they had high knowledge in both the engaging and less engaging topics. Kellogg concluded that the more engaged the writers are in the topic, the more effort they put into their writing. He did not evaluate the quality of the papers produced by the writers. These recent studies lend support to our intuition that writing leads to learning and that the writers' prior knowledge and interest in the topic will affect their writing.

This study further investigates the assumptions that writers with high prior-knowledge and writers with high interest write better papers. In addition, this study investigates the process of

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learning through writing; it attempts to determine how students learn through writing and the effects of that learning on the quality of students' writing. Chapter Two reviews what is already known about the effects of prior-knowledge of learning and on writing.

Chapter Three presents the procedures for collecting the data and the evaluation of the compositions and tests. To summarize, this study takes place in the college freshman composition class. The students write three compositions, take knowledge tests before and after writing each paper in order to measure prior-knowledge and knowledge-gain through writing; and the students answer questions about their interest in and their writing processes for each topic. The students' papers are evaluated on holistic quality, coherence, sophistication, content, interest, length of the T-units and number of mechanical errors, and receive a grade from the teacher. The knowledge tests are rated for the level of organized knowledge, fluency and are given a score which combines organization and fluency.

Chapter Four presents the results of the statistical analysis. Briefly, the composition scores are correlated with the priorknowledge scores, the knowledge gain scores, and the responses to the questionnaire using the Pearson-Product Moment Correlation Coefficient. In addition, the T-Test Analysis is used to determine significant differences between composition scores of those students with high and low prior-knowledge, high and low knowledge gain, high and low responses on the questionnaire about interest, priorknowledge, learning, time and effort during the writing process.

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Finally, a regression analysis examines the interrelations of the variables.

Chapter Five discusses the findings, provides suggestions for further research, and suggests some practical implications for the writing teacher.

The hypotheses of this study are:

The hypothesis for the effects of prior knowledge is:

1. Prior-knowledge scores correlate with writing scores.

Each paper is evaluated on overall quality (holistic), coherence, sophistication, content and interest. In addition, each paper receives a syntactic complexity measure (mean T-unit length), mechanics measure (number of errors per 100 words), and a grade from the teacher. The hypothesis states that on seven of the writing measures (holistic, coherence, sophistication, content, interest, Tunit length and the teacher's grade) the means for the students with high prior-knowledge will be significantly higher than the means for the students with low prior-knowledge.

On the mechanics measure, the means for the students with high prior-knowledge will be significantly lower than the means for the students with low prior-knowledge.

The hypothesis for the effects of learning on writing is:

2. For a student with a low prior-knowledge score, an increase in knowledge about the topic during the writing process is associated with a rise in the writing scores.

On the seven writing measures (holistic, coherence, sophistication, content interest scores, T-unit length, and teacher's grade), the means for the students with a significant knowledge gain (difference between the pre- and post-knowledge tests) will be higher than for the students with low or no increase in learning.

On the mechanics measure, the means for the students who learn a lot from writing will be lower than for the students with low or no knowledge gain.

The following hypotheses concern the students' responses on the pre- and post-writing questionnaires:

3a. Interest and involvement in the topic correlate with writing scores.

3b. Personal assessment of knowledge on the topic correlates with writing scores.

3c. Personal assessment of learning about the topic and the teaching point correlates with writing scores.

3d. Time and effort spent on writing correlate with writing scores.

3e. Personal assessment on the quality of the composition correlates with writing scores.

These hypotheses state that the students' responses to the questions about interest, prior knowledge, learning through writing, effort and personal evaluation will correlate with their writing scores on each of the seven measures.

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In summary, this study seeks to follow the path laid down by research in reading and now in writing, and to further explore the interrelationships of knowledge and a variety of affective and process variables on the quality of writing.

CHAPTER TWO

REVIEW OF THE LITERATURE

The following review of the literature examines those studies which have investigated the role of prior knowledge on comprehension and recall in learning theory, reading theory and writing theory. A selection of literature that considers writing as a process of learning is examined. And what is known about how students' interests affect writing quality is briefly discussed.

PRIOR KNOWLEDGE

Learning Research

Discourse comprehension and verbal learning studies have investigated how previously acquired knowledge affects the processing of new knowledge within the same domain; how prior knowledge influences the learning of new knowledge; and how prior knowledge influences verbal generation, recall, and comprehension. To test the effects of prior knowledge on the tasks mentioned above (text generation, recall and comprehension) a series of experiments were conducted on individuals with high and low knowledge of baseball by Chiesi, Spilich and Voss (1979); Spilich, Vesonder, Chiesi and Voss (1979); and Voss, Vesonder and Spilich, (1980). In earlier studies experts and non-experts had been delineated in chess-playing ability (Chase and Simon, 1973) and in Go playing ability (Reitman, 1976), but a system had not been developed for classifying a person's knowledge within any given subject or domain. Chiesi, et al. (1979) worked on developing a system for classifying baseball knowledge. First they defined knowledge of a domain "as an understanding of its basic concepts, as well as its goals, rules and/or principles" (p.257). Then they developed a conceptual framework for baseball that had three areas in which they predicted there would be differences between the high- and low-knowledge individuals concerning goal structure, game states and game actions. Spilich, et al. (1979) developed a Baseball Knowledge Structure from the conceptual framework for baseball:

Setting

General: Teams playing, team at bat, team in field, inning, miscellaneous conditions
Specific: Relevant: teams' records as related to goal structure, players' records as related to goal structure Irrelevant: team attributes, player attributes
Enabling: Batter at bat and pitcher ready to pitch

Goal Structure				
Team at Bat	Level	Variables	Values	Team in field
Winning game	1	Game outcome	Win-lose	Winning game
Scoring runs	2	Score	Domain of game scores	Preventing runs from scoring
Getting runners on base and advancing	3 g	Pattern of base runners	Eight possible patterns	Preventing runners from getting on base or advancing by making outs
		Outs	0, 1, 2, 3	
Having 'Balls'	4	Balls	0, 1, 2, 3, 4	Getting 'Strikes'
Avoiding 'Strikes'		Strikes	0, 1, 2, 3	Avoiding 'Balls'
Non game actions relevant non game actions				

irrelevant nongame actions (1979: 276)

Chiesi et al. (1979) found that new information is mapped onto existing knowledge structures. In other words, subjects of his study who knew something about baseball remembered new information more easily than those subjects who knew little about baseball. A 40item test of the terms and principles of baseball was administered in order to designate those individuals with high knowledge and those with low-knowledge of baseball. Then the subjects went through a series of five experiments. Their responses to the oral descriptions of the half innings demonstrated that knowledge in a given subject facilitates the learning of new information within that subject. Spilich et al. (1979) continued this work within the domain of baseball. As was predicted, the better-informed individuals had a greater ability to relate the specific actions of the game to its overall goal structure, and they were better able to remember the most important information given in the passage. Subjects listened to a taped presentation of a half inning of a baseball game and then were asked to: 1) summarize the text in two sentences, 2) write as much as they could remember and 3) answer 40 multiple-choice questions. These post tests were evaluated based on the previously developed "Baseball Knowledge Structures."

In Voss et al. (1980) the quality of the verbally generated texts by the high-knowledge individuals was judged higher because the writers included information about how to achieve the goals of the game, whereas the low-knowledge writers included actions unrelated to the game's goals such as fans' actions or thoughts. The subjects were asked to generate a text on a half inning of baseball, and two weeks later they were asked to recall what they had said. High knowledge individuals generated initial texts that were more detailed and they recalled more information than those with low knowledge. The subjects' texts and recollections of their texts were evaluated according to "problem representation" (knowledge of the rules, goals and conventions of the game), and "content representation" (the general content that the text would be expected to have, given the particular knowledge domain of the half inning of baseball). In summary, these studies indicate that high prior-knowledge leads to higher comprehension, recall, and to better content of a verbally generated text.

Reading Research

Prior knowledge is also important in reading. Current reading theory has shown that reading is an individual process of generating meaning from the text. Rosenblatt (1978) writes:

The reader's attention to the text activates certain elements in his past experience--external reference, internal response--that have become linked with the verbal symbols. Meaning will emerge from a network of relationships among the things symbolized as he senses them. The symbols point to these sensations, images, objects, ideas, relationships, with the particular associations or feeling-tones created by his past experiences with them in actual life or in literature. The selection and organization of responses to some degree hinge on the assumptions, the expectations, or sense of possible structures, that he brings out of the stream of his life. Thus built into the raw material of the literary process itself is the particular world of the reader.

(p.11)

The assessment of prior knowledge and the quantification of its effect on reading comprehension has been studied by Langer (1980), Langer and Nicholich (1981), and Langer (1983a). Researchers and teachers have developed several techniques used to establish valid and reliable assessments of students' prior-knowledge on a given topic. These techniques range from asking students for free recall to asking them to complete multiple choice items. This section outlines prior knowledge assessment measures and then briefly notes some of the interesting results of some of the studies on the effects of prior knowledge on reading.

Holmes and Roser (1980) compared five techniques for measuring prior knowledge with third through sixth grade students on the subject of "Snakes." In addition to determining the reliability and validity of each technique, they wanted to find the best technique for assessing prior knowledge. They defined the "best technique" as the one which produced the highest quantity of information.

They found that the 55 structured probe questions produced the highest number of facts; the multiple choice test produced the second highest number of facts; the word association task produced the third highest number of facts. The structured probe questions and the recognition task (M-C) yielded 35% - 28% incorrect facts and the less structured techniques yielded very few inaccurate facts 15% - 25%. Because the structured probe question technique yielded the most information per minute of administration of the task, the investigators concluded that it was the most successful. In addition they found that the techniques to assess topical knowledge can be affected by topic and age; for example, the older readers tended to perform better than young readers on free recall and structured questions.

From this study it is important that we note that the multiplechoice and structured probe questions yielded incorrect facts, and that the older the children were, the better they performed on the free recall tests. Also the subject, "Snakes," contains more factual knowledge rather than integrated knowledge, as would a subject such as "Happiness." Holmes and Rosner do not endorse the use of the free recall tests because as a means of eliciting accurate factual information, free recall tests were not the most efficient with regard to adminstration time and grading time. Langer (1980), on the other hand, has been interested in evaluating integrated knowledge rather than factual knowledge, and she has developed criteria for evaluating the responses to free recall tests.

Langer's (1980) criteria evaluates the strength of organization of the responses to free recall prompts. She evaluated the responses to the free association prompts based on three levels of organization of the knowledge represented by the students' responses. The responses were weighted from three to one with three representing much prior knowledge and one representing little prior knowledge:

<u>Much (3)</u>	Some (2)	<u>Little (1)</u>
superordinate	examples,	associations
concepts,	attributes,	morphemes.
definitions,	and defining	sound alikes,
analogies,	characteristics	and first hand
and linking		experience

Langer developed the above 3-level quality of knowledge guide from a 12-level guide and from other learning theories of thought organization. One of these is Vygotsky's (1962) three phases of complexity from subjective and diffuse to the more objective and organized:

- a. abstract symbolic relationships are recognized.
- b. concrete relationships are formed around more objective recognizable bonds.
- c. knowledge is organized around poorly articulated images and objects related only by the immediate perception of the observer.

Another's is Bruner's (1956) three groups of conceptual categories:

- a formal-specifying properties or attributes that are intrinsic to whole class
- b. functional: specific function, concrete, objective
- c. affective: personally based and not easily described.

In Langer's 1980 study the prior knowledge average scores on the topics of Schizophrenia and Parakeets ranged from a high of 2.67 to a low of 1.00. The following illustrates how the responses to the prompt, schizophrenia, were scored:

3- much prior knowledge

superordinate concept--"one of a group of severe mental disorders..."

definition--"a psychotic disorder characterized by withdrawal from reality including behavioral disturbances"

linking--"schizophrenia is like living in two worlds because..."

2-some prior knowledge example--"split personality" attribute--"character disorder" defining characteristic--"withdrawal from reality"

1-little prior knowledge association--"Jekyll and Hyde" morphemes--"schizoid" first hand experiences--"crazy--like in the movies"

(Langer 1980, p. 375)

Langer's subjects responded to the prompts of the free association test on schizophrenia, then they read the passage on schizophrenia, and they wrote everything they could remember about what they had read. The recall protocols were scored and then correlated with the prior knowledge scores. She found that the levels of prior knowledge were highly correlated with the reader's organization of recall. In another paper Langer and Nicholich (1981) reexamined the data from Langer (1980) again and found that the measure of recall was independent of the reader's I. Q. or general reading level. This conclusion, then, is even stronger evidence for the effect of prior knowledge on the ability to recall a reading passage than demonstrated in Langer's original paper.

Results of a similar study by Hare (1982) support Langer's qualitative measure as a predictor of overall passage recall even when I. Q. is constant. But Hare's results also suggest that the overall quantity of prior knowledge predicted recall better than the quality of prior knowledge. The subjects, all with high I. Q.'s, were asked to predict how much they would remember of an article on "Planets." Then they took a free association test with the prompts: planets, axis, and distance from sun. Each student was given a qualitative score and a quantitative score for the free association test. After reading the passage the students wrote a recall protocol and then answered three comprehension questions which were evaluated quantitatively and qualitatively. The overall quantity of prior knowledge predicted the students' recall performance better than the quality of prior knowledge. These findings favor the use of a quantitative over qualitative scoring system. Also interesting to note in Hare's study is that students' own predictions did not correlate with their levels of prior knowledge. In other words, those students with high prior knowledge did not predict that they would remember the passage well. In fact, the reasons for their predictions were not based on their knowledge but more on their

perceived ability to remember; for example, "Because I have average remembering skills."

In contrast to Hare's (1982) evidence that the quantitative score is a better predictor than the qualitative score, Langer (1983a) suggests that a qualitative prior knowledge score is more strongly related to reading comprehension than the quantity of the prior knowledge. She administered free-association prior-knowledge tests on the topics of Stonehenge and World War I. The Stonehenge passage was narrow, around specific astronomical uses of Stonehenge. Either the students knew the prompt words on Stonehenge or they did not; the Stonehenge prompts did not permit a range of lower-level, partially-organized responses. The prompts for the WWI passage, however, did generate a range of responses.

After the students read the respective passages, they answered specific questions instead of writing recall protocols as in her earlier study. For both passages, Hare (1982) found that the quality of background knowledge did not predict the subjects' ability to answer specific implicit or explicit questions, but it was a significant predictor of total comprehension.

Langer (1981) describes her pre-reading plan and explains that when teachers use it, the quality of learning for readers of all achievement groups rises. She also endorses the use of the free association test to measure background knowledge in studies of the effects of specific knowledge on particular kinds of learning in particular content areas. In her conclusion she suggests using five stimulus words rather than three.

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In sum, research on reading has concluded that, "priorknowledge is an exceptionally important determiner of comprehension" (Langer and Nicholich, 1981). Based on her studies in content area classes, Langer surmises that availability and organization of topic-specific knowledge is also important in writing. In addition to leading us to examine the effects of prior-knowledge on writing, an additional benefit of reading research is the direct applicability of the free-association test to measure the writers' prior knowledge of the topic.

Writing Research

This section examines the recent studies of the effects of prior-knowledge on writing. The findings from learning theory and reading theory, reviewed above, are just beginning to be examined in writing research and have yielded some very interesting results.

Kellogg (1987) found that overall, high knowledge writers put less effort into their writing than low knowledge writers. He tested the time and cognitive effort of low and high knowledge writers on three writing process tasks: planning ideas, translating ideas into text, and reviewing ideas and the text. He sounded a beep at irregular intervals and then asked the students to tell in which process they had been engaged at the sound of the beep. He did so to measure the amount of time the student spent on each of these processes. To measure cognitive effort (or concentration) he measured reaction times of the writers to another task while they were writing. Concentration could be inferred from the delay: the writer was to say "stop" as soon as the writer heard the beep. From the accounts of the writers, both low- and highknowledge writers intermixed planning, translating and reviewing; and the allocation of time for each process was apparently the same for both the high and low knowledge writers. But the effort expended during the processes was different--the high-knowledge writers used less effort than the low-knowledge writers. His hypothesis is that automaticity gradually develops with experience and knowledge. This is the workload hypothesis: the more the writer knows about the topic, the less effortful it is to remember and use the relevant knowledge while writing the text and the more effort is available to be creative.

In the first experiment topic knowledge varied among the subjects. Kellogg used a 25-item M-C test on the history, organization and purpose of the United Nations in order to determine prior knowledge and then he asked the subjects to write a persuasive essay on "Why the United Nations should remain in New York City." (This experiment was done shortly after the Korean Airline 007 incident and the proposal of the United States to ban Soviet flights into airports of New York. The Soviets at this time suggested the United Nations move to a more neutral place.)

Although the high-knowledge group used less effort in their writing, the quality of their writing was not significantly better than the low knowledge group with respect to language usage, organizational coherence, idea development, effectiveness, and mechanics. Other studies, reviewed below, however, suggest that prior knowledge is a very important factor in the quality of students' writing. In the second experiment the topics were manipulated. The task in the high knowledge topic was to write an argument for or against tuition for all state university students. The task in the low knowledge topic was a fictitious situation for which the writer had to argue for or against a proposal of an anti-greed club to give a large amount of money every year to poor families. Again, effort was less for the high knowledge writers, and again, according to his criteria, writing performances were not significantly different. Kellogg concludes that the workload hypothesis seems to apply to writing. Apparently knowledgeable writers lessen the mental workload of writing by performing some operations relatively automatically; and, therefore, they invest roughly equal effort, some of which is automatic, than the low knowledge writers, and, have roughly equally good written products compared to the less knowledgeable writers.

DeGroff (1986) studied the effects of prior knowledge on the writing processes of fourth grade writers by looking at the first drafts, the comments made in peer conferences, and the revised drafts. She used Spilich, et al.'s (1979) "Baseball Knowledge Structure" to evaluate the content of the subjects' prior knowledge. Then she evaluated the content of their first drafts, the content of their propositions in the conference utterances and the content of their second drafts using Spilich's knowledge structure. In the first drafts she found that the high-knowledge subjects produced a significantly greater mean proportion of auxiliary action propositions than did the low-knowledge subjects. Low-knowledge subjects produced more non-game relevant action propositions. During the conference the high-knowledge subjects commented on goal-related content while the low knowledge subjects commented about information unrelated to goals of the game. And in the second draft the high-knowledge subjects made more changes than the lowknowledge subjects. DeGroff concluded, then, that prior knowledge influences all three stages of the students' writing processes. That is, prior knowledge causes a difference in the quality of the content of the first draft, the quality of the remarks made in the conference, and the quality of the final draft.

Judith Langer (1984) tested the effect of topic-specific knowledge on the quality and local coherence of written work. The writing tasks of this study came from topics studied in history courses and the writing was used to evaluate the students' learning. The results suggest that different writing assignments can be used to evaluate different kinds of learning. She used her free association test to measure the level of prior knowledge on the topic of the tenth grade students. These responses were scored using her three levels of knowledge organization mentioned earlier. Each student was given three scores based on these responses: one that measured the total number of responses (fluency score); one that measured the highest level of organization attained in the responses (organization score); and one that combined fluency with organization (combination score). The writing samples that were then written were scored on five measures: overall quality, coherence, syntactic complexity, audience, and function.

In general, she found that the combined knowledge measure had the strongest relationship to the holistic writing score; she also found a significant relationship between the combined background knowledge measure and Halliday and Hasan's (1976) measure of coherence. And she found that the effects of topic-specific background knowledge were independent of the effects of the general knowledge scores. More specifically she found that different kinds of knowledge predict success in different writing tasks. For the two assignments that asked for a simple reiteration of facts or elaborations, a large amount of unintegrated knowledge was sufficient. These were the topics:

- a Write a paper comparing city and frontier life with regard to individualism and democracy.
- b. Write a one or two page essay on your version of a Utopian society, the kind you would like to live in.
- c. It has been stated that in the 18th and 19th centuries the South was a deferential society. In one or two paragraphs, explain why this was true. In your answer, be sure to discuss the concepts of prejudice and acquiescence and how each related to this conclusion.
- d. Some historians refer to the 1920s as a decade in American history when sexual freedom and the pursuit of happiness flourished. At the same time, it is noted that the 1920s were characterized by harsh moralistic and anti-foreign sentiments. Explain how social changes during the 1920s influenced the growth of new values that conflicted with traditional ones.

Students with highly organized prior knowledge (3 points on organization of prior knowledge) wrote better essays for topics a and c. But when the prompt was more general as in topics b and d and called for examples and elaboration, fluency (many responses, not necessarily highly organized) mattered more. Langer concluded that writing assignments can be used to distinguish students' learning of separate facts versus integrated knowledge.

Chesky's (1984) study continued Langer's work. But rather than test the subjects' prior knowledge, Chesky manipulated the topics--he chose a topic for which he thought the students would have low knowledge (Tobacco Price Supports) and he chose a topic for which he thought they would have high knowledge (Problems with Teachers). He found that students who wrote on a topic for which they had a high level of prior knowledge wrote quantitatively more, qualitatively better, were more involved in their writing, liked what they wrote, and found the task of writing much easier than students who wrote on a topic for which they had how prior knowledge. Forty high school students wrote on a low-knowledge topic and 40 wrote on a high-knowledge topic. The audience for which the paper was addressed was also varied.

The high-knowledge students wrote more and better; they were more involved; they liked writing more; and they found writing easier than the students with low-prior knowledge. With respect to the effects of audience, Chesky found no differences in the quantity or quality of the students' writing between writing when they wrote for their peers or for their teacher.

These studies in writing seem to endorse and support our intuition that prior knowledge affects the quality of writing just as it has been shown to affect the quality of learning and of reading. The results of the studies reviewed help us understand better the importance of prior knowledge in students' composition writing. DeGroff's (1986) study demonstrates that the quality of the written content is richer with high prior knowledge; Kellogg's (1987) study suggests that students with high prior knowledge use less effort in their writing than students with low prior knowledge; Langer's (1984) study suggests that different kinds of writing tasks require different kinds of prior knowledge; and Chesky's (1984) study demonstrates that students need to have high knowledge on the topic on which they write in order to write better papers.

WRITING PROCESSES

The previous sections have examined the importance of priorknowledge on the task. This section will examine the role the writing process plays in the students' learning about the writing topic. Writing appears to be a recursive process of gathering information, organizing it, translating it into words and editing the drafts. As writers follow this process, they appear to learn about the topic. Writing, in other words, includes the discovery of meaning or knowledge as well as organization and correct language use.

In an essay, Reither (1985) suggests that writers do not need to know what they are going to write about before they begin. He says that writers learn about what they are discussing as they write--"they can write their way out of ignorance." He suggests that students in content areas need to learn the knowledge of their discipline and they need to learn the writing discourse strategies of the community within their discipline. He concludes by strongly recommending writing instruction across the curriculum. He also asks these important research questions: Are writers who know how
to find out likely to be better writers? What kinds of knowing and what kinds of know-how assist writing?

McCutchen (1986) attempted to separate content knowledge and discourse knowledge in a study concerning the development of children's writing abilities. She asked two questions: a.) Can a rich knowledge base overcome immature linguistic procedures? b.) Does impoverished content knowledge make an otherwise mature writer produce choppy and ill-structured texts? She wanted to examine the interaction between the content components (what one knows of a topic) and the discourse component (what one knows about how to She called these latter concerns lower-level planning. write). Concerns with audience, tone, clarity (Flower and Hayes) she considered higher level planning. She gave her subjects (ten each from grades 4, 6, and 8) a 30-item test for knowledge of football rules and terms. Then she evaluated the subsequent written texts 1. local coherence--how a sentence builds on the semantic on: commitments of the previous sentence; 2) hierarchical structure-how main arguments are elaborated; 3) analysis of content--level of detail. She chose to evaluate these because they can be quantified and because they seem intuitively to relate to aspects of the text that probably influence subjective quality ratings. Halliday and Hasan (1976) labeled three kinds of coherence: local connections, remote connections, and unsuccessful connections.

She found that older children produced more linguistically coherent texts; but regardless of grade, children produced more coherent texts on topics in which they were knowledgeable. Highknowledge students generally gave more main points; low-knowledge students did attempt to create well-formed elaborated discourse even though they did not discuss the goal structure of football in specific plays. She concluded that differences in topic knowledge affect what gets said, but knowledge of another sort affects how it gets said. This knowledge of how to write, the discourse component, changes with linguistic development and with the experience with texts that comes with age.

Newell (1984) explored students' learning from different writing tasks. After a free-association prior knowledge test, the students read a passage and then did a writing activity: took notes, wrote comprehension questions or wrote an essay. After the respective writing activity, the students took a post-knowledge test. This measure was given both at the beginning and at the end of the writing sessions to measure gains in the student's knowledge of the concepts. Newell found that essay writing helps students learn the concepts from the reading passage more than taking notes or answering comprehension-type questions. These results suggest that essay writing required more extensive thought and consideration of the content in the prose passages.

STUDENTS' INTEREST AND ENGAGEMENT

Students' interests are an implicit concern in the writing classroom. This section briefly discusses the findings of the effects of students' interest and engagement on writing quality of two studies previously reviewed.

Chesky (1984) asked four questions on his involvement survey: how involved the students were in the writing; how the students liked the writing; whether they found the writing easy or difficult; whether they wrote for a grade or to say something to somebody; and an open-ended question asking them to explain their feelings about the writing assignment. He found that when the students wrote on the topic for which they had high prior knowledge, they wrote better and were more involved in their writing, liked their writing, and found the task of writing much easier and less frustrating than when students wrote with a low level of prior knowledge.

Kellogg (1987) observed that overall cognitive effort both for low- and high-knowledge writers was greater in the first experiment when the students wrote on the United Nations. This task may have elicited greater emotional involvement no matter how much prior knowledge the student had about the United Nations. Kellogg speculates that with relatively unengaging tasks, the processes of writing do not involve the high levels of effort that they do in tasks of great interest to the writer.

SUMMARY

The literature indicates that the level of prior knowledge affects the quality of the written text in complex ways. And to-date it seems to endorse the free recall test as the one most likely to succeed in evaluating integrated knowledge. The literature also indicates that the students' interest and involvement in the topic seem to affect the quality of the written text and perhaps the quality of the learning from the process of writing on the topic. The present study further explores the processes of learning through writing and the relationships between the student's prior knowledge and interest on the written text.

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CHAPTER THREE

METHODOLOGY

This study seeks to continue the work done with priorknowledge in learning theory, reading theory, and writing theory, summarized in the previous chapter; and it asks further questions concerning learning through writing. It also seeks to explore the effects of affective variables and writing process activities on the written product. The three main hypotheses of this study are: 1) Prior-knowledge scores correlate with writing scores. 2) For a student with a low prior-knowledge score, an increase in knowledge about the topic during the writing process is associated with a rise in the writing scores. 3) With regard to the pre- and post-writing questionnaires, the students' responses will correlate with their writing scores.

This chapter presents the procedures used for collecting the data and the evaluation of them. Briefly, the subjects wrote three compositions. Before and after writing each composition, they took a free-association knowledge test and filled in a questionnaire. This chapter explains the topics used and the procedures and criteria for evaluating the compositions, questionnaires, and knowledge tests.

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SETTING

During the spring of 1988 at the foot of Mount Sentinel located between the Bitterroot and Rattlesnake Valleys, three freshman English Composition classes at the University of Montana participated in this study.

SUBJECTS

Of the 60 students in the three classes who agreed to participate in the study, 43 students completed every section of the study. Only the data from these 43 students are included in the tabulations.

MATERIALS

This section describes the topics, the pre- and post-writing questionnaires, and the pre- and post-writing knowledge tests used in this study.

Topics. The topics were familiar to the students which is to say that each student would know at least a little about each of the three topics and that within each topic-knowledge domain the students would demonstrate different amounts and levels of knowledge and personal involvement. The topics for this present project did not require such exact information as did the writing about a baseball inning (DeGroff 1986) nor did the topics concern an issue that the students were not at all familiar with, as we can assume was the case with Chesky's (1984) "Tobacco Price Supports." The final topics were selected as follows: The researcher compiled a list of topics that teachers frequently use in composition courses by consulting English and ESL composition texts, and the suggested-topics list used by the University of Montana Writing Program. Each teacher selected her preferences from the list and then she met with the other two teachers to make the final decision--consensus was reached remarkably quickly. The three topics corresponded to their teaching points for the three weeks of the study: "body language" to teach organization; "presidential candidates" to teach transitions; "clothes" to teach development.

The instructions given to the students were to write an article on the assigned topic for the campus newspaper, <u>The Kaimin</u>. Since their audience was their professors and fellow students, their papers were expected to be sophisticated as well as interesting. Appendix A gives the instructions that the students received.

Questionnaires. The students answered questions about their interest in and feelings about writing on the assigned topic; they also answered questions about what they did in order to write the paper, questions such as: amount read, number of people interviewed, amount changed in the rewrite, etc. The questionnaires, like Chesky's, used a 5-point Likert scale. The pre-writing questionnaire asked the students to rate their interest in the topic, their knowledge of the topic and their confidence in their ability to write a good paper on the topic (Appendix B). The responses to the openended question on why they were confident in or uncertain about their ability are in Appendix C. The post-writing questionnaires (Appendix D) had the following questions:

- on interest--how they liked writing on the topic, how they felt about writing on this topic, how involved they were, how interesting they found the assignment
- on learning--how much they had learned about the topic and the teaching points from the writing and from the peer workshop
- on effort--how easy or difficult they had found the writing, how much time they had spent writing and rewriting, what kinds of activities they had followed during their writing processes
- on evaluation--how good they thought their paper was, and what grade they expected to receive

The students also answered an open-ended question on their feelings about the assignment. The responses are in Appendix E.

Free-Association Knowledge Tests. To test prior knowledge, a word association test was used. Langer (1984), Newell (1983) and Chesky (1984) have successfully used this test to assess the subjects' prior knowledge before they wrote compositions. Langer and Newell chose the prompts for the free association tests from prose passages the students had previously read; Chesky used selected articles on the writing topics from which raters chose key concept words that were related to the writing topic. A multiple-choice test was not used to determine prior-knowledge because the students would not produce a story within a domain such as baseball where statements could be judged correct or incorrect (DeGroff 1986). Nor were the topics selected as high- or low-knowledge topics as Chesky's (1984) were. He assumed that "Tobacco Price Supports" was a lowknowledge topic for the students and that they would have high knowledge on the topic "Problems with Teachers."

For the present study the three teachers read pre-selected articles on the subject and selected key concept words for the compositions dealing with 'clothes' and 'body language.' Then they rank ordered the selected words. The researcher then selected the top 8 concept words for prompts on the 'body language free association test' and the top 7 concept words for prompts on the 'clothes free association test.' For the topic on the 'presidential candidates,' the three teachers brainstormed among themselves and made a list of key words for the issues in the campaign. Then they rank ordered this list and the researcher selected the fourteen topranked words as prompts for the free association test on the presidential campaign. The researcher selected more prompts for this topic in order to include more of the compaign issues. The Preand Post-Knowledge Tests are in Appendix F.

PROCEDURE

The project began the third week of classes Spring Term 1988. The students were already familiar with the procedure followed by the University of Montana Writing Program: on Fridays the teacher assigned the topic and asked the students to think about it over the weekend; on Mondays the teacher introduced the teaching point of that week--for example the thesis statement and its support; on Wednesdays the students brought a rough draft of their papers to class and the teacher reviewed the teaching point of that week and then asked the students to work in groups of two and critique their colleague's paper according to this lesson; on Fridays the students brought in their typed papers, discussed them and then edited them in in-class peer workshops before handing them in to the teacher. The teacher, then, graded the papers evaluating them only on the points that had been covered up to that point in the term.

The class day before the beginning of this project, the teacher explained the procedures of the project to the students. The next day, Friday of the third week of classes, the project began. The researcher gave the students a letter explaining the project and asking them to participate in it. A couple of the students chose not to participate. After the teacher handed out a copy of the assignment, discussed it and answered questions, the students filled out the questionnaire about their interest in and knowledge of the topic and then they took the free association test. On Monday, the teacher taught the lesson of that week; on Wednesday the students participated in a peer conference workshop using their drafts; on Friday the students turned in their papers, filled out the post-writing questionnaire, and took the post-writing free-association test. Then the teacher introduced the next topic and the students began the process again by taking the pre-writing questionnaire and freeassociation tests. The researcher interrupted the class only on Fridays. In all other ways, the students followed the same writing and rewriting procedures of the course.

The researcher chose to do this project within the classroom with the help of the teachers for several reasons which are most clearly stated by Ruth (1982). He explains the differences between prompts for writing tests and prompts for class writing assignments. The prompt for a writing test must function autonomously; that is, the students may receive no help in interpretation from the proctors. In this setting no preparatory content or motivating impulse is given except for the command to write. The conditions are controlled to be depersonalized, formal, and standardized, and each stimulus should be the same for each student. A writing prompt given within the context of a class, on the other hand, can be negotiated; the teacher may offer guidance, clarify expectations, and offer possible directions; the teacher may enlarge the ground of shared knowledge; the teacher may suggest strategies for discovering and structuring the essential material of the composition and may help along in the process. Ruth's (1982) chart is as follows:

Participants and process		Writing assignment in a teaching context	Writing assignment in a testing context		
1.	population	class members	assembled students		
2.	leader	teacher	unknown proctor		
3.	assigned text	negotiable	autonomous		
4.	interaction	allowable	prohibited		
5.	writing process	interpersonal, reciprocal informal	depersonalized, oneway, standardized		
6.	expectations	known	partly implicit		
7.	evaluation	flexible, contingent, graded	fixed standard, ranked, scored		

This researcher wanted the procedures of this project to follow as closely as possible the usual procedures of the writing assignment given within the English composition class. Of course the pre- and post-knowledge tests and questionnaires were out of the ordinary; but the teacher's presentation of the topics, the discussion that followed, and the students' writing processes were very similar to the usual writing routine.

SCORING THE QUESTIONNAIRES

Before and after the students wrote their compositions, they answered questions about their feelings, knowledge, confidence; and they self-evaluated their papers and answered questions about their writing processes. Appendix B gives the Pre-Writing Questionnaire and Appendix D gives the Post-Writing Questionnaire. The students rated their activities and involvement on a five-point Likert scale. On the questionnaires the values were mixed--for some questions 5 was high and for some questions 5 was low. This alternation between high and low was used to keep the students alert as they answered each question. Later the researcher converted all the values so that for each question 5 was the value for high and good and 1 was the value for low and poor.

SCORING THE FREE ASSOCIATION TEST

The researcher was interested in both the quantity the quality of responses. Although Hare's (1981) study suggests that only quantity of prior knowledge information needed to be evaluated to adequately predict readers' comprehension on the 'planets' reading passage, Langer's study demonstrated that different kinds of knowledge are needed for different kinds of tasks. Langer examined the quality of the responses based on a scale that measured the organization of the student's knowledge from (3) highly integrated to (2) loosely integrated knowledge and (1) barely connected knowledge. For the present study two independent raters scored the free association tests making three different assessments:

- 1. Organization score: the highest level of organization for all the responses (Langer's scale)
- 2. Fluency score: the number of responses to all the concept words regardless of the level of organization
- 3. Combined score: fluency and organization--the number of responses that showed at least some integrated knowledge

Training Procedures. The researcher used the above criteria and Langer's (1984) examples to write the grading guide. The researcher then graded several sample knowledge tests using the criteria and selecting difficult-to-evaluate examples to include in the scoring guide (Appendix G). Then, the researcher trained six graders to score these tests by giving them the grading guide. In the training session the graders reviewed Langer's criteria, examples, and the examples the reseacher had selected from sample knowledge tests. The graders practiced scoring responses from tests that could not be included in the study (tests of students who did not finish the complete project). As a group, the graders and researcher discussed ranking problems and reached a consensus on the sample knowledge tests before scoring the tests of the study. The trained graders evaluated the free-association tests and recorded their scores on prepared score sheets (Appendix H). Before examining the scores of the graders, the researcher evaluated all of the free-association tests for the second time. Interrater reliability was very high on the free-association tests because the students' responses were remarkably similar to each other; it was therefore easy to maintain a clear category of responses for each of Langer's three levels of knowledge.

Organization Score. Two independent graders (a trained grader and the researcher) graded both the pre-writing and post-writing free association tests; they gave a score for all the responses under each word prompt using Langer's (1980) 3-point scale: 3 for much knowledge (incorporation of abstract, superordinate principles; 2 for some knowledge (concrete, functional responses); and 1 for little knowledge (diffuse, associational responses reflecting little understanding of the concept). Appendix G gives the descriptions of these three levels and the guidelines followed by the raters. The score for all the responses on the tests were then averaged to give the organization score. Appendix H gives an example test and demonstrates the scoring procedure.

Fluency Score. Two independent raters (a trained grader and the researcher) counted the total number of responses for all of the prompts on the tests whether or not the responses represented much or little knowledge. Appendix H gives an example of fluency assessment. The scores of the two raters were averaged to give the final fluency score.

Combination Score. This score is simply a count of the number of responses that represented much (3) or some (2) knowledge; in

other words it is a combination of the organization and fluency score. It disregards those responses that did not demonstrate concrete (2) or abstract knowledge (3) of the concept. Again two independent raters counted the number of higher level responses. These two scores were averaged to determine the student's final combination score. Appendix H gives an example of the method of scoring for the combination score.

SCORING THE COMPOSITIONS

Hirsch (1977) wrote that the assessment of writing is the "single most important snag to practical progress in composition teaching and research." Comparative studies suggest that while indirect assessment (standardized tests) may be reliable, direct assessment (writing samples) appears to be more valid and can usually be reliable when proper procedures are followed. Within direct measures there are many ways to evaluate the written sample. Each method must deal with the central issue of criteria: what factors constitute quality writing? In addition to these central issues are the other concerns of inter-rater reliability, topics and rating procedure.

The definition of quality writing is still being debated in the literature; therefore, the choice of criteria and grading method are, in the end, the choice of each researcher. Choices of other researchers are briefly discussed before the choices for this project are presented.

DeGroff (1986) looked at the quality of the content of her subjects' papers on baseball. She measured the propositions and content against the rules and terms of baseball but she did not evaluate the formal or linguistic properties of the papers.

Langer (1984) evaluated the papers on 1. holistic quality using a 5-point holistic scale, 2. coherence using Hasan's measure of interaction among cohesive chains, 3. syntactic complexity using the mean number of words per clause, 4. sensitivity audience, and 5. function.

Chesky (1984) used 1. Myer's (1980) holistic scoring (4-point scale), 2. essay length (number of words), 3. context-creating statements which demonstrated awareness of audience, 4. cohesion from Mullis and Mellon (1980), 5. syntactic complexity as determined by measuring the mean T-unit length from Mullis and Mellon, and 6. error analysis from Mullis and Mellon.

In this present study, each composition was given seven scores by two independent graders. The compositions were rated for holistic quality, coherence, sophistication, content, interest, syntactic complexity (mean T-unit length), and mechanics (mean number of spelling, usage, or punctuation errors per 100 words).

Training Procedure. The researcher used Myer's procedure in training the graders and used his suggestions for the grading session: The researcher developed the grading criteria (Appendix I), graded a few sample compositions using the criteria. At the training session, the graders reviewed the criteria and graded these same sample compositions using the criteria. The compositions had been typed by the students and the students' names had been blackened out because some of the students may have been familiar to the graders. As a group, the graders discussed their ranking problems and reached a consensus on the sample compositions. The graders, then, graded another group of sample compositions. This second time, scores were remarkably reliable (which will be statistically deomonstrated in the following chapter). At this point the graders began grading the compositions for the study. During the grading session, the researcher checked the ratings of the two graders. Whenever, the graders differed by more than two points, a third grader was asked to rate the composition. Appendix I gives the criteria the graders used to assess the compositions for overall quality (holistic) coherence, sophistication, content, and interest. The following sections further explain the procedure for each assessment category, but for complete detail see Appendix I.

Holistic Score. Two trained graders gave each composition a score for its quality as a whole based on a six-point scale: 6 = excellent; 5 = good; 4 = slightly above average; 3 = slightly below average; 2 = below average; 1 = poor. For this score the graders examined the author's thesis, organization, development, syntax and mechanics. Whenever the raters disagreed by more than 1 point, a third grader was asked to rate the compositions. The two scores were added together for the final score on holistic quality; the highest possible score, then, was 12 and the lowest was 2.

Coherence Score. Witte and Faigley (1981) in an important study on how coherence and cohesion correlate with writing quality found that highly rated essays are much more dense with cohesive ties than low rated essays, but Witte and Faigley do not go so far as to state that a large or small number of cohesive ties of a particular type will positively affect writing quality. Halliday and Hasan (1976) identified five categories of linguistic features of cohesion: reference, substitution, ellipsis, conjunction and lexical cohesion. These tie sentences together to create a meaningful semantic unit of text. Unfortunately, however, cohesive ties in themselves do not lead to global or overall coherence (Bamberg 1984). Bamberg wrote a holistic coherence evaluation scale based on current linguistic theory and discourse analysis. This scale considers the coherence of the text as a whole and not simply local coherence and cohesive ties. Using these criteria she reevaluated students' texts that had been scored earlier for coherence using cohesive tie counts. Her results demonstrate that the number of cohesive ties of a particular type will not necessarily positively affect writing quality or the coherence of the text as a whole. (Witte and Faigley, 1981; and Bamberg, 1984). For these reasons the researcher used a modified version of Bamberg's criteria (see Appendix I for this written version) instead of Halliday and Hasan's version.

Two trained raters gave each composition a score on its coherence based on a six-point scale. The raters assessed the writer's reader orientation, organization, placement and use of supporting detail, audience awareness, paragraph and sentence transitions, and cohesive ties. A third rater settled any disagreements with scores that differed by more than one point. The final two scores were added together for the composition's coherence score.

Sophistication Score. Two trained raters gave each composition a score on its level of sophistication using a six-point scale (Appendix I). The raters based their scores on the writer's

audience awareness, content, innovative ideas, choice of supporting detail, sentence structures, and word choice. A third rater settled any rankings that differed by more than one point. The two closest scores were added together for the composition's sophistication score.

Content Score. Two trained raters gave each composition a score on the amount of content and thoughtfulness of the details and support using a six-point scale (Appendix I). A third rater settled any disagreements and the two closest scores were added together for the composition's sophistication score.

Interest Score. Two trained raters gave each composition a score on the composition's level of interest using a six-point scale (Appendix I). The raters assessed the writer's ideas, audience awareness, sincerity, innovative presentation, choice of words, sentence structures, and choice of details. A third rater settled any disagreements that differed and the two closest scores were added together for the composition's interest score.

Syntactic Complexity. Many studies have been done to test whether syntactic complexity correlates with quality compositions, but these studies produce conflicting results. Mellon (1969) found that compositions with high syntactic complexity were rated lower than those with low syntactic complexity. On the other hand, Potter (1967) found that measures of syntactic complexity did distinguish between high and low rated papers in 2nd, 4th 6th and 10th grades. Since this evidence is so conflicting, Crowhurst (1980) examined two modes of discourse: the narrative essay and the argumentative essay. Her subjects were from the 6th, 10th, and 12th grades and she examined two compositions for each student: one of high syntactic complexity and one of low. The argumentative essays of high syntactic complexity were rated significantly higher than argumentative essays of low syntactic complexity. But the 12th grade students' narratives of low syntactic complexity were rated higher than narratives of high syntactic complexity. These results suggest that there is a positive relationship between effective argumentative discourse and the ability to relate propositions syntactically. This evidence supports the intuition that narrative style is not greatly dependent on complex syntax. For example, both Hemingway's simple style and Faulkner's complex style are effective for each author's purpose.

With these considerations in mind, the researcher chose to evaluate the compositions on syntactic complexity. The raters followed Mullis and Mellon's (1980) measure of mean T-unit length as Chesky (1984) and Crowhurst (1980) have done. Two independent graders (a trained grader and the researcher) identified the T-units and counted the number of words to determine the mean T-unit length for each composition. A T-unit is a main clause with all of its phrases and subordinate clauses (Mullis and Mellon 1980). Appendix J further defines the T-unit, and explains the procedure of counting T-units, and gives an example.

Mechanics Score. Two independent graders (a trained grader and the researcher) used Mullis and Mellon's guidelines to count and designate mechanical errors: word level, sentence level and punctuation errors. Appendix J explains this procedure and gives an example. The mechanics score is the mean number of errors per 100 words.

Following this collection and evaluation of data described in this chapter, the researcher had eight scores for each composition (holistic quality, coherence, sophistication, content and interest) including the teacher's grade, three scores for each pre- and postwriting knowledge test (organization, fluency, and a combination of the two), and all of the responses to the pre- and post-writing questionnaires. The next chapter statistically examines these data with regard to the three main hypotheses of this study: the first examines the relationship between the pre-knowledge tests and the writing scores; the second examines the relationship between the learning from writing scores (the difference between the pre- and post-writing knowledge test scores) and the writing scores; the third examines the relationship between the pre- and post-writing questionnaire responses and the writing scores.

CHAPTER FOUR

RESULTS

This chapter presents the data and the statistical analysis of the data. The ratings of the graders are tested for reliability. The writing scores are correlated with the knowledge tests scores and the questionnaire responses. The knowledge scores and the questionnaire responses are used to put the students into high- and low-knowledge groups, high- and low-interest groups, and so on with all the variables. Then the writing measure means of the high and low groups are compared using the T-test analysis. Finally, the interrelationships among the variables are examined using a regression analysis.

INTERRATER RELIABILITY

Interrater reliabilility was determined by correlating the two graders' ratings for each measure on the knowledge tests and the compositions. This gives us the reliability coefficient or the consistency between the two graders. Table 1 gives the interrater reliability for the grading of the pre- and post-knowledge tests scores and for the composition scores.

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INTERRATER RELIABILITY (Table 1)

Pre-Knowledge Tests Scoring

	body lg	candidates	clothes
organization	.931	.987	.977
fluency	.974	.983	.992
combination	.953	.978	.991

Post-Knowledge Tests Scoring

	body lg	candidates	clothes
organization	.872	.983	.978
fluency	.992	.994	.984
combination	.892	.965	.991

Composition Measure Scoring

	body lg	candidates	clothes
holistic	.892	.838	.879
coherence	.816	.849	.778
sophistication	.890	.807	.873
content	.877	.821	.918
interest	.875	.868	.907
T-unit score	.994	.997	.995
error score	.985	.965	.918

CORRELATION AND COMPARISON ANALYSES

This section presents the results of the statistical correlation and comparison analyses in such a way as to support or reject the three hypotheses of this project. These analyses provide information about relationships between the knowledge tests scores and the composition scores, and between the questionnaire responses and the composition scores. Pearson product-moment correlation coefficients tested for significant relationships between 1) the three measures of prior-knowledge and the writing measures, and between 2) the three measures of knowledge change and the writing measures, and between 3) each response on the questionnaire questions and the student's writing measures. A T-test Analysis tested for 1) significant mean differences between the high and low knowledge groups and the writing measures, 2) significant mean differences between the high and low knowledge change groups (difference between pre- and post-knowledge test scores) and the writing measures, and 3) significant mean differences between the students' high and low responses on the questionnaires and their writing measures. The results are presented in the order of the three hypotheses. The raw scores on the tests, compositions, and questionnaires are provided in Appendix K.

Hypothesis #1:

Prior-knowledge scores correlate with writing scores.

Specifically the hypothesis states that the high priorknowledge group will receive significantly higher scores on the holistic, coherence, sophistication, content, interest, T-unit measures and on the teacher's grade; and that they will have significantly fewer errors than the low prior-knowledge group. Table 2 gives the means of each writing measure for each composition. The holistic, coherence, sophistication, content and interest scores are based on a 12-point scale. The T-unit score is based on the mean T-unit length of the compositions. The error score is based on the mean number of errors per 100 words. The teacher's grade is based on a 5-point scale: A=5, B=4, C=3, D=2, F=1. Table 3 shows the results of the Pearson product-moment correlation coefficients between the prior-knowledge tests and the composition scores.

WRITING MEASURE MEANS (Table 2)

	body language	candidates	clothes
composition meas	ures		
holistic	7.63	7.90	8.12
coherence	7.67	8.00	8.28
sophistication	6.93	7.44	7.47
content	7.19	7.53	7.33
interest	6.81	7.67	7.14
T-unit	14.85	16.10	14.39
errors	1.66	2.68	2.76
teacher's grade	3.86	3.98	3.95

DDIOD KNOUT EDCE AND	WOMMEN MEASURE CODDEL ATTONS	(Table 3)
PRIOR ANOWLEDGE AND	WRITING MEASURE CORRELATIONS	(Table 3)

Body Language					
	organization	fluency	combination		
Composition measu	res				
holistic	.033	.079	.096		
coherence	044	.022	.054		
sophistication	064	051	008		
content	147	092	058		
interest	054	034	.079		
T-unit length	003	.130	.247		
mechanics	.241	133	061		
teacher's grade	.034	089	001		
Presidential Candid	ates				
	organization	fluency	combination		
Composition measu	ires				
holistic	.273	.292	.347*		
coherence	.135	.144	.122		
sophistication	.314*	.373*	.358*		
content	.184	.247	.207		
interest	.166	.220	.165		
T-unit length	.212	.172	.222		
mechanics	100	187	200		
teacher's grade	.257	.406*	.140		
Clothes					
	organization	fluency	combination		
Composition measu	ires				
holistic	.219	.176	.334*		
coherence	.250	.087	.389*		
sophistication	.138	.195	.205		
content	.205	.197	.284		
interest	.272	.099	.379*		
T-unit length	.102	.223	.090		
mechanics	236	244	293		
teacher's grade	.174	.086	.306*		

* = exceeds α of .05

Before the T-Test was used to analyze the data, high and low pre-knowledge groups were determined to make the differences, if they existed, more obvious. The low group was determined by taking the scores from roughly the lower third and the high group was determined by taking roughly the higher third. The number of students in each group varies because the researcher wanted to include all the students with the bordering score rather than to choose randomly from those students on the boarder. The designation of the high and low pre-knowledge groups is presented in Table 4. The T-Test, then, analyzed the difference between the means on each writing measure for the high and low pre-knowledge scores. The T-Test was used to test whether the writing scores for the high prior-knowledge group.

Pre-Organization. The pre-organization score represents the level of organization of the responses to the prior-knowledge prompts, from highly organized (3 points) to diffusely organized (1 point). Table 5 presents the means for the high pre-organization group and the low pre-organization group on each composition measure. The findings show that on the 'body language' composition the high group did not receive significantly higher scores than the low group; in fact, the low pre-organization group had higher means on the coherence, sophistication, content, interest measures and the teacher's grade, and lower scores on the mechanics measure than the high pre-organization group. On the 'candidate' composition the sophistication measure significantly correlated with the preorganization score (Table 2). The T-Test analysis (Table 5) shows that the high pre-organization group scored significantly higher on the sophistication measure than the low pre-organization group (P=.044). On the 'clothes' composition the high pre-organization group received significantly higher coherence ratings than the low pre-organization group (P=.03); and the high pre-organization group had significantly fewer errors than the low pre-organization group (P=.023).

Pre-Fluency. The pre-fluency score represents the number of responses to the prior-knowledge test prompts; the scale is from zero to any number. Table 4 gives the designated high and low pre-fluency groups means. Table 6 compares the composition means for the high and low groups. On the 'candidate' composition the high fluency group received significantly higher composition measures: holistic (P=.014), sophistication (P=.007), content (P=.011), interest (P=.032), and the teacher's grade (P=.013). In addition the correlation coefficients (Table 2) shows that the fluency score significantly correlated with the sophistication measure and the teacher's grade. On the 'clothes' those with high fluency scores made fewer errors on their compositions (P=.017).

Pre-Combination. Table 4 gives the designation of the high and low pre-combination groups. Table 7 compares the writing measures for the high and low groups. On the 'body language' composition the high pre-combination group did not receive significantly higher writing ratings than the low pre-combination group. Again the low pre-combination group had several means that were higher than the high group. On the 'candidates' composition the high pre-combination group wrote significantly longer T-units HIGH AND LOW PRE-ORGANIZATION GROUPS (Table 4)

Pre-Organization

body language:

high is 1.9 and above; low is 1.4 and below; mean=1.63 candidates:

high is 1.3 and above; low is .8 and below; mean=1.07 clothes:

high is 1.7 and above; low is 1.0 and below; mean=1.38

Pre-Fluency

body language:

high is 25 and above; low is 15 and below; mean=20.31 candidates:

high is 21 and above; low is 13 and below; mean=17.06 clothes

high is 18 and above; low is 15 and below; mean=14.92

Pre-Combination

body language:

high is 14 and above; low is 6 and below; mean=10.56 candidates:

high is 11 and above; low is 5 and below; mean=.8.22 clothes

high is 7 and above; low is 1 and below; mean=.4.23

	high		lo	low			
	mean	stdev	mean	stdev	Т	Р	
Body Language (high=13 students; low=16 students)							
holistic	8.00	1.73	7.94	1.39	.11	.46	
coherence	7.92	1.66	8.00	1.21	14	.55	
sophistication	7.15	1.57	7.44	1.46	50	.69	
content	7.15	1.72	7.75	1.57	96	.83	
interest	6.92	1.66	7.13	1.59	33	.63	
T-unit	14.89	2.89	14.86	3.61	.03	.49	
errors	1.57	.953	1.3	1.13	.70	.75	
t's grade	3.85	.801	3.94	.680	33	.63	
Presidential Can	didates	(h•gh=	16 student	ts; low=	13 students)	
holistic	8.44	1.26	7.69	1.38	1.50	.073	
coherence	8.31	1.45	7.77	1.59	.95	.18	
sophistication ⁴	* 8.12	1.54	7.08	1.61	1.78	.044	
content	8.00	1.26	7.38	1.33	1.27	.11	
interest	8.19	1.22	7.46	1.39	1.47	.077	
T-unit	17.08	2.25	15.77	3.03	1.29	.11	
errors	2.38	1.41	2.91	1.08	-1.14	.13	
t's grade	4.13	.806	3.70	.630	1.62	.058	
		_		_			
Clothes (high=12	2 stude	nts; low	=15 stude	nts)			
holistic	8.33	1.56	7.53	1.55	1.33	.099	
coherence*	8.58	1.24	7.47	1.68	1.98	.03	
sophistication	7.58	1.62	7.07	1.53	.84	.20	
content	7.67	1.56	7.00	1.65	1.08	.15	
interest	7.67	1.61	6.73	1.53	1.51	.073	
T-unit	14.28	2.06	14.61	3.07	34	.63	
errors*	2.30	.871	3.15	1.23	-2.11	.023	
t's grade	4.27	.905	3.87	.640	1.27	.11	
T = T-Test	P =	Signific	ance	* = ez	cceeds α of	.05	

T-TEST ON PRE-ORGANIZATION SCORES (Table 5)

T-TEST ON PRE-FLUENCY SCORES (Table 6) high low mean stdev mean stdev Т Ρ **Body Language** (high=14 students; low=14 students) holistic 7.64 1.78 7.43 1.22 .37 .36 coherence 7.50 1.83 7.50 1.22 .00 .50 .87 7.07 1.38 -1.13 sophistication 6.50 1.29 content 6.79 1.63 7.29 1.27 -.91 .81 6.86 1.51 .68 6.57 1.60 -.49 interest T-unit 15.11 2.85 14.95 1.49 .18 .43 .31 1.67 .945 1.90 1.46 -.49 errors 3.714 .726 4.07 .475 -1.54 .93 t's grade **Presidential Candidates** (high=16 students; low=12 students) holistic* 8.56 1.09 7.50 1.24 2.36 .014 coherence 8.44 1.31 7.92 1.56 .93 .18 sophistication* 8.25 1.44 6.75 1.48 2.68 .007 content* 8.06 1.12 7.00 1.13 2.47 .011 8.37 1.26 interest* 7.33 1.50 1.95 .032 T-unit 17.00 2.13 15.91 3.08 1.05 .15 -1.42 .084 errors 2.07 1.16 2.73 1.24 3.67 .651 t's grade* 4.31 .793 2.36 .013 **Clothes** (high=11 students; low=16 students) 7.69 1.35 holistic 8.36 1.69 .14 1.11 coherence 8.64 1.86 7.94 1.29 1.08 .15 7.06 1.34 1.39 .092 sophistication 8.00 1.95 7.64 2.34 6.88 1.63 content .94 .18 interest 7.18 2.18 6.88 1.75 .39 .35 13.66 2.74 14.75 1.62 1.31 .10 T-unit errors* 2.29 .971 3.16 .991 -2.26 .017 3.94 .772 t's grade 3.91 .831 -.09 .54 T = T-Test P= significance * = exceeds α of .05

than the low pre-combination group (P=.039). And the high precombination group received nearly significantly higher sophistication scores than the low group. (Note that the difference was also significantly higher in the pre-organization and sophistication T-Test analysis Table 5).

On the 'clothes' composition the higher pre-combination group received significantly higher scores on the holistic measure (P=.026), the coherence measure (P=.004), the content measure (P=.027), the interest measure (P=.01), and the teacher's grade (P=.007); and the high group had significantly fewer errors than the lower group (P=.042). In addition the correlation coefficients (Table 2) show that the holistic, coherence, interest scores and the teacher's grade showed a significant relationship with the precombination score on 'clothes' (P<.05).

Summary of Hypothesis 1. On the 'body language' composition there was no significant relationship between prior-knowledge and writing scores. Students with high prior-knowledge for the 'presidential candidates' topic, however, received significantly better writing scores on holistic quality, sophistication, content, interest, syntactic complexity (T-unit lenght) and higher grades from their teacher. On the 'clothes' composition the students with high priorknowledge scores received significantly better writing scores for holistic quality, coherence, content, interest, and higher grades, and had fewer mechanical errors. Since these significant relationships between prior-knowledge scores and the writing scores, were not equally important on all three composition topics, the findings provide only limited support for the hypothesis that prior-knowledge correlates with writing scores.

	hig	h	lo	w		
	mean	stdev	mean	stdev	Т	Р
Body Language	(high=14	4 stude	nts; low=14	stude	nts)	
holistic	8.21	1.81	7.929	.997	.52	.30
coherence	7.93	1.77	8.07	1.07	26	.60
sophistication	7.14	1.66	7.36	1.08	41	.66
content	7.14	1.79	7.79	1.25	-1.10	.86
interest	7.14	1.79	7.21	1.37	12	.55
T-unit	15.76	4.04	13.80	1.86	1.64	.059
errors	1.21	.925	1.37	1.12	40	.34
t's grade	3.86	.770	3.93	.616	27	.61
Presidential Can	didates	(high=	=13 student	s; low=	15 students	5)
holistic	8.46	1.39	7.60	1.50	1.57	.064
coherence	8.15	1.52	8.07	1.62	.15	.44
sophistication	* 8.23	1.59	7.20	1.61	1.70	.05
content	7.85	1.34	7.47	1.30	.76	.23
interest	8.15	1.34	7.87	1.96	.46	.33
T-unit*	16.71	1.72	15.28	2.38	1.84	.039
errors	2.23	1.45	2.69	1.28	88	.19
t's grade	4.15	.899	4.07	.458	.32	.38
Clothes (high=1	2 stude	nts; lov	v=17 stude	nts)		
holistic*	8.83	1.70	7.59	1.46	2.06	.026
coherence*	9.08	1.31	7.53	1.59	2.88	.004
sophistication	8.08	1.98	7.06	1.48	1.52	.072
content*	8.17	1.90	6.76	1.71	2.04	.027
interest*	8.17	1.95	6.47	1.50	2.53	.010
T-unit	14.54	2.12	14.54	2.90	.00	.50
errors*	2.283	3.871	2.96	1.17	-1.80	.042
t's grade*	4.455	.522	3.882	.600	2.67	.007
T = T-Test	P =	signific	ance	* = e	xceeds α of	.05

T-TEST ON PRE-COMBINATION SCORES (Table 7)

Hypothesis #2

For a student with a low prior-knowledge score, an increase in knowledge about the topic during the writing process is associated with a rise in the writing scores.

This hypothesis states that those learning the most will have significantly higher scores on all the writing measures except for the error measure in which case they will have significantly lower scores than the low-knowledge gain group. The knowledge change scores were determined by subtracting the pre-knowledge test scores from the post-knowledge test scores. Table 9 gives the means of the knowledge change scores on each composition and the division of the high and low groups. Table 8 shows the results of the Pearson product-moment correlation coefficients between the knowledge change scores and the students' composition scores. Only two relationships were significant: fluency and coherence on the 'body language' composition; and combination and interest on the 'clothes' composition. In other words, increases in fluency of knowledge in the 'body language' assignment were associated with increases in coherence. In the 'clothes' assignment increases in the combination score were associated with decreases in interest.

Again before the T-Test analyzed the data, high and low knowledge change groups were identified (Table 9). In order for the differences in the two groups to be apparent, the upper third of the students are in the high-knowledge gain group and the lower third of the students are in the low-knowledge gain group. The T-Test analyzed the difference between the means on each writing measure. **Organization Change.** Table 10 presents a comparison between the means for the high and low groups and a comparison between these two means. On the 'body language' composition, the high group received significantly higher means on the coherence measure than the low group. This is the only significant difference between the high and low means on the T-Test for organization change.

Fluency Change. Table 8 shows that fluency change significantly correlated with the coherence measure on 'body language.' And Table 11 shows that on 'body language' the high fluency group received significantly higher holistic scores (P=.018), coherence scores (P = .005), and content scores (P = .011); the interest scores were almost equal to α of .05 higher (P=.053).

Combination Change. Table 12 presents the high and low means of the combination change scores and the T-Test results. Again, on 'body language' the high group received significantly higher means on the coherence measure (P=.031) and on the content measure (P=.011). In addition, the high group for the 'candidate' composition had significantly fewer errors (P=.04).

Summary of Hypothesis #2. On the 'body language' composition the high knowledge gain group received significantly higher writing scores on holistic quality, coherence and content. On the 'presidential candidates' composition the high-knowledge gain group had significantly fewer errors than the low knowledge gain group. On the 'clothes' composition the knowledge gain scores did not positively correlate with any of the composition measure scores. These results, however, perhaps have limited value because for the
most part the students demonstrated on the tests that they learned nothing or very little between the pre-writing and post-writing tests--more than half of the students had negative knowledge-gain scores which is to say that their pre-writing knowledge was higher than their post-writing knowledge. The data, therefore, indicate that Hypothesis #2 cannot be accepted.

KNOWLEDGE CHANGE CORRELATIONS (Table 8)

Body Language		A	
	organization	nuency	combination
Composition rating	S		
holistic	.121	.225	.207
coherence	.111	.319*	.260
sophistication	007	.071	.083
content	.139	.241	.239
interest	.080	.104	.091
T-unit length	130	214	292
mechanics	218	250	011
teacher's grade	.019	.200	.095

Presidential Candidates

	organization	fluency	combination
Composition rating	s	•	
holistic	.006	068	026
coherence	.041	052	.085
sophistication	071	119	019
content	.045	060	005
interest	051	089	039
T-unit length	153	114	181
mechanics	183	088	220
teacher's grade	046	127	.069

Clothes

	organization	fluency	combination
Composition ratings		•	
holistic	.089	010	233
coherence	.083	217	175
sophistication	.109	.076	129
content	.027	008	190
interest	102	.006	325*
T-unit length	.010	042	017
mechanics	.082	147	.220
teacher's grade	.098	.078	099

* = exceeds α of .05

HIGH AND LOW KNOWLEDGE CHANGE SCORE (Table 9)

organization change

body language

high is .3 and above; low is -.3 and below; mean=.037 candidates

high is .2 and above; low is-.2 and below; mean=.044 clothes

high is .5 and above; low is-.5 and below; mean=-.25

fluency change

body language

high is 1.0 and above; low is -4. and below; mean=-1.42 candidates

high is 1.0 and above; low is -3. and below; mean=-.837 clothes

high is 2.0 and above; low is -3. and below; mean=-.930

combination change

body language high is 4 and above; low is -4 and below; mean=-.37 candidates high is 3 and above; low is -3 and below; mean=.379 clothes high is 1 and above; low is -5 and below; mean=-2.05

	hig mean	h stdev	la mean	ow stdev	Т	Р
Body Language	(high=1)	3 stude	nts: low=1() studer	nts)	
holistic	7.85	.899	7.20	1.32	1.33	.10
coherence*	8.15	.899	7.30	1.16	1.93	.036
sophistication	6.92	1.04	6.70	1.49	.40	.35
content	7.31	1.25	6.60	1.26	1.34	.099
interest	6.85	1.14	6.20	1.69	1.04	.16
T-unit	13.91	2.18	15.38	2.61	-1.44	.92
errors	1.54	.981	2.17	1.01	-1.51	.074
t's grade	3.85	.689	3.70	.483	.60	.28
Presidential Can	didates	high=	=10 studen	ts; low=	14 students)	
holistic	8.00	1.25	7.50	1.29	.96	.18
coherence	8.40	1.35	7.86	1.51	.92	.18
sophistication	7.50	2.01	7.29	1.07	.31	.38
content	7.90	1.52	7.14	1.03	1.37	.097
interest	7.90	1.52	7.57	1.45	.53	.30
T-unit	15.59	2.49	16.34	3.14	65	.74
errors	2.00	1.22	2.92	1.57	-1.62	.06
t's grade	3.80	.919	3.86	.770	16	.56
Clothes (high=3	studen	ts; low=	=13 studen	ts)		
holistic	7.67	2.89	8.00	1.87	19	.57
coherence	8.33	2.52	8.15	1.63	.12	.46
sophistication	7.33	3.21	7.31	1.93 .	.01	.50
content	7.33	2.31	7.31	2.10	.02	.49
interest	7.00	2.65	7.62	2.18	37	.63
T-unit	13.87	2.50	14.42	2.45	34	.62
errors	3.93	2.48	2.95	1.07	.68	.72
t's grade	4.00	1.00	3.77	.725	.38	.37
T = T-Test	P =	Signifi	cance	* = e:	xceeds α of .	.05

T-TEST ON ORGANIZATION CHANGE SCORES (Table 10)

1-1E5	IONFL	UENCIC	HANGE SCU	RES (12)		
	hig mean	h stdev	lo mean	w stdev	Т	Р
Body Language (high=1	5 stude	nts; low=19	9 studer	nts)	
holistic*	8.20	1.42	7.05	1.61	2.20	.018
coherence*	8.33	1.23	7.00	1.56	2.78	.005
sophistication	7.00	1.36	6.68	1.67	.61	.27
content*	7.73	1.49	6.53	1.39	2.42	.011
interest	7.13	1.51	6.26	1.52	1.67	.053
T-unit	14.35	2.32	15.53	3.50	18	.88
errors	1.47	.88	1.93	1.19	-1.28	.11
t's grade	3.93	.704	3.63	.68	1.26	.11
Presidential Can	didates	(high=	=15 studen	ts; low=	16 students)
holistic	7.73	1.22	7.81	1.28	18	.57
coherence	7.60	1.45	8.00	1.51	75	.77
sophistication	7.00	1.73	7.50	1.21	93	.82
content	7.20	1.37	7.50	1.15	66	.74
interest	7.27	1.39	7.56	1.36	60	.72
T-unit	15.34	2.75	16.30	2.86	95	.83
errors	2.73	1.27	2.89	1.50	32	.37
t's grade	4.00	.845	3.93	.680	.23	.41
Clothes (high=14	4 stude	nts; low	v=18 stude	nts)		
holistic	8.07	1.49	8.00	1.88	.12	.45
coherence	8.21	1.76	8.22	1.59	01	.51
sophistication	7.79	1.48	7.17	2.09	.98	.17
content	7.50	1.70	7.06	2.15	.65	.26
interest	7.07	1.38	6.94	2.26	.20	.42
T-unit	14.38	2.64	14.78	2.01	47	.68
errors	2.46	1.32	3.02	1.21	-1.23	.12
t's grade	4.07	.475	3.77	.664	1.50	.073
T = T-Test	P =	Signific	cance	* = ez	cceeds α of	.05

T-TEST ON FLUENCY CHANGE SCORES (Table 11)

T-TEST ON COMBINATION CHANGE SCORES (Table 12)

	hig mean	h stdev	lov mean	w stdev	Т	Р
Body Language	(high=1	3 studer	nts; low=14	4 studen	its)	
holistic	8.08	1.19	7.07	1.90	1.66	.055
coherence*	8.38	1.04	7.29	1.77	1.98	.031
sophistication	7.31	1.11	6.57	1.60	1.40	.088
content*	7.77	1.24	6.50	1.45	2.45	.011
interest	7.15	1.34	6.50	1.65	1.13	.13
T-unit	13.98	1.89	15.74	3.80	-1.53	.93
errors	1.53	.897	1.61	.964	23	.41
t's grade	3.85	.689	3.64	.633	.80	.22

Presidential Candidates (high=11 students; low=13 students)

holistic	7.73	1.49	8.00 1.41	46	.6
coherence	8.09	1.51	7.85 1.46	.40	.35
sophistication	7.09	2.17	7.54 1.61	57	.71
content	7.45	1.37	7.62 1.26	30	.62
interest	7.55	1.75	7.69 1.25	23	.59
T-unit	15.05	2.04	16.16 2.89	-1.11	.86
errors*	2.02	1.14	3.05 1.57	-1.84	.04
t's grade	4.00	.632	3.846 .689	.57	.29

Table 12 (Cont'd.)

high	low		
mean stdev	mean stdev	Т	Ρ

Clothes (high=6 students; low=10 students)

holistic	7.50	1.97	8.70	1.70	-1.24	.88
coherence	8.67	1.63	9.00	1.25	43	.66
sophistication	7.00	2.19	7.90	1.97	83	.78
content	6.67	1.63	8.10	2.08	-1.53	.92
interest	6.33	1.86	8.40	2.01	-2.09	.97
T-unit	13.75	2.59	14.68	2.26	73	.76
errors	3.88	1.78	2.39	.827	1.94	.95
t's grade	3.67	.816	4.22	.441	-1.52	.91
-						

T = Test P = Significance	* = exceeds α of .05
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Hypothesis #3

Responses on the questionnaires correlate with the writing scores.

This hypothesis is divided into five sub-hypotheses:

Hypothesis #3a

Interest and involvement in the topic correlate with writing scores.

Hypothesis #3b

Personal assessment of knowledge on the topic correlate with writing scores.

Hypothesis #3c

Personal assessment of learning about the topic and the teaching point correlates with writing scores.

Hypothesis #3d

Time and effort spent on writing correlate with writing scores.

Hypothesis #3e

Personal assessment on the quality of the composition correlates with writing scores.

Hypothesis #3a.

Interest and involvement in the topic correlate with writing scores.

Table 4.12 shows the results of the Pearson product-moment correlation coefficients between students' responses to the

questions on interest and involvement and the composition measures. The significant correlations are on the 'clothes' composition. For this composition there were significant correlations between the students' feelings about writing on this topic, the interest measure (P<.05), their grade (P<.05), and an approaching significant correlation between the students' preinterest and the grade they received on their paper, and a negative correlation between how involved they were in the writing and their mechanics measure (P<.05). This may possibly suggest that the more involved the students were, the fewer errors they made.

The T-Test tested for significant differences between the composition measures for those students who chose high (4 or 5 on the Likert Scale) and those students who chose low (1 or 2 on the Likert Scale) on the interest and involvement questions. Those students who choose 3 on the Likert Scale were not included in this analysis because the researcher was interested in the difference between the very interested students and the very uninterested students. Each T-Test table gives the means for the interest questions and the number of students in the high and low groups for each composition. The results of the T-Test on each question for each writing measure follow with a discussion of those results.

Pre-Interest. Table 14 presents a comparison of the means for each composition measure between those who were interested in the topic and those who were uninterested in the topic. The results of the T-Test analysis show that the highly interested students did not receive significantly higher composition scores on any of the measures than those students who were uninterested in the topic.

PRIOR INTEREST AND WRITING MEASURE CORRELATIONS (Table 13) hol coh T-un SOD con int err t'sg **Body Language** -.049 .051 -.101 .068 -.006 -.156 .289 .072 interest -.055 -.081 -.153 -.040 .111 -.031 .045 .040 confidence post-test like -.043 .129 -.036 .040 .073 -.147 .160 .127 feelings .065 .072 .010 .071 .016 -.052 .181 .211 involvement -.026 -.034 -.074 -.041 -.083 -.160 .028 -.015 -.064 -.014 -.116 .010 .035 -.159 .173 .026 interest **Presidential Candidates** -.041 -.113 .108 .065 .100 -.033 .223 .170 interest .127 .164 .164 .082 .053 -.222 .001 -.086 support -.164 -.187 .025 -.018 -.066 -.085 .161 -.095 confidence post-test like .142 .062 .202 .288 .143 .190 -.071 .285 .027 -.203 .109 .139 .039 feelings .136 -.066 .193 involvement -.126 -.113 .033 .038 -.039 -.033 .253 -.157 -.169 -.188 -.059 .050 .024 -.027 .217 -.065 interest Clothes interest .229 .239 .193 .177 .160 -.010 -.032 .303 confidence .119 .030 .153 .097 .063 -.184 -.013 .131 post-test .203 .074 .231 .193 .300 -.055 -.113 .277 like .271 .323* .062 -.013 .310* .193 .073 .290 feelings .026 -.004 .083 .072 .017 -.024 -.339* involvement .220

* = exceeds α of .05

interest

hol=holistic; coh=coherence; sop=sophistication; con=content; int=interest; T-un=T=unit; err=errors; t'sg=teacher's grade

.137 .184 .158 .187 .136

.006 -.269 .223

Table 13 (cont'd)

Key to the Questionnaire Questions

Pre-Questionnaire Questions on Interest:
interest: How interested are you in writing a paper on this topic?
confidence: How confident are you in your ability to write a good paper on this topic?
support (candidate): How strongly do you support the candidate you have chosen to write about?

Post-Questionnaire Questions on Interest: like: How did you like writing this paper? feelings: How did you feel about writing this paper? involved: How involved were you in writing this paper? interest: How interesting did you find the writing?

Confidence. Table 15 presents a comparison of the composition means between the students who were highly confident in their ability and those students who were uncertain of their ability to write a good paper on each of the topics. Again the results of the T-Test analysis show that the highly confident students did not receive significantly higher composition ratings than the students who were uncertain of their writing abilities. This is to say that confidence did not make a difference in the quality of the students' compositions.

Support. ('Candidates' only). Table 16 presents a comparison of the means for each of the composition measures between the

T-TEST (ON HIGH	AND LO	w 'Pre-Int	EREST'	(Table 14)	
	hig mean	h stdev	lo mean	w stdev	т	Р
Body Language	(high=1)	2 stude	nts; low=12	7; mear	n=1.18)	
holistic	7.33	1.72	7.88	1.76	84	.79
coherence	7.58	1.93	7.94	1.43	55	.70
sophistication	6.67	1.72	7.24	1.69	90	.81
content	7.25	2.09	7.35	1.37	15	.56
interest	6.75	1.82	6.88	1.45	21	.58
T-unit	14.68	2.05	14.94	3.45	25	.60
errors	2.33	1.45	1.34	.943	2.10	.97
t's grade	4.00	.739	3.88	.697	.43	.33
Presidential Can	didates	(high=	19 student	ts; low=	15 students	;
mean=3.12)						
holistic	7.95	1.54	7.73	1.44	.42	.34
coherence	7.89	1.52	1.52	1.75	07	.53
sophistication	7.63	1.86	6.93	1.49	1.22	.12
content	7.58	1.43	7.20	1.32	.80	.21
interest	6.75	1.82	6.88	1.45	21	.58
T-unit	16.38	2.62	16.22	3.10	.16	.44
errors	2.99	1.61	2.35	.861	1.51	.93
t's grade	4.05	.705	3.73	.704	1.31	.10
Clothes (high=2	0 stude	nts; low	v=12 stude	nts; me	ean=3.16)	
holistic	8.15	1.35	7.33	1.56	1.51	.073
coherence	8.45	1.43	7.75	1.76	1.16	.13
sophistication	7.55	1.70	6.67	1.50	1.53	.069
content	7.30	2.00	6.50	1.45	1.31	.10
interest	7.10	2.10	6.42	1.24	1.16	.13
T-unit	14.43	2.64	14.63	2.50	21	.58
errors	2.70	1.17	2.71	1.12	02	.49
t's grade	4.0	5 .621	3.67	.888	1.32	.10
T = T-Test	P =	Signific	ance	* = e	xceeds α of	.05

T-TEST ON HIGH AND LOW 'PRE-CONFIDENCE' (Table 15)

	hig mean	h stdev	lo mean	w stdev	Т	Р
Body Language	(high=2	2 stude	nts; low=7	students	s; mean=3.	37)
holistic	7.55	1.71	7.86	1.46	47	.68
coherence	7.68	1.64	8.29	.756	-1.34	.90
sophistication	6.77	1.69	7.71	1.38	-1.49	.92
content	7.23	1.77	7.71	1.38	76	.77
interest	7.00	1.75	7.00	1.73	.00	.50
T-unit	14.89	2.15	15.24	5.08	18	.57
errors	1.71	1.29	1.10	.714	1.59	.94
t's grade	3.91	.610	3.86	.900	.14	.45
Descidential Com		(ha sh	10 studen	4	7 at a damp	

Presidential Candidates (high=13 students; low=17 students;

mean=2.84)

holistic	7.69	1.55	8.12	1.45	77	.77
coherence	7.54	1.51	8.06	1.78	87	.80
sophistication	7.54	1.71	7.41	1.84	.19	.42
content	7.62	1.45	7.65	1.46	06	.52
interest	7.38	1.45	7.82	1.78	75	.77
T-unit	16.17	2.37	16.85	2.87	71	.76
errors	2.82	1.51	2.53	1.13	.59	.72
t's grade	3.77	.832	3.94	.556	64	.74

Clothes (high=22 students; low=7 students; mean=3.47)

holistic	8.14	1.28	7.86	2.04	.34	.37
coherence	8.14	1.61	7.86	1.46	.43	.34
sophistication	7.55	1.68	6.71	1.60	1.18	.13
content	7.27	1.93	6.43	1.51	1.20	.13
interest	7.09	2.02	6.43	1.90	.79	.22
T-unit	14.03	2.75	15.50	2.28	-1.41	.91
errors	2.82	1.16	2.63	1.16	.38	.64
t's grade	3.95	.669	3.71	1.11	.53	.30

	high mean stdev		lo mean	low mean stdev		Р
Presidential Cano mean=2.40)	lidates	(high=6	6 students	; low=20	students;	
holistic	8.50	.837	7.70	1.45	1.70	.056
coherence	9.00	1.55	7.80	1.70	1.63	.071
sophistication	* 8.50	.837	7.15	1.79	2.57	.0096
content	8.00	.632	7.45	1.47	1.32	.10
interest	8.33	.516	7.65	1.73	1.55	.067
T-unit	15.17	1.47	16.80	2.67	1.92	.96
errors	2.17	1.43	2.63	1.33	70	.25
t's grade	3.67	.816	3.95	.759	76	.76
T = T-Test	P =	Significa	ance			

students who strongly supported the candidate and those who strongly opposed the candidate they chose to write about. As the table shows, the students who strongly supported the candidate they wrote about received significantly higher sophistication ratings (P=.0096) than those who strongly opposed the candidate they wrote about. The compositions that presented the candidate in a negative way tended to degenerate into name calling and over-simplified negative slogans.

Enjoyed Writing. Table 17 compares the composition means for those students who liked writing on each topic and those who disliked the writing. Those students who liked writing the 'clothes' topic received significantly higher scores on the interest measure

T-TEST ON HIGH AND LOW 'SUPPORT' (Table 16)

(P=.032). Although no other differences were significant, most of the writing scores are higher for the high 'like' group.

Feelings. Table 18 presents a comparison of the means for each composition measure between those who enjoyed writing the paper and those who thought it was a waste of time. The results of the T-test analysis show that those students who enjoyed writing on the 'clothes' composition received significantly higher ratings (P=.046) on the interest writing measure than those who thought the writing was a waste of time. And the results show that those students who enjoyed writing the 'body language' composition received significantly higher grades (P=.024) on their compositions than those students who thought that 'body language' was a waste of time.

Involvement. Table 19 presents a comparison of the means for each of the composition measures between the highly involved students and the very uninvolved students. The results of the T-Test analysis shows that the highly involved students did not receive significantly higher composition scores. In fact, on a few measures the composition means for the uninvolved students were higher than the composition means for the involved students.

Post Interest. Table 20 presents a comparison of the means for each of the composition measures between the students who found the writing very interesting and those who found the writing boring. Again, the results of the T-Test analysis show that the highly interested students did not receive significantly higher composition ratings than the students who found the writing boring.

T-TEST ON HIGH AND LOW 'LIKE' (Table 17)

	hig mean	jh stdev	lo mean	w stdev	Т	Р
Body Language	(high=1	2 stude	ents; low=1	9 stude	nts; mean=2	.79)
holistic	7.67	2.06	7.58	1.61	.13	.45
coherence	7.92	1.93	7.58	1.50	.52	.31
sophistication	7.25	1.60	7.00	1.60	.42	.34
content	7.58	2.02	7.11	1.56	.70	.25
interest	7.08	1.83	6.63	1.61	.70	.25
T-unit	14.74	1.99	15.31	3.77	54	.70
errors	1.58	.918	1.38	.992	.57	.71
t's grade	3.92	.669	3.68	.749	.90	.19
Presidential Can	didates	(high=	=8 students	; low=2	2 students;	
holistic	8 00	026	7 68	1 36	73	24
coherence	7 75	1.28	7.00	1.50	.73	.24
sophistication	7.63	1.20	7.75	1.50	1 18	13
content	7.87	1.13	7.14	1.21	1.10	.10
interest	8.25	.886	7.55	1.68	1.48	.076
T-unit	16.95	2.29	15.52	2.57	1.46	.084
errors	2.44	1.69	2.73	1.35	44	.34
t's grade	4.38	.916	3.86	.640	1.46	.09
Clothes (high=1)	8 stude	nts; lov	v=10 stude	nts; me	an=3.21)	
holistic	8.61	1.33	8.00	1.33	1.16	.13
coherence	8.72	1.49	8.50	1.18	.43	.33
sophistication	8.00	1.81	7.00	1.33	1.66	.055
content	7.83	1.98	7.00	1.63	1.20	.12
interest	7.78	2.13	6.50	1.35	1.94	.032
T-unit	14.50	1.58	15.47	3.43	84	.79
errors	2.57	.905	2.98	1.38	85	.20
t's grade	4.18	.636	3.80	.789	1.28	.11

T = T-Test P = Significance * = exceeds α of .05

Summary of Hypothesis #3a. The data, therefore, indicate that the hypothesis that high interest and involvement in the topic correlate with good writing scores cannot be accepted.

T-TEST ON HIGH AND LOW 'FEELINGS' (Table 18)

	hig	gh		low		
	mean	stdev	mean	stdev	Т	Ρ
Body Language	(high=1	0 stude	ents; low=1	3 stude	nts; mean=2	.86)
holistic	8.40	1.58	7.62	1.98	1.06	.15
coherence	8.50	1.18	7.69	1.89	1.26	.11
sophistication	7.60	1.51	7.15	1.82	.64	.26
content	8.10	1.85	7.15	1.77	1.24	.12
interest	7.40	1.84	6.85	1.63	.75	.23
T-unit	14.60	1.87	15.16	4.04	44	.67
errors	1.62	1.02	1.28	.926	.83	.79
t's grade*	4.20	.422	3.62	.870	2.12	.024
Presidential Can	didates	high=	=12 student	ts; low=	16 students;	
holistic	8 08	1 44	8.06	1 44	04	40
coherence	7 50	1.57	8 31	1.58	.04	. 1 3 Q1
sophistication	7.50	1.57	7 25	1.53	43	.31
content	7.83	1.01	7.20	1.00	.40	.00
interest	8.00	1.28	7.81	1.97	.30	.38
T-unit	16.75	2.60	15.62	2.72	1.11	.14
errors	2.60	1.02	2.67	1.40	16	.44
t's grade	4.17	.835	3.94	.574	.82	.21
Clothes (high=1)	3 stude	ents; lov	w=12 stude	nts; me	an=3.07)	
holistic	8.77	1.54	8.08	1.38	1.18	.13
coherence	8.54	1.56	8.17	1.47	.61	.27
sophisticated	8.31	1.55	7.33	1.61	1.54	.069
content	8.31	1.97	7.33	1.83	1.28	.11
interest*	8.23	2.24	6.83	1.70	1.77	.046

T-unit

errors

t's grade

2.82 1.00

4.23 .725

14.63 2.09 14.74 3.19

2.63 1.30

3.92 .669

T = T-Test P = Significance * = exceeds α of .05

-.10

.41

1.13

.54

.66

.14

	hig mean	h stdev	lo mean	w stdev	Т	Р
Body Language	(high=1	8 stude	ents; low=1	1 stude	nts; mean=	3.26)
holistic	7.72	1.60	7.55	2.02	.25	.40
coherence	7.89	1.64	7.82	1.60	.11	.46
sophistication	7.00	1.68	7.09	1.64	14	.56
content	7.39	1.82	7.27	1.56	.18	.43
interest	6.89	1.68	6.82	1.72	.11	.46
T-unit	14.51	1.72	16.01	3.97	-1.18	.87
errors	1.56	1.10	1.14	.956	1.10	.86
t's grade	3.94	.639	3.82	.874	.42	.34

Presidential Candidates (high=19 students; low=12 students;

mean=3.28)

holistic	8.00	1.25	8.42	1.16	94	.82
coherence	8.16	1.50	8.42	1.56	46	.67
sophistication	7.79	1.18	7.75	1.29	.09	.47
content	7.89	1.29	7.83	1.11	.14	.44
interest	7.95	1.18	8.17	1.85	37	.64
T-unit	15.83	2.94	15.87	1.94	04	.52
errors	2.82	1.38	2.18	.778	1.63	.94
t's grade	3.89	.809	4.17	.577	-1.09	.86

Clothes (high=20 students; low=6 students; mean=3.44)

holistic	8.15	1.69	8.83	1.33	-1.03	.84
coherence	8.10	1.71	9.00	.894	-1.70	.95
sophistication	7.45	1.73	8.00	1.90	64	.73
content	7.30	2.08	7.83	1.83	60	.72
interest	7.20	2.14	7.38	1.83	71	.75
T-unit	14.24	2.01	14.80	3.02	42	.66
errors	2.51	.865	3.30	1.07	-1.66	.07
t's grade	4.11	.567	4.00	.894	.27	.40

T = T-Test $P = Significance * = exceeds <math>\alpha$ of .05

T-TEST ON HIGH AND LOW 'POST-INTEREST' (Table 20)

	hig	h	lo	w	-	-			
	mean	stdev	mean	stdev	Т	Р			
Body Language	(high=1	0 stude	nts; low=1	3 studer	nts; mean=2	2.79)			
holistic	8.20	1.75	7.92	1.50	.40	.35			
coherence	8.40	1.18	8.23	1.17	.55	.30			
sophistication	7.40	1.58	7.54	1.45	22	.58			
content	8.00	1.94	7.54	1.39	.64	.27			
interest	7.40	1.84	6.85	1.63	.75	.23			
T-unit	14.45	2.26	15.59	3.71	91	.81			
errors	1.53	.878	1.24	1.07	.72	.76			
t's grade	4.10	.568	3.92	.760	.64	.26			
Presidential Condidates (high-01 students) low-10 students									
mean-3.24	muarca	(ingii-		ls, 10w-		•			
holistic	7 87	1 35	8 25	1 36	_1 19	88			
coherence	7.67	1.53	8 25	1.00	-1.06	.00			
sonhistication	7.02	1.50	7 58	1.71	- 69	.00			
content	7.13	1.00	7.50	1.02	05	.75			
interest	7.92	1.25	7.00	1.01	.03	.40			
T-unit	16.28	2.61	16.03	1.05 2 Q/	.04	.40			
1-unit errors	10.20 2 81	2.01	2 25	2.34	1 47	.40			
t's grade	2.01	1.00 854	<i>2.2</i> 5	515	1.47	.92			
ts grade	3.80	.004	4.00	.515	95	.02			
Clothes (high=1	5 stude	nts; lov	v=12 stude	nts; me	an=3.09)				
holistic	8.00	1.85	7.83	1.34	.27	.39			
coherence	8.20	1.74	7.83	1.47	.59	.28			
sophistication	7.27	1.94	7.17	1.53	.15	.44			
content	7.47	1.88	7.17	1.64	.44	.33			
interest	7.27	2.12	7.00	1.95	.34	.37			
T-unit	14.39	2.16	15.02	3.49	54	.70			
errors	2.77	1.02	3.38	1.10	-1.46	.079			
t's grade	4.00	.877	3.75	.754	.78	.22			
T = T-Test	P =	Signific	cance	* = ez	cceeds a of	.05			

-

Hypothesis #3b

Personal assessment of prior knowledge on the topic correlates with writing scores.

Table 21 shows the results of the Pearson product-moment correlation coefficients between the students' self-report on priorknowledge and the scores the students received for their compositions. This analysis does not show a significant relationship between self-reported prior-knowledge and the composition measures for any topic. Oddly, on the 'clothes' composition there was a positive correlation between the number of errors and the students' knowledge of the rules of dress where a negative correlation was expected (P<.05). This is to say that those who said they knew a lot about rules of dress made more mechanical errors.

The T-Test compared the composition means between those students with self-reported high prior-knowledge (4 or 5 on the Likert Scale) and those students with low prior-knowledge (1 or 2 on the Likert Scale). T-Test Table 22 gives the means for these questions and the number of high and low students for each topic. The results show that those students who reported that they had high knowledge about how people talk received significantly higher scores on the interest measure. Note, however, that on the 'talk' question for the 'body language' composition only three students were in the low group and all three received a score of 6 points. The T-Test shows that on 'clothes' the low knowledge students had significantly fewer errors than the high knowledge students (P<.01). **Summary of Hypothesis #3b.** The data, therefore, indicate that the hypothesis that high personal assessment of knowledge on the topic correlates with good writing scores cannot be accepted.

PRIOR-KNOWLEDGE AND WRITING MEASURE CORRELATIONS (Table 21)

	hol	coh	sop	con	int	T-un	err	t'sg
Body Language	e							
know-dress	010	093	048	.076	.019	137	.017	.156
know-body lg	045	113	159	000	.094	045	.021	008
know-talk	.125	.082	003	.167	.121	.015	133	.173

Presidential Candidates

aware -.122 -.032 .127 .071 .006 .058 .136 .009

Clothes

rules of dress .002 .001 -.026 -.014 .032 -.089 .331* .119

* = exceeds α of .05

Key to Questionnaire Questions

Body Language:

How aware are you of how you and others dress?

How aware are you of your body language and that of others?

How aware are you of your style of dress and that of others? Presidential Candidates:

How aware are you of the current presidential campaign? Clothes:

How much do you know of formal and informal rules of dress?

hol=holistic; coh=coherence; sop=sophistication; con=content; int=interest; T-un=T-unit; err=errors; t'sg=teacher's grade T-TEST ON HIGH AND LOW 'KNOWLEDGE' (Table 22)

	hig	high low		w					
	mean	stdev	mean	stdev	Т	Р			
Body Language									
dress (high=33	studen	ts; low=	4 students	s; mean	=3.63)				
holistic	7.58	1.66	7.00	1.15	.89	.21			
coherence	7.55	1.70	7.75	1.26	29	.61			
sophistication	6.88	1.49	6.50	1.91	.38	.36			
content	7.24	1.68	7.00	1.15	.37	.36			
interest	6.88	1.56	6.50	1.00	.67	.27			
T-unit	14.64	2.44	15.00	.748	63	.73			
errors	1.70	1.27	1.78	.574	22	.42			
t's grade	3.88	.696	3.50	1.00	.74	.26			
body language (high=24 students; low=6 students; mean=3.93)									
holistic	7.54	.711	7.33	1.03	.38	.36			
coherence	7.58	1.89	8.17	.408	-1.39	.91			
sophistication	6.75	1.59	7.00	1.10	45	.67			
content	7.17	1.83	7.00	1.10	.29	.39			
interest	6.92	1.59	6.00	1.26	1.50	.083			
T-unit	14.72	2.48	13.98	1.53	.91	.19			
errors	1.80	1.15	1.60	.963	.45	.67			
t's grade	3.83	.702	3.83	.983	.00	.50			
talk (high=32 st	udents	; low=3	students;	mean=	3.37)				
holistic	7.69	1.64	6.67	1.15	1.40	.15			
coherence	7.66	1.60	7.67	1.53	01	.50			
sophistication	6.91	1.67	6.67	1.15	.33	.39			
content	7.31	1.73	6.67	1.15	.88	.24			
interest*	6.88	1.70	6.00	.00	2.91	.003			
T-unit	15.06	3.09	15.73	1.42	69	.74			
errors	1.62	1.25	2.47	.709	-1.81	.084			
t's grade	3.91	.641	3.00	1.00	1.54	.13			

Table 22 (cont'd.)

Presidential Candidates (high=21 students; low=16 students;

mean=3.19)						
holistic	7.86	1.24	8.31	1.25	-1.10	.86
coherence	8.05	1.60	8.19	1.33	29	.61
sophistication	7.67	1.46	7.44	1.63	.44	.33
content	7.67	1.32	7.63	1.36	.09	.46
interest	7.81	1.25	7.87	1.86	12	.55
T-unit	16.40	2.80	15.98	2.73	.46	.32
errors	2.58	1.54	2.37	.893	.52	.70
t's grade	4.05	.669	3.94	.574	.54	.30
Clothes (high=18	8 stude	nts; lov	v=13 stude	nts; me	an=3.16)	
holistic	7.94	1.43	8.08	1.75	22	.59
coherence	8.11	1.78	8.31	1.65	32	.62
sophistication	7.17	1.72	7.31	1.84	22	.58
content	7.11	1.68	7.23	2.13	17	.57
interest	7.00	1.68	6.85	1.82	.24	.41
T-unit	13.67	2.21	14.07	1.73	57	.71
errors	3.24	1.26	2.24	.770	2.75	.99
t's grade	4.00	.707	3.77	.725	.87	.20
T = T-Test	P =	Signific	cance	* = ez	cceeds α of	.05

Hypothesis #3c

Personal assessment of learning about the topic and the teaching points correlates with writing scores.

Table 23 presents the results of the Pearson product-moment correlation coefficients between the students' self-reports on their learning and their composition scores. There is one positive correlation between the self-reports on the students' learning through writing and the interest rating on the 'clothes' composition (P<.05). But in this analysis there are several significant negative correlations at the .05 level. This is to say that low learning responses were significantly correlated with high composition scores and vice-versa.

The T-Test compared the composition means of those students with high self-reported learning (4-5 on the Likert Scale) with those students with low self-reported learning (1-2 on the Likert Scale). The T-Test tables give the means for each question and the number of students in the high and low groups. The results in Tables 24-27 indicate that the students with high learning did not receive significantly higher composition scores. In many cases, in fact, the composition means in the low learning group are significantly higher than the means in the high learning group at the .05 level of significance.

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SELF-REPORTED LEARNING AND COMPOSITION CORRELATIONS (Table 23)

	hol	coh	sop	con	int	T-un	err	t'sg
Body Language	•							
learn-topic	187	135	180	134	245	018	.251	.091
learn-org	357'	•262	312	*332	*311	• .117	.112	290
topic in wkshj	p063	231	120	139	214	.199	.117	274
organ in wksh	p288	323*	415	*355	*29 1	098	.264	478*

Presidential Candidates

learn-topic	084	167	152031	046	.209	.231	220
learn-trans	009	020	.048096	249	091	.024	191
topic in wkshr	o127	022	188147	333*	201	.049	381*
trans in wkshp	.168	.102	.103 .045	243	.042	.017	.037

Clothes

learn-topic	.167	.054	.091	.176	.351	• .036	.071	.007
learn-devel	028	121	.024	.060	.064	.052	005	090
topic in wkshp	118	.057	.006	.015	071	043	057	363*
dev in wkshp	098	.003	092	010	072	113	.024	332*

* exceeds α of .05

Key to Questions on Learning:

- learn-topic: How much did you learn about this topic from writing this paper?
- learn-organ/trans/dev: How much did you learn about organization/ transitions/development from writing this paper?
- learn-topic: From Wednesday's workshop how much did you learn about the topic?
- organ/trans/dev in wkshp: How much did you learn about organization/ transitions/development from the workshop?

hol=holistic; coh=coherence; sop=sophistication; con=content; int=interest; T-un=T-unit; err=errors; t'sg=teacher's grade Learn about the Topic through Writing. On the correlation coefficients (Table 24) the responses to the question on how much the students learned about 'clothes' through writing positively correlated with the interest writing measure (P<.05). But the T-Test (Table 24) revealed no significant difference between the composition means of the high and low learning groups. On the 'candidate' topic, the students who learned little about the topic had significantly fewer errors than those who learned much about the topic (P=.05).

Learn about the Teaching Points through Writing. On the 'body language' the students' responses to question on how much they learned about 'organization' (the teaching point for that week) negatively correlated with their holistic, sophistication, content and interest scores on their compositions(<.05). And the T-Test (Table 25) also demonstrated that these students who learned little, received significantly higher holistic (P=.05), sophistication (P=.03), content (P=.03) and interest scores (P=.04) and almost significantly higher grades (P=.06). Also on the 'candidates' composition the students who learned little about transitions received significantly higher interest scores (P=.05) and almost significantly higher interest scores (P=.05) and almost significantly higher grades (P=.06).

Learn about the Topic in the Workshop. Table 26 shows that the responses to this question negatively correlated with the students' interest rating (P<.05), and the teacher's grade (P<.05) on the 'candidates' composition and with the teacher's grade (P<.05) on the 'clothes' composition. The T-Test analysis in Table 26 shows that the students who learned little about 'body language' in the workshop had significantly fewer errors on their compositions (P<.05). And the students who learned little about the candidates in the workshop received significantly higher interest scores (P=.04), had significantly longer T-units (P<.03), and received significantly higher grades (P<.02).

Learn about the Teaching Point in the Workshop. There was a significant negative correlation between the responses to this question and the coherence, sophistication, content writing measures and teacher's grade on the 'body language' composition. There was also a significant negative correlation on the responses to this question and the grades received on the 'clothes' composition (P<.05). The T-Test analysis in Table 27 revealed that these students who said that they learned very little about the teaching point in the workshop, received significantly higher ratings on sophistication (P=.04), content (P=.03) and mechanics (P=.01) measures and higher grades (P=.01) on the 'body language' paper. For the 'clothes' paper the low responses to this question received significantly higher grades from their teacher (P=.01).

Summary of Hypothesis #3c. The data, therefore, indicate that the hypothesis that high personal assessment of learning about the topic and the teaching points correlates with good writing scores cannot be accepted. T-TEST ON HIGH AND LOW 'LEARN-TOPIC' (Table 24)

	hig mean	h stdev	low mean stdev		Т	Р
Body Language	(high=6	studen	ts: low=19	student	s: mean=2.	27)
holistic	7.67	1.51	7.84	1.74	- 24	.59
coherence	7.83	1 60	7 84	1 42	- 01	.50
sophistication	6.76	2.07	7.05	1.61	- 42	.66
content	7.33	1.97	7.32	1.77	.02	.49
interest	6.50	1.22	7.05	1.87	84	.79
T-unit	15.90	1.38	14.97	3.37	.97	.17
errors	1.55	.850	1.42	1.15	.30	.61
t's grade	4.17	.408	3.79	.713	1.61	.06
Presidential Can	didates	(high=	=13 studen	ts; low=	16 students	, ,
mean=2.91)						
holistic	7.92	1.50	8.06	1.29	27	.60
coherence	8.08	1.50	8.63	1.54	97	.83
sophistication	7.08	1.66	7.94	1.39	-1.49	.93
content	7.46	1.27	7.69	1.25	48	.68
interest	7.92	1.50	8.00	1.67	13	.55
T-unit	17.42	3.21	15.85	2.54	1.44	.08
errors	2,93	1.20	2.12	1.39	1.68	.95
t's grade	3.69	.855	4.00	.516	-1.14	.87
Clothes (high=3	student	s; low=	27 student	s; mear	n=2.14)	
holistic	8.33	.577	7.81	1.44	1.20	.14
coherence	8.33	.577	8.19	1.42	.34	.37
sophistication	6.67	2.08	7.19	1.33	42	.64
content	7.33	2.31	6.89	1.55	.33	.39
interest	8.00	2.00	6.52	1.28	1.25	.17
T-unit	14.60	1.70	14.48	2.69	.11	.46
errors	3.10	.854	2.76	1.28	.61	.71
t's grade	4.00	.00	3.96	.706	.27	.39
T = T-Test	P =	Signifie	cance	* = ez	cceeds a of	.05

	high		lo	W	T	n
	mean	staev	mean	staev	1	Ρ
Body Language	(high=1	9 stude	ents; low=1	2 stude	nts; mean=3	.19)
holistic	7.00	1.56	8.17	1.53	-2.05	.97
coherence	7.37	1.57	8.08	1.44	-1.30	.90
sophistication	6.47	1.61	7.42	1.08	-1.95	.97
content	6.74	1.73	7.83	1.27	-2.03	.97
interest	6.37	1.71	7.33	1.23	-1.83	.96
T-unit	15.18	2.26	14.17	2.51	1.14	.13
errors	1.81	1.34	1.34	1.10	1.05	.85
t's grade	3.68	.885	4.08	.515	-1.59	.94
Presidential Can	didates	(high=	=19 student	ts; low=	3 students;	
mean=3.40)						
holistic	7.74	1.19	8.00	1.73	25	.59
coherence	7.84	1.54	8.33	1.53	52	.67
sophistication	7.53	1.22	7.67	.577	32	.62
content	7.26	1.10	8.00	2.00	62	.70
interest	7.26	1.10	9.33	1.15	-2.90	.95
T-unit	15.53	2.86	14.97	1.70	.47	.33
errors	3.06	1.43	3.17	2.48	07	.48
t's grade	3.84	.765	4.67	.577	-2.19	.94
Clothes (high=1	8 stude	nts; lov	v=10 stude	nts; me	an=3.16)	
holistic	7.83	1.76	7.80	1.14	.06	.48
coherence	7.94	1.89	8.30	1.25	60	.72
sophistication	7.39	1.88	7.10	1.52	.44	.33
content	7.28	1.87	6.80	1.69	.69	.25
interest	6.94	1.86	6.30	1.06	1.17	.13
T-unit	14.62	2.37	14.13	3.33	.41	.34
errors	2.86	1.16	2.77	1.52	.17	.56
t's grade	3.77	. 9 03	3.90	.568	48	.68

T = T-Test P = Significance * = exceeds α of .05

T-TEST ON HIGH AND LOW 'LEARN-TOPIC IN WORKSHOP' (Table 26)

	hig mean	h stdev	lo mean	w stdev	Т	Р
					-	
Body Language	(high=1	0; low=	16; av. lear	ning=2.	71)	
holistic	7.40	1.58	7.56	1.55	26	.60
coherence	7.20	1.69	7.87	1.45	-1.05	.84
sophistication	6.50	1.96	6.88	1.41	53	.70
content	7.00	2.00	7.25	1.61	33	.63
interest	6.50	1.65	7.06	1.65	85	.80
T-unit	15.51	3.14	13.98	1.63	1.43	.09
errors	1.79	.742	1.21	.978	1.72	.95
t's grade	3.60	.843	3.88	.719	86	.80
Presidential Can	didates	(high=	=7 students	; $low=1$	8 students;	
mean=2.59)		Ū				
holistic	7.57	1.62	8.22	1.31	95	.82
coherence	8.14	2.04	8.22	1.59	09	.54
sophistication	7.57	1.62	8.00	1.33	62	.72
content	7.29	1.25	7.83	1.15	-1.00	.83
interest	7.29	1.25	8.39	1.46	-1.88	.96
T-unit	14.37	2.72	16.93	2.23	-2.22	.97
errors	2.81	1.28	2.36	1.43	.78	.77
t's grade	3.43	.787	4.22	.732	-2.31	.98
Clothes (high=5	studen	ts; low:	=16 studen	ts; mea	n=2.58)	
holistic	7.00	2.24	8.12	1.20	-1.08	.83
coherence	6.80	2.39	7.50	1.10	64	.72
sophistication	6.80	2.39	7.50	1.10	64	.72
content	6.80	1.79	7.25	1.18	53	.69
interest	6.40	2.07	7.13	1.31	74	.75
T-unit	15.06	1.70	15.02	3.12	.04	.49
errors	2.78	1.42	2.72	1.22	.09	.53
t's grade	3.40	1.14	4.31	.704	-1.69	.92
T = T-Test	P =	Signifi	cance	* = e:	kceeds α of	.05

T-TEST ON 'LEARN-TEACHING POINTS IN WORKSHOP' (Table 27)

	high		lo	w		
	mean	stdev	mean	stdev	Т	Р
Body Language	(high=9	studen	ts: low=7 s	tudents	; mean=3.0	8)
holistic	6.67	1.32	7.86	1.86	-1.43	.91
coherence`	6.56	1.51	7.71	1.25	-1.68	.94
sophistication	5.56	1.24	7.29	2.06	-1.97	.96
content	5.78	1.09	7.14	1.46	-2.06	.97
interest	5.89	1.36	7.00	1.73	-1.39	.90
T-unit	15.14	3.03	15.93	4.82	38	.64
errors	1.94	1.04	.729	.616	2.92	.99
t's grade	3.11	.782	3.86	.378	-2.51	.99
Candidates (hig	h=14 st	udents;	low=10 st	udents;	mean=3.08	3)
holistic	8.36	1.28	7.90	1.52	.77	.22
coherence	8.71	1.54	8.30	1.42	.68	.25
sophistication	7.86	1.46	7.40	1.43	.77	.23
content	7.64	1.22	7.60	1.26	.08	.47
interest	7.36	1.28	8.50	1.84	-1.69	.94
T-unit	16.26	3.33	15.37	2.11	.80	.22
errors	2.86	1.31	2.56	1.61	.49	.68
t's grade	3.93	.730	3.80	.919	.37	.36
Clothes (high=1	1 stude	nts; lov	v=13 stude	nts; me	an=2.87)	
holistic	7.64	1.80	8.15	1.07	84	.79
coherence	7.82	1.72	8.00	1.47	28	.61
sophistication	6.73	1.85	7.46	1.05	-1.17	.87
content	6.91	2.02	7.23	1.24	46	.67
interest	6.55	1.92	7.15	1.41	87	.80
T-unit	14.72	1.83	15.18	3.22	44	.67
errors	2.77	1.34	2.65	1.02	.26	.60
t's grade	3.46	.820	4.23	.725	-2.44	.99

T = T-Test P = Significance * = exceeds α of .05

Hypothesis #3d

Time and effort spent on writing the composition correlates with writing scores.

Table 28 shows the results of the Pearson product-moment correlation coefficients between the students' effort and the scores they received on their compositions. Again there are several negative correlations between amount of change, number of interviews, and amount of rewrite times and the composition scores.

The T-Test compared the composition means of those students with much effort and those with little effort. The results of the T-Test for each question on effort follow in Tables 30-35. Table 29 shows the designation of the high and low groups for each of the questions on effort.

Difficulty. Table 30 compares the composition means of those students who found the writing very easy and those who found the writing very difficult. The results show that the students who said that they had found the writing easy did not receive significantly higher ratings than the students who said they had found the writing difficult.

Reading. Note that the T-Test analysis was not possible in Table 31 with 'body language' because only one student read more than the others.

	hol	coh	sop	con	int	T-un	err	t'sg
Body Languag	e							
difficulty	073	.001	151	073	010	097	.131	.187
amount read	.134	.133	.108	.079	.119	030	142	.032
interviews	.038	167	078	099	032	.137	022	.022
writing time	018	061	.142	.101	.173	.027	280	009
am of change	311	•363•	324	* 110	160	209	.118	314*
rewrite time	292	348	• 2 29	187	176	109	187	262

Presidential Candidates

difficulty	052	055	.037	.034	045	.285	.171	.057
amount read	099	144	048	.020	.107	.018	.124	005
interviews	240	368	190	255	293	022	.118	308*
writing time	151	114	114	080	.004	303*	.275	298
am of change	045	.009	133	034	.158	231	036	.041
rewrite time	0 01	.040	010	024	.057	280	044	070

Clothes

difficulty.188.087.255.131.154-.084-.146.276amount read-.064.012.026-.065-.196-.004-.030.006interviews-.043-.045-.097-.035-.076.047-.281-.329*writing time.236.094.084.087.171.279-.180.205am of change-.021-.215.019.119.036-.057.003-.097rewrite time-.157-.089-.190-.157-.218.105-.114.040

* = exceeds α of .05

Key to Questions on Effort: difficulty: How difficult did you find the writing? read: How much did you read for this paper? interview: How many people did you interview for this paper? write-time: About how much time did you spend thinking about your paper and writing the first draft? change: How much did you change your paper after the workshop? rewrite-time: About how much time did you spend rewriting your paper?

hol=holistic; coh=coherence; sop=sophistication; con=content; int=interest; T-un=T-unit; err=errors; t'sg=teacher's grade Writing Time. Table 33 shows that the students who spent much time writing the 'body language' composition had fewer errors than the students who spent little time writing the composition. The high students' composition results were not significantly higher than the low effort students on any of the other questions or topics.

The correlation coefficients on the questions of effort do, in fact, support the opposite of what Hypothesis 3d proposes: on 'body language' the amount the students changed their papers negatively correlated with the holistic, coherence, sophistication measures and the teacher's grade (P<.05); and on 'candidates' the number of people interviewed negatively correlated with the coherence measure and the teacher's grade (P<.05); also on 'clothes' the number of people interviewed negatively correlated with the teacher's grade (P<.05). The interviews were intended as a method from which the students could get ideas for writing not as a method of editing their papers. This seems to suggest that the students need not interview people to write good papers for their teachers and, thus, succeed in their composition classes. In addition, the length of the T-unit negatively correlated with writing time on the 'candidate' composition. This seems to suggest that the more time spent writing, the shorter the T-units.

Interviews. Table 32 shows that on the 'candidate' composition the low interview group received significantly higher coherence measures than the high interview group (P=.02). On the 'clothes' composition the low interview group had significantly higher grades (P=.04) and the correlation approaches significance
between few errors and the students who spent little time writing (P=.06).

Writing Time. Table 33 shows that the students who spent little time writing the 'candidate' paper had significantly fewer errors than those who spent much time writing their papers (P=.01).

Changes. Table 34 shows that students who changed their 'body language' papers very little from the first to second drafts received significantly better grades (P=.04) and better sophistication scores (P=.04).

Rewrite Time. Table 35 shows that students who spent little time rewriting their 'clothes' papers received significantly higher interest scores (P=.04).

Summary of Hypothesis #3d. The data, therefore indicated that the hypothesis that much time and effort spent on writing correlate with good writing scores cannot be accepted.

HIGH AND LOW EFFORT GROUPS (Table 29)

Difficulty: Body Language: high is 4-5, low is 1-2; mean=2.79 Candidates: high is 4-5, low is 1-2; mean=2.91 Clothes: high is 4-5, low is 1-2; mean=3.16
Amount read: Body Language: high is 2 and above, low is 1; mean=1.02 Candidates: high is 2 and above, low is 1; mean=1.44 Clothes: high is 2 and above, low is 1; mean=1.05
Other Research: Body Language (research): high is 4-5, low is 1-2; mean=2.49 Candidates (interviews): high is 1-4, low is 0; mean=.74 Clothes (interviews): high is 1-2, low is 0; mean=.22
Writing Time: Body Language: high is 3 hrs. and above; low is 1 h.r and below; av. 2.2 Candidates: high is 3 hrs. and above; low is 1 hr. and below; av. 2.13 Clothes: high is 4 hrs. and above; low is 1 h.r and below; av. 2.68
Amount Changed Body Language: high is 4-5, low is 1-2; mean=2.9 Candidates: high is 4-5, low is 1-2; mean=3.33 Clothes: high is 4-5, low is 1-2; mean=3.17
Rewrite time: Body Language high is 2 hrs. and above; low is 45 min. and below; mean=1.71 Candidates high is 2.5 hrs. and above; low is 1 hr and below; av. 1.81 Clothes high is 3 hrs. and above; low is 1 hr and below; mean=1.94

T-TEST ON HIGH AND LOW 'DIFFICULTY' (Table 30)

100

	hig	h	lo	w		
	mean	stdev	mean	stdev	Т	Р
Body Language	(high=1	3 stude	nts; low=17	7 studer	nts)	
holistic	7.54	1.85	7.82	1.67	44	.67
coherence	7.69	1.55	7.88	1.58	33	.63
sophistication	6.54	1.33	7.18	1.70	-1.15	.87
content	7.15	1.63	7.35	1.62	33	.63
interest	6.92	1.55	6.88	1.76	.07	.47
T-unit	14.15	2.04	15.18	3.47	-1.01	.84
errors	1.67	.946	1.26	1.02	1.14	.87
t's grade	3.92	.760	3.77	.664	.60	.28
Presidential Can	didates	(high=	15 studen	ts; low=	16 students	;) · · · ·
holistic	8.33	1.23	8.25	1.18	.19	.42
coherence	8.20	1.26	8.19	1.68	.02	.49
sophistication	7.93	1.71	7.56	1.31	.67	.25
content	8.00	1.46	7.69	1.14	.66	.26
interest	8.00	1.25	7.94	1.69	.12	.45
T-unit	16.57	3.13	14.96	2.28	1.63	.058
errors	2.64	1.64	2.3 82	.899	.54	.70
t's grade	4.20	.561	4.13	.619	.35	.36
Clothes (bigh-1)	0 stude	nte: lou	-12 stude	nto)		
bolistio	9 Stude 9 A9	115, 100	7 95	1 77	04	19
acherence	9.52	1.57	1.00	1.77	.54	.10
contraction	7.05	1.07	7.02	1.40	.50	.51
sophistication	7.90	1.07	7.20	1.74	1.11	.14
content	7.00	2.01	7.31	2.02	.40	.33
Turit	14.07	2.09	0.92	2 10	.02	.21
	14.27	1.99	12.00	3.10	01	.79
errors	2.04	1.10	3.09	1.44	90	.17
t's grade	4.05	.780	3.62	.768	1.57	.064

T-TEST ON HIGH AND LOW 'READING' (Table 31

	hig mean	h stdev	lo [.] mean	w stdev	Т	Р
Body Language	(high=1	studen	t: low=42 s	tudents)		
holistic	9.00		7.60			
coherence	9.00		7.64			
sophistication	8.00		6.90			
content	8.00		7.17			
interest	8.00		6.79			
T-unit	14.30		14.86			
errors	.6		1.71			
t's grade	4.00		3.86			
Presidential Can	didates	(high=	14 studen	ts; low=2	9 students	s)
holistic	7.79	1.53	7.97	1.35	38	.64
coherence	7.50	1.51	8.24	1.57	-1.49	.93
sophistication	7.21	1.37	7.55	1.74	69	.75
content	7.50	1.56	7.55	1.24	11	.54
interest	7.86	1.51	7.59	1.62	.54	.30
T-unit	16.36	3.42	15.98	2.31	.37	.36
errors	2.91	1.32	2.57	1.42	.79	.78
t's grade	4.00	.877	3.93	.593	.27	.40
Clothes (high=2	studen	ts: low=	40 studen	ts)		
holistic	7.50	2.12	8.15	1.58	43	.63
coherence	8.00	2.83	8.30	1.56	15	.55
sophistication	7.50	2.12	7.50	1.74	.00	.50
content	6.50	2.12	7.40	1.89	59	.67
interest	5.50	.707	7.20	1.91	-2.91	.89
T-unit	14.85	3.75	14.40	2.46	.17	.45
errors	3.75	2.05	2.70	1.16	.72	.70
t's grade	3.50	.707	3.97	.743	92	.74

T-TEST ON HIGH AND LOW 'INTERVIEWS' (Table 32)

	hia	h	101	-		
	mean	stdev	mean	stdev	Т	Р
Body Language	researc	h (hig h	n=12 stude	nts; low	=26 studen	nts)
holistic	7.58	1.98	7.73	1.43	23	.59
coherence	7.33	2.10	8.08	1.09	-1.15	.87
sophistication	6.58	2.02	7.12	1.31	84	.79
content	6.83	1.95	7.38	1.39	88	.80
interest	6.58	1.62	6.96	1.51	.68	.75
T-unit	15.24	3.80	14.70	2.53	.45	.33
errors	2.05	1.41	1.63	1.07	.91	.81
t's grade	3.83	.718	3.89	.711	21	.58
Presidential Can	didates	interv	riews (high	n=17 sti	udents; low	=25
students)						
holistic	7.76	1.39	8.00	1.44	53	.70
coherence	7.41	1.23	8.40	1.71	-2.18	.98
sophistication	7.15	1.55	7.68	1.68	-1.00	.84
content	7.18	1.29	7.76	1.36	-1.41	.92
interest	7.29	1.45	7.92	1.66	-1.30	.90
T-unit	16.11	2.70	15.86	2.50	.29	.39
errors	2.54	1.20	2.71	1.50	41	.34
t's grade	3.88	.857	4.00	.577	49	.69
Clothesintervie	ews (hi	øh=6 st	udents: lov	v=35 st	udents)	
holistic	8.33	1.63	8.14	1.57	.27	.40
coherence	8.33	1.37	8.29	1.66	.08	.47
sophistication	7.67	2.34	7.51	1.65	.15	.44
content	7.83	2.23	7.31	1.86	.54	.30
interest	7.50	2.59	7.09	1.82	.38	.36
T-unit	14.88	1.18	14.43	2.62	.70	.25
errors	3.47	1.11	2.58	1.16	1.79	.94
t's grade	3.50	.548	4.03	.758	-2.05	.96

	hig	h	lo	w		
	mean	stdev	mean	stdev	Т	Р
Body Language ((high=1)	6 stude	nts; low=14	4 studen	its)	
holistic	7.69	1.82	7.71	1.68	04	.52
coherence	7.63	1.89	8.07	1.33	75	.77
sophistication	7.31	1.62	6.71	1.44	1.07	.15
content	7.50	1.86	7.14	1. 79	.53	.30
interest	7.19	1.64	6.64	1.86	.84	.20
T-unit	14.30	1.91	14.59	2.17	39	.65
errors*	1.23	1.03	1.93	.965	-1.92	.033
t's grade	3.88	.806	3.79	.699	.32	.37
Presidential Can	didates	(high=	9 students	s; low=9	students)	
holistic	7.44	1.51	8.33	1.22	-1.37	.90
coherence	7.44	1.42	8.44	1.42	-1.49	.92
sophistication	7.22	1.09	7.78	1.99	74	.76
content	7.11	1.17	7.56	1.42	72	.76
interest	7.67	1.32	7.67	2.00	.00	.50
T-unit	14.73	2.24	16.11	1.81	-1.44	.91
errors	3.41	1.64	1.87	.550	2.68	.99
t's grade	3 .67	1.00	4.11	.601	-1.14	.86
Clothes (high=10) stude	nts; low	-9 studen	ts)		
holistic	8.10	1.52	8.11	1.54	02	.51
coherence	8.00	2.00	8.00	1.66	.00	.50
sophistication	7.90	1.66	7.33	1.80	.71	.24
content	7.20	2.10	7.33	1.80	15	.56
interest	6.80	1.69	7.00	1.73	25	.60
T-unit	14.45	2.14	13.24	2.35	1.16	.13
errors	2.30	1.46	2.91	.912	-1.11	.14
t's grade	4.20	.632	3.78	.972	1.11	.14

T-TEST ON HIGH AND LOW 'CHANGE' (Table 34)

	hig mean	h stdev	low mean	stdev	Т	Р
Body Language	(high=1)	1 stude	nts; low=16	6 studer	nts)	
holistic	7.09	1.81	8.19	1.52	-1.65	.94
coherence	7.09	2.07	8.25	1.06	-1.71	.94
sophistication	6.36	1.50	7.50	1.67	-1.84	.96
content	7.18	1.83	7.44	1.63	37	.64
interest	6.64	1.69	7.00	1.41	59	.72
T-unit	14.05	2.13	15.56	3.51	-1.38	.91
errors	1.72	.979	1.48	1.15	.59	.72
t's grade	3.64	.674	4.13	.619	-1.91	.96
Presidential Can	didates	(high=	-17 studen	ts; low=	9 students)	
holistic	8.00	1.12	8.00	1.73	.00	.50
coherence	8.24	1.30	8.33	1.87	14	.55
sophistication	7.47	1.28	8.22	1.92	-1.06	.84
content	7.59	1.42	7.67	1.41	13	.55
interest	8.12	1.65	7.44	1.51	1.05	.16
T-unit	15.86	3.04	17.41	1.89	-1.60	.94
errors	2.55	1.18	2.81	1.59	44	.33
t's grade	4.00	.612	3.78	.972	.62	.27
Clothes (high=1	5 stude	nts; lov	v=11 stude	nts)		
holistic	8.27	1.58	8.36	1.57	16	.56
coherence	8.00	1.73	8.82	1.33	-1.36	.91
sophistication	7.33	1.99	7.27	1.56	.09	.47
content	7.60	1.76	7.09	1.81	.72	.24
interest	7.13	1.77	7.09	1.58	.06	.47
T-unit	14.24	1.71	14.67	3.49	38	.64
errors	2.73	1.07	2.67	1.47	.10	.54
t's grade	3.86	.864	4.00	.775	43	.67

	higi mean	h stdev	lo [.] mean	w stdev	Т	Р
Body Language	(high=1)	6 stude	nts: low=16	6 studer	nts)	
holistic	7.37	1.71	7.75	1.57	65	.74
coherence	7.44	1.93	7.87	1.20	77	.78
sophistication	6.75	1.61	7.00	1.55	45	.67
content	7.37	1.86	7.19	1.60	.31	.38
interest	6.75	1.57	6.75	1.73	.00	.50
T-unit	14.19	2.10	14.74	2.20	72	.76
errors	1.48	.986	1.69	1.23	55	.29
t's grade	3.88	.719	4.00	.632	52	.70
Presidential Can	didates	(high=	=14 studen	ts; low=	25 students	s)
holistic	8.00	1.24	8.00	1.50	.00	.50
coherence	8.00	1.66	8.08	1.53	15	.56
sophistication	7.57	1.55	7.56	1.69	.02	.49
content	7.71	1.27	7.60	1.38	.26	.40
interest	8.14	1.46	7.60	1.63	1.07	.15
T-unit	15.76	2.48	16.59	2.80	96	.83
errors	2.37	1.18	2.89	1.49	-1.19	.12
t's grade	3.93	.829	3.96	.676	12	.55
Clothes (high=6	studen	ts; low=	=17 studen	ts)		
holistic	7.67	1.51	8.12	1.50	63	.73
coherence	7.67	1.51	8.24	1.39	81	.78
sophistication	6.50	1.22	7.47	1.37	-1.62	.93
content	6.50	1.76	7.18	1.88	79	.78
interest	6.17	.983	7.29	1.99	-1.79	.96
T-unit	14.98	1.84	14.31	2.04	.75	.24
errors	2.28	.722	2.55	1.16	66	.26
t's grade	4.00	.707	4.00	.866	.00	.50

Hypothesis #3e

Personal assessment on the quality of the composition correlates with writing scores.

Table 36 shows the results of the Pearson product-moment correlations coefficients between the students' personal evaluation of their papers and the scores their compositions received. There was a significant correlation on the 'clothes' composition between the students' expected grade and the actual grade the teacher gave the composition (P<.05). Also, there was a significant correlation on the 'body language' composition between the length of the T-units and the expected grade (P<.05).

The T-Test in Table 37 shows the means for the students' evaluation of their papers and the number of students in the high group (4-5 on the Likert Scale) and in the low group (1-2 on the Likert Scale). The results show that the students who thought they wrote above average papers did not receive significantly higher composition scores than the students who though they wrote below average papers.

Table 38 gives the mean anticipated grade for each composition (A=5, B=4, C=3, D=2, E=1). Those students who thought they would receive an A or B were in the high group and those who thought they would receive a D or E were in the low group. Only one student thought his paper was probably a 'D'--this was the same student for each composition. In other words all the other students thought their papers deserved a 'C' or better. Most

students expected a high grade but most did not receive a high grade so the low level of significance is not surprising.

Summary of Hypothesis #3e. The data, therefore, indicate that the hypothesis that high personal assessment on the quality of the composition correlates with good writing scores also cannot be accepted.

Summary of Correlation and Comparison Analyses. In conclusion, then, the findings will not allow for the acceptance of any of the hypotheses of this study. The findings, however, will allow for very limited support for the effects of prior-knowledge about and prior-interest in the topic on writing quality

PERSONAL EVALUATION AND COMPOSITION MEASURE CORRELATIONS (Table 36)

	hol	coh	sop	con	int	T-un	err	t'sg
Body Language								
per-evaluation	.036	.110	.026	.005	005	.144	.070	.119
grade	.090	.079	.054	014	028	.304	046	.099

Presidential Candidates

per-evaluation	.129	029	.121	.216	.228	.124014	.163
grade	.291	.077	.095	.267	.130	.285205	.162

Clothes

per-evaluation	.053	157	.090	.009	.131	048	.015	.176
grade	.047	115	.058	.048	.074	.234	217	.315*

* = exceeds α of .05

Key to Questions on Personal Evaluation:

evaluation: What is your evaluation of the quality of your paper? grade: What grade do you think you will receive on this paper?

hol=holistic; coh=coherence; sop=sophistication; con=content; int=interest; T-un=T-unit; err=errors; t'sg=teacher's grade T-TEST ON HIGH AND LOW 'PERSONAL EVALUATION' (Table 37)

	hig	h	lo	w	Τ	D
	mean	staev	mean	staev	1	Р
Body Language	(high=1	5 stude	nts; low=8	student	s; mean=3.2	21)
holistic	7.73	1.49	7.87	1.64	20	.58
coherence	7.93	1.53	7.75	1.91	.23	.41
sophistication	6.87	1.51	7.00	1.51	20	.58
content	7.20	1.82	7.50	1.85	37	.64
interest	6.67	1.54	7.13	1.64	65	.75
T-unit	14.89	2.00	14.00	2.32	.92	.19
errors	1.60	.995	.86	1.02	1.65	.94
t's grade	3.93	.594	4.00	.926	18	.57
Presidential Can	didates	(high=	20 student	s; low=7	7 students;	
mean=3.49)						
holistic	8.15	1.50	7.43	1.40	1.15	.14
coherence	8.00	1.56	7.57	1.81	.56	.30
sophistication	7.65	1.60	7.14	1.21	.87	.20
content	7.85	1.39	7.00	1.00	1.74	.052
interest	8.25	1.48	7.57	1.40	1.09	.15
T-unit	16.36	2.38	15.77	3.09	.46	.33
errors	2.61	1.34	2.89	1.55	43	.34
t's grade	4.00	.795	3.71	.756	.85	.21
Clothes (high=2	3 stude	nts; lov	v=6 studen	ts; mea	n=3.44)	
holistic	8.13	1.71	8.17	1.33	06	.52
coherence	8.13	1.74	9.00	.632	-1.95	.97
sophistication	7.57	1.88	7.00	1.10	.95	.18
content	7.35	2.01	7.33	1.97	.02	.49
interest	7.30	2.18	6.83	1.33	.66	.26
T-unit	13.97	2.19	14.38	4.10	24	.59
errors	2.81	1.15	2.60	1.40	.34	.63
t's grade	4.00	.756	4.00	.632	.00	.50
T = T-Test	P =	Signific	cance	* = ex	ceeds a of	.05

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1-TEST ON HIGH AND LOW ANTICIPATED GRADE (Table)
--

high mean stdev	low mean stdev	т р
(high=32 stue	dents; low=1 student;	mean=3.84)
7.78	9.00	
7.84	10.00	
7.03	8.00	
7.25	10.00	
6.88	9.00	
15.40	10.40	
1.68	1.50	
3.94	4.00	
	high mean stdev (high=32 stud 7.78 7.84 7.03 7.25 6.88 15.40 1.68 3.94	high mean stdevlow mean stdev(high=32 students; low=1 student; 7.789.007.8410.007.038.007.2510.006.889.0015.4010.401.681.503.944.00

Presidential Candidates (high=31 students; low=1 student; mean

3.84)

holistic	7.95	6.00
coherence	7.84	7.00
sophistication	7.21	7.00
content	7.63	6.00
interest	7.68	8.00
T-unit	16.24	13.30
errors	2.46	6.00
t's grade	4.16	4.00

Clothes (high=35 students; low=1 student; mean=3.95)

holistic	8.06	9.00
coherence	8.17	9.00
sophistication	7.49	6.00
content	7.29	6.00
interest	7.11	6.00
T-unit	14.39	9.90
errors	2.75	5.00
t's grade	4.00	3.00

REGRESSION ANALYSIS

Since the hypotheses are interrelated, we will use a regression analysis to find out which of the variables are the more important predictors of good writing. The holistic score was chosen as the main indicator of writing quality for each composition. A stepwise regression analysis was performed to find the best predictor from all the variables for writing quality. On the 'body language' composition this was the students' response to the amount learned about the teaching point (organization); on the 'presidential candidates' composition this was the prior-knowledge combination score; on the 'clothes' composition this was, also, the prior-knowledge combination score. Using these variables in the base formula to predict the holistic writing scores, each of the other variables was used in a regression analysis and retained in the formula when it increased the predictive power of the formula.

Table 39 shows, for each composition topic, the predictors that predict the holistic writing scores. The other variables did not predict the holistic writing score and for this reason are not included in the regression formula.

REGRESSION ANALYSIS (Table 39)

Body Language

Holistic Score = -.660 (learn about organization) + .0489 (knowledge gain--fluency) + .236 (feelings) -.409 (amount changed) + .094 (involvement)

Predictor	t-ratio	р
question about amount learned about organization	-2.42	.021
knowledge gainfluency score	1.30	.202
question about feelings	.66	.516
question about amount changed in the rewrite	-1.94	.061
question about involvement	.33	.744
R-square = 28.4% R-square (adjusted) = 17.9%	b	

Presidential Candidates

Holistic Score = +.104 (pre-combination) -.117 (prior interest) -.121 (prior confidence) - .413 (interviews) - .235 (learned-topic in workshop + .394 (learned-transitions in workshop)

Predictor	t-ratio	р
prior knowledge -combination score	2.59	.015
question on prior interest	83	.413
question on prior confidence	70	.487
number of interviews	-2.15	.039
amount learned in the workshop about the topic	96	.344
amount learned in the workshop about transitions	1.74	.092
R-square = 38.1% R-square (adjusted) = 26.1	%	

Clothes

Holistic Score = + .109 (pre-combination) + .538 (prior-interest) - .238 (question on prior-knowledge) -. 088 (interviews) -. 114 (learn about the topic in the workshop) - .140 (time spent re-writing on the topic)

Predictor	t-ratio	р
prior-knowledge combination score	1.94	.062
question on prior-interest	2.5	.018
question on prior-knowledge	99	.328
question on number of interviews	21	.835
question on amount learned about topic in workshow. .607	p	52
question on time spent rewriting	-1.02	.318
R-square = 32% R-square (adjusted) = 17.9	9%	

Of the positive predictors in these three formulas, prior knowledge and prior interest (responses to the questions on interest, confidence, feelings, and involvement) are the important predictors on all three compositions. On the other hand, over half of the predictors in the three formulas represent negative correlations with the holistic writing scores. In addition these three regression formulas account for only 28%-38% of the data (R-square), a relatively small amount of the variability.

In conclusion, the regression analysis shows that the variables of this study cannot adequately predict writing quality; but of the variables studied, prior-interest and prior-knowledge are the most important predictors. As the reader will recall, the T-test analysis and correlation analysis also showed that the variables of this study, for the most part, were not associated with writing quality; but of the variables studied, interest and prior-knowledge were the variables that best related to the composition scores.

CHAPTER FIVE

DISCUSSION

This chapter discusses the findings presented in Chapter Four in relation to the hypotheses of this research project. This chapter then compares the findings with other similar studies, provides suggestions for further research and re-evaluates commonly held assumptions on the teaching of writing. A brief review of the hypotheses, procedures, and findings of the project is presented first.

REVIEW

The research questions were: Do students with high priorknowledge on the familiar topics, 'body language,' 'presidential candidates,' and 'clothing,' write better compositions? Do those students who learn a lot through writing, write better compositions? Do interest, confidence, engagement, and a strong opinion on these subjects help the writer write a better paper? Do high motivation, active research on the topic, and more learning about the topic help the writer with low prior-knowledge learn more via the experience and write a better paper?

Three college freshman composition classes (43 students) wrote on three popular topics: 'body language,' 'presidential

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candidates' and 'clothes.' Before writing each paper the students took a free-association prior-knowledge test on the content of the topic and filled out a questionnaire. After writing each composition, they took the post-writing knowledge test and filled out a postwriting questionnaire. Trained graders scored the compositions on overall writing quality (an holistic measure), coherence, sophistication, content, interest, syntactical complexity, and mechanical errors. The raters also scored the knowledge tests for degree of organization, and fluency. Composition ratings and responses to the questionnaires were correlated using the Pearson-Product Moment Correlation Coefficient. A T-Test analysis compared the composition means between the high- and lowknowledge groups and the high- and low-interest groups, etc. Chapter 4 presents the results in detail. Briefly, these findings show that, contrary to the anticipated results, successful students apparently 1) do not need to know a lot about the topic they write on, 2) do not learn from writing and 3) do not need to be interested in the topic. The following section will briefly review the findings, discuss them in relation to the hypotheses and provide possible explanations for the results.

The following paper written by a successful student provides an illustration from which to look at the results of this study. The paper is reproduced as the student wrote it, as are all other students' comments quoted in this chapter.

It's All in the Clothes

Personal attire has become an important social issue amoung the younger generation. What a person wears can affect and reflect his style of living. "What should I wear?", is probably the most frequently asked question by student-aged people. The answer to this question is generally influenced by three social factors: what type of statement or image a person is trying to project, the reference group to which he or she identifies, and the general trend of current fashion.

Personal image is very important in social circles. It is not often that one sees the young studious business major associating with the average punk rocker. A person's image is his statement about himself, consequently his clothing will be highly representitive of what he wants to say. For example, most people would not view a person wearing a three-piece suit, tie, and Flourshiem shoes as a head-banging rocker. Conversely, someone dressed in a black leather jacket and spiked gloves would hardly be associated with Wall Street. The mark a person wants to make in life, and what he wants to say about himself are usually projected by the type of clothing he wears.

Just as what a person wants to say, is seen in his clothing; who he wants to say it to is equally evident. For example; Johnny Frat and Suzie Sorority are members of the Greek system. This being their reference group, they want to fit in. In order to fit in, they must meet or surpass the traditional standard of overpriced designer clothing. It would be a grave day, for either Johnny or Suzie, to be caught in anything less than Levis. It would be an unforgivable sin to spend fifteen dollars on a noname shirt at J.C. Penney's when they could purchase the exact same brandname shirt for fourty-five dollars somewhere else. It is this type of social allegiance that makes the obvious distinction between greeks and normal human beings, granolas and foresters.

Probably the most widely recognized influence on an individual's attire is the current trend in fashion. What Jean-Claude What's his Face says, goes. A very good example of a fashion slave is Jenny Nonsense. In late fall, when Jean-Claude came out with a new pastel, cotton mini-skirt, Jenny just knew that was going to be big fashion. Wanting to beat the rush, she went out an bought twenty. As fall slid into winter, and the temperature dropped, this fashion trend was still hot. Of course, Jenny didn't mind the cantalope sized goose bumps on her legs or even the fact that her thieghs were frost bitten, because she was fashionable. This type of senseless slavery to fashion has drawn the blind following of hundreds-of-thousands of student aged people across the country.

For many people, what clothes to wear is the most crucial decision they make all day. Just what clothing are chosen is influenced by: the statement a person is trying to make, the specific social references he or she makes, and the trend in fashion at that moment. Once these three points have been pondered, the person is able to properly attire him or herself.

Although there are many errors, the teacher gave the student an Abecause the writer carefully demonstrated proper use of the teaching points presented up to that point in the term: thesis statement, organization, transition, and development. While the examples and illustrations are entertaining and colorful, the student has clearly not explored any new knowledge, ideas, or relationships in this composition. The graders recognized this by rating it average or above average on each of the writing measures. This paper received an 8 for holistic quality based on a 12-point scale. The following discussion of the hypotheses will use this student's paper as an example.

DISCUSSION

Hypothesis #1: Prior-knowledge scores correlate with writing scores.

The findings lend limited support for this hypothesis. The T-Test evaluated the composition measure means of the high- and lowknowledge groups and found that students with high priorknowledge scores received significantly better writing scores on the 'presidential candidates' composition for holistic quality, sophistication, content, interest, T-units, and the teacher's grade. The regression analysis certainly seems to support the priority of prior-knowledge compared to the other factors measured. On the 'clothes' composition the students with high prior-knowledge scores received significantly better writing scores for holistic quality. coherence, content, interest, teacher's grade and for fewer mechanical errors. On the 'body language' composition there was no significant relationship between prior-knowledge and any of the writing scores. Since relationships between prior-knowledge scores and the writing scores were not equally significant for all three compositions, this study did not consistently find that high priorknowledge was associated with good writing scores. The results show all possible combinations of high and low knowledge associated with high and low composition scores.

Interestingly, the final composition on 'clothes' demonstrated the strongest relationship between prior-knowledge and writing quality (despite the counter example provided above). Perhaps, the students began to use their knowledge of ideas and relationships more towards the end of the term than at the beginning. The Writing Program at the University of Montana is designed in such a way that organization was taught when the students wrote the 'body language' paper, transitions for the 'presidential candidates' composition and development for the 'clothes' composition. On the first two compositions the students directed their efforts toward form and were rewarded for that effort by the teacher. On the 'clothes' composition the teacher emphasized content more than on the earlier compositions--the full development of ideas with examples, illustrations and colorful details. This ordering of teaching points may explain why prior-knowledge correlated most with the scores on the composition on 'clothes' than on the other two compositions. Perhaps, then, a study on the effects of priorknowledge and learning on writing may best be conducted toward the end of the term when the students focus more on content than on form. On the other hand, the fact that on the 'clothes' topic the prior-knowledge factor was more important than on the 'body language' and 'presidential candidates' topics may, perhaps, suggest that good writers could also write well on the earlier topics regardless of the amount of prior-knowledge they had.

Hypothesis #2: For a student with a low prior-knowledge score, an increase in knowledge about the topic during the writing process is associated with a rise in the writing scores.

The knowledge gain measures represent the difference between the pre- and post-knowledge tests. And for the most part, students appeared to learn nothing or very little. On the 'body language' composition the high knowledge gain group received significantly higher writing scores on holistic quality, coherence, and content. And on the 'presidential candidates' composition the high knowledge group had significantly fewer errors than the low knowledge group. But more than half of the students had negative knowledge gain scores which is to say that they had higher preknowledge test scores than post-knowledge test scores. The results did demonstrate a few significant differences on the 'body language' composition, but with respect to the test scores for all three compositions, the students who demonstrated that they learned something about the topic during the writing process, did not necessarily write good papers. In fact, a few of those who appeared to learn a lot received C's and even D's on their papers. The results did not show that the students who had low prior-knowledge and appeared to learn something during the writing process wrote better.

The composition presented above illustrates these findings well. Since the student had low prior-knowledge scores the hypothesis predicted that he would have a substantial gain in learning. But his knowledge gain scores were also very low. The teacher gave him an A- and rewarded him for his development of ideas, not his learning.

These low knowledge gain scores, however, may be as a result of a loss of interest in this project on the part of the students. Perhaps, earlier in the project, the students were more interested in doing their best on the free-association tests, especially on the posttests; and then later on in the term the students realized that the knowledge tests did not affect their success in the class and tried to complete the tests quickly with little thought and effort. One teacher reported later that at the end of the term, her students had complained about having to respond to the prompts and answer the questions.

Hypothesis #3a: Interest and involvement in the topic correlate with writing scores.

The results of the statistical analyses give some support for this hypothesis that students who are interested in the topic and enjoy writing on the topic, write better compositions. Students who strongly supported the 'candidate' about whom they wrote received significantly higher writing scores for sophistication. Those students who liked writing on 'clothes' and did not find it a waste of time received significantly higher scores for interest. And those students who enjoyed writing on 'body language' received significantly better grades than those who thought 'body language' was a waste of time. On the other hand, since the relationship between interest and the writing scores was not equally significant for all three compositions, this study seems to indicate that neither enjoyment nor interest are uniformly necessary to succeed in the English composition classroom. All combinations existed between high and low interest and high and low composition scores. For example the student who wrote the paper reproduced above, wrote on the pre-questionnaire: "I feel I can write this but a lack of interest may inhibit creativity." This student succeeded in his class--he received an A; but the trained graders rated his paper about average (8 on a 12-point scale). Another student who received an A on the 'body language' paper and a good score from the trained graders (10 on a 12-point scale) wrote: "I'm bored with the subject, and quality of my writing is affected by boredom!"

Hypothesis 3b: Personal assessment of prior knowledge on the topic correlates with writing scores.

Overall, those students who indicated on the questionnaires that they knew a lot about the topics did not get better scores on their compositions. The correlation between self-reported knowledge and composition scores was low, so we find all possible combinations between high and low knowledge and high and low composition scores. Some students who said that they knew little about the topic, still wrote good papers. For example, on the 'presidential candidates' topic one student who received a B+ and a 10 (on a 12-point scale) from the graders said, "I don't know enough to write a good essay." Another who received an A- and a 10 from the graders said, "I don't know enough about each candidate to write extensively about them." Another who received an A from the teacher and a 9 from the graders on holistic quality said, "I don't know a lot about this year's campaign...so I don't know how good this paper will be." And some students who said that they knew much about the topic, wrote poor papers. For example, one student who received a C from the teacher and an 8 from the graders on holistic quality said. "I feel I am informed enough about the candidates and their followers that I can write a logical and clear essay." And another who received a C- from the teacher and a 6 from the graders on holistic quality said, "Because I am interested in Politics and I do follow the presidential race. I feel I will be able to write a decent paper." And another who received a C and an 8 on holistic quality said, "I feel confident I could write on a presidential candadate because of all I have read." And, of course, there are examples of the type of student who knew a lot and wrote a good paper: "My major is political science and this sort of topic interests me." This student received an A but an 8 on holistic guality. Overall, however, these expected and unexpected results cancel out.

Hypothesis 3c: Personal assessment of learning about the topic and the teaching points correlates with writing scores.

The amount the students said that they learned did not significantly correlate with either high or low composition scores. Many students who said they learned little (and most reported little learning) received high composition scores. And in the T-Test Analysis the students who reported high learning did not receive significantly higher scores than those who reported that they learned little. In fact, as the correlation coefficients indicated, the individuals in the low learning group often received higher composition scores than some in the high learning group.

Perhaps, good writers already know what they need to know about organization, transitions and development before they write their papers. During the writing process they use that knowledge and find that it is adequate for the type of writing they have been asked to do. Or perhaps these findings may be explained by looking at the expectations of each student. The good writers may expect to learn much in their writing and when they have finished feel that they could have done better or that they had not learned as much from the assignment as they had wanted. And the poor writers may have reported that they learned much but still may not have learned enough to receive an A or B on their papers or high ratings from the graders.

Hypothesis 3d. Time and effort spent on writing correlate with writing scores.

There was no significant correlation between the students' perceived ease or difficulty of writing and the composition scores. For the most part, students did not do any extra reading for these assignments except for the elections composition and this extra reading had neither positive nor negative correlations with the compositions scores. On the elections composition, the students who interviewed few people received significantly higher coherence scores and on the clothes composition those students who interviewed few people received significantly higher grades. Those students who spent more time writing made fewer errors in 'body language' but students who spent more time writing the 'presidential candidates' paper made more errors. Those students who indicated on the questionnaire that they had made many changes had low sophistication scores and low grades from the teacher on 'body language.' Also interesting is the fact that those students who spent much time rewriting the 'clothes' composition received significantly lower scores for interest.

The correlation coefficients and T-Test results indicate that less effort and time predict better writing scores. Possibly, the successful writers have already had much experience in writing and at this point could write with little effort and time. On the other hand, the significant correlations and mean differences are not so overwhelming as to suggest that to succeed, students should put as little effort and time as possible into their writing. The amount of time and effort do not seem to be associated with either high or low scores.

Hypothesis 3e: Personal assessment on the quality of the composition correlates with writing scores.

The students' anticipated grade did not significantly correlate with the teacher's actual grade until the final composition on 'clothes.' On the 'clothes' topic the students' personal assessments were significantly related to the grade they received from their teacher on the composition.

Apparently students do not judge their papers as their teachers do nor as the trained graders did--they evaluated their papers more highly. Not until the final composition on 'clothes' did the students' anticipation of a grade correlate with the grade they actually received. Perhaps the students were learning their teacher's criteria for evaluation or learning better how to evaluate writing through the peer-workshops.

SUMMARY

The results of this study show that prior-knowledge apparently positively affects the quality of the students' compositions (hypothesis 1). But the relationship is not so strong as to allow us to suggest that high prior-knowledge is a necessary and sufficient condition for good writing. Some writers with low-knowledge were judged to have written well, and some with high-knowledge were given low ratings. The regression analysis, on the other hand, shows that prior-knowledge is the most significant variable examined in this study. This study also indicates that those with low priorknowledge do not necessarily learn during the writing process (Hypothesis 2). In relation to the students' questionnaire responses, the findings show that prior-interest and confidence sometimes, not always, are associated high composition scores.

COMPARISON WITH OTHER STUDIES

Langer's (1984) study showed that prior-knowledge correlated highly with the quality of the composition. She even showed that high prior-organization scores seem to lead to good analytic essays and high pre-fluency scores seem to lead to good argumentative essays. Why did the results of this present study not demonstrate this same conclusion? The researcher believes that the answer lies in the difference between the two classrooms: Langer's study was conducted in a history class and the present study was conducted in a composition class. Content or ideas are more likely to be the focus in history papers whereas the form and style of writing are emphasized in composition classrooms.

Chesky (1984) found that students with high prior-knowledge on the topic and high prior-interest in the topic write significantly better compositions. Why do not the results of this study demonstrate the same conclusion? A reasonable explanation is that Chesky (1984) made the difference between high and low knowledge very clear by introducing one topic that was bound to be familiar, 'Problems with Teachers' and one topic that was bound to be unfamiliar, 'Tobacco Price Supports.' By having two topics of such clearly varying familiarity and interest, Chesky's study was, to some degree designed to show that high knowledge correlated with good writing. Chesky, in other words, may have confounded the two variables--interest and knowledge--in such a way that the subjects found it much easier to write well on one topic than on the other.

The present study, in contrast, used prior-knowledge tests to measure a more subtle kind of knowledge--differences in students' levels of knowledge on familiar English composition topics. Langer's topics were from the history class and the test measured learning of the content taught or read in class. Chesky's tests confirmed the fact that the students would have low knowledge on the unfamiliar topic and high knowledge on the familiar topic. Apparently, subtle differences in prior-knowledge on popular composition topics do not affect the writing process or the quality of the written product to any great extent. Generally, students already seem to have enough knowledge of content to succeed on the familiar topics frequently assigned to them in the English composition classroom and seem to know enough to satisfy the requirements for a particular form.

POSSIBLE CONSTRAINTS ON THE PROJECT

The results of the present study are surprisingly different from those discussed above. One way to explain or understand the findings is to analyze the constraints that existed on the research that were not anticipated in the original design. This section addresses the possible constraints and hidden assumptions that affected the present study, and suggests possible ways to resolve them in subsequent studies.

Topics. The 'body language' topic and to some extent the 'clothes' topic were complex; generally the students found it difficult to find a specific focus in their writing. Much of the writing was unthoughtful and oversimplified. For example, many students wrote about stereotypes without any further exploration beyond the obvious observations. For example, typical descriptions of "granolas" were: granolas eat yogurt and nuts, wear hiking boots to class, and never shave or brush their hair. In addition, all three topics were chosen to be assessable to some extent to all of the students and thus the knowledge tests did not demonstrate wide gaps in knowledge. For these reasons, the quality of the compositions was not dependent on the students' prior-knowledge about the topic.

Tests. The knowledge tests were designed in content classrooms and for this reason may not adequately assess prior-

knowledge on topics that are assessable to all. Perhaps a knowledge test to assess knowledge on self-generated topics could be designed.

Questionnaires. Students do not report their writing activities in such a way that all the responses can be represented in a linear way. Reports of learning gain or amount changed are subject to the perception of the individual student. Very good students and very poor students both seem to realize how little they know in relation to what there is to know; but the middle-level students feel that their present level of knowledge serves them more than adequately. Other studies would better monitor the writing processes of the students through actual observations rather than through questionnaires.

Time. The students had very little time to write and rewrite their papers. The topics were received on Friday; a draft was brought to class the next Wednesday; the final copy was turned in for a grade on Friday. It can hardly be expected, therefore, that the students would have time to learn through various methods of research with such little time for these activities. In a subsequent study, care should be taken to allow for adequate time for learning to take place.

Course Design. The course objectives and the research were in conflict. Since the course had no demands on learning content, it is hardly surprising that the post-writing tests were not better than the pre-writing tests. The teaching and, thus, most likely, the learning was about form not content. It is hardly surprising that little variation in knowledge of content was observed when the research was conducted in a setting where there was little variation by design because the teacher was trying to eliminate variation in the students' knowledge of content.

Researcher. The study was not part of the course. For this reason and because the student's grade was not linked to the tests and questionnaires, the students were not particularly motivated about doing their best on the tests and questionnaires. The prior-knowledge test fit the instructional program as a type of pre-writing activity; however, the post knowledge tests appeared not to serve either the needs of the student or the teacher. In a subsequent study the post-knowledge could be judged not by imposing a post-knowledge free-association test but by analysis of the writing itself using Langer's criteria to analyze the content of the written compositions.

SUGGESTIONS FOR FURTHER RESEARCH

The above considerations as well as the distinctions between this study and the earlier studies lead to several recommendations:

1. Develop a better prior-knowledge test and grading criteria to measure subtle differences in knowledge on popular English composition topics. Langer's (1984) free-association test and grading criteria worked well within the history class because the prompts were based on the assigned reading and the students were expected to have grasped certain historical content. Using the prompts from the reading, the graders were able easily to assess the level of students' understanding through the responses to the prompts. The composition classroom, however, needs a prior knowledge test and evaluative criteria to assess prior-knowledge on a very broad topic. The researcher feels that prompts limit the students' responses, but unfortunately cannot recommend a more suitable procedure. In addition, a better test would also make changes in knowledge more apparent because the pre- and post-tests used in this study did not demonstrate the differences in knowledge after writing. Perhaps, the test could simply be the assigned topic with the instructions to students to free-associate or brainstorm on what they know about that topic in general. This type of test would not limit their free associations to certain prompts; prompts that may not be appropriate to their experiences.

2. Design a study that would compare the quality of written compositions in the regular English composition class with the quality of compositions written in content area classes. The research would ask the question of whether students write better when they are trying to express specific ideas than when they are writing to practice certain writing conventions.

3. Explore a broader range of popular topics and priorknowledge about and prior-interest in those topics. Since the regression analysis showed that prior-knowledge and prior-interest were the main predictors for the holistic quality scores given to the compositions, further exploration of prior-knowledge and priorinterest and other potentially predictive variables on a broad range of topics would prove fruitful.

PRACTICAL IMPLICATIONS

This study leads to a re-evaluation of common assumptions that teachers hold about the teaching of writing.

1. In the composition classroom, students apparently do not learn as much about the topic through the writing process as many teachers might like to think. One of the teachers in this project asked her students to write about the presidential candidates because she really wanted them to become better informed voters. In this study, most of the students received worse scores on the post-knowledge test than on the pre-knowledge test. If teachers want their students to learn from the writing process, the teachers will need to change their teaching focus and grading criteria or include an opportunity to learn about the topic. The results of this study imply that the composition teacher needs to encourage learning about content along with form.

2. Students do not necessarily learn the teaching points from the peer workshops or from the writing and rewriting processes. In fact, most of the students reported that they learned very little from the workshops and that they changed their papers very little from the rough draft to the final draft they turned in. Teachers may want to re-assess the value of the peer workshop and the task of rewriting papers. These results imply that the composition teacher to make the peer-workshop more meaningful. Perhaps the peer workshop needs to be more structured at the beginning of the term. The teacher may need to look at the drafts and make the assignment to rewrite a very specific assignment until the students learn what rewriting really is. 3. Students receive good grades even when they are not interested in the topic assigned. In this study, some students received good grades on topics they found boring and some students received bad grades on topics they found interesting. Teachers apparently need to allow more flexibility so that students can write on something they are interested in. The teachers could provide a selection of topics from which the students could choose; or the teacher could approve topics generated by the students.

4. Teachers' grades reflect form, not substance. In this study the teachers seemed to reward the correct form rather than explorations in the topic. The A papers did not necessarily reflect innovative thinking, or learning about the topic or about writing process. Teachers may think their students are learning from writing or are being creative, but the students do not need to learn in order to succeed and hence seem to learn little. Teachers, then, need to decide what they want their students to do during the writing process. As it stands there is a double standard--teachers say they want exploration in writing. But rather than rewarding risktaking, they reward 'perfect form.' This study implies that the teachers who want their students to learn about content need to have their grading practices reflect this priority.

PERSONAL OBSERVATIONS

An old maxim quips, "Do as I say, not as I do," another, "Physician, heal thyself." As a researcher I feel obliged to look at practical situations to see whether the hypotheses make common sense. The most likely practical experience, interestingly, becomes
my own--in the writing of this dissertation. Do the hypotheses apply to me? In this final section I would like to ask myself the questions implied by the hypotheses of this project with respect to my own experience and respond to Murray's statement quoted in Chapter One. Question 1: Did I have high prior-knowledge before I began? Question 2: Did I learn anything through the writing process? Question 3: What activities during the writing process helped me learn?

Prior-knowledge. Before discussing my prior knowledge, I need to distinguish different levels of knowledge or schemata: discourse (writing a dissertation), facts about statistics, and facts about methods of teaching and evaluating writing. Before writing this dissertation I knew the main structure for the five chapters and I had a grasp of the project as a whole although I did not clearly visualize the steps and sections that made up the whole. My schema about statistics was next to nothing; but I knew that I would need to learn how to demonstrate significant relationships. My knowledge about writing was somewhat richer; because I had had prior experience teaching ESL writing, I was familiar with teaching writing as process but I was not familiar with the evaluation of native-speakers' compositions.

Knowledge Gain. Of course, I cannot quantitatively measure what I learned, but I sense I have learned much. On the discourse level I learned about the parts of the dissertation and that a writer can only work on one section at a time--slowly it becomes a whole piece. On the statistics level, I learned the formula of the correlation-coefficient and the T-Test: initially I calculated the numbers by hand in order to understand the function of the formula and then later I depended on the quick use of a computer program. And, of course, I learned what the results mean. Concerning my understanding of the teaching of writing I learned how English composition is taught at the University of Montana; I know how these students write; I know how they are evaluated; I know now what successful and unsuccessful freshman compositions are by the standards at the University of Montana.

Writing Process. More interesting than what I learned through this dissertation is how I learned it. I did not learn these things by writing alone; I interacted with other texts and with other professionals in the field. First, I read many research models: Chesky's dissertation and Langer's and DeGroff's studies. Understanding of these models, I believe, came mostly as I was designing my own model. The writing process itself was the means by which I became aware of what I needed to learn and what prompted me to explore further readings.

In addition to learning through writing after reading, I learned through writing after talking: my research questions became more clearly defined by interacting with my advisor. These discussions showed me that I was interested more in the process of learning than in the effects of prior knowledge on writing quality.

Later I learned by interacting with the three teachers, observing their classes, discovering their methods of teaching and evaluation. After the collection of the data I learned by interacting with the actual data: I read and evaluated the compositions, and statistically analyzed the data. Finally I started to write again; learning and writing, of course, in the long run, was interactive. Each draft lead to discussions with my advisor, rewriting, further discussions and rewriting. I feel that the nature of these discussions is an important key to my discovery of meaning: most importantly my advisor gave me confidence that I had something very important to say. He did not tell me what to say but he suggested categories or areas that I should confidently pursue. Again this was not a one-time talk; but each time I finished a draft, he read it and responded with enthusiasm about the ideas already there and with encouragement to continue to pursue the ideas in particular areas.

In conclusion, with regard to my experience: I will reject the narrow interpretation of hypothesis #1--I did not begin with the degree of knowledge necessary for successful writing of a dissertation. I did not have the knowledge I needed about the ideas, statistics or even form before I started. Rather I learned when it became apparent that I did not know what I needed to know. I will accept hypothesis #2--in order to write, I had to learn. As mentioned above, I learned about current writing theory, statistics, and form in order to write this dissertation. I will accept hypothesis #3--I engaged in various learning activities during the writing process: reading, discussing, writing and rewriting in order to write.

With regard to Murray's statement, "We write to discover what we know and then what we need to know," my experience is not supportive. I did not begin with writing; rather, I learned before writing. The prompt: 'you will need to write a dissertation,' caused me to first discuss ideas with my advisor, and second to read other studies and then finally to write my own research design. The prompt also caused me to learn about teaching English Composition and to learn about statistics. The prompt to write, then, forced me to do activities from which I would learn enough to be able to write. And when I started the act of writing, I realized what I needed to reread or re-discuss in order to make my writing more clear.

The writing of the students involved in this project is also not supportive of Murray's statement. In this project, the students did not write to learn nor did they use the prompt to write about a 'presidential candidate,' for example, as an opportunity to do activities that would help them learn about a candidate. I believe that they wrote to get a good grade which they apparently reasived when they wrote in a particular format. Their writing was directed toward a form and they did not need to interact with other texts or with knowledgeable people in the field in order to follow that form.

Attention to form is important but I believe that it should be put in its proper place--toward the final stages of writing. I directed my attention to form after I had written the results of my learning. Attention to form, then, came in the later drafts. The discipline of well-organized writing and correct form can help to clarify muddled ideas in the writer's mind--this has certainly been important in my writing of Chapter Five. My advisor's comments on form and structure have led, of course, to better form and readability but they have also forced me to continue to learn from the results of this research. This is to say that strictness in form forced me to explore new areas of content. But, I believe, that the writer need not, and, in fact, perhaps should not attend to form until later in the writing process.

The attention of the subjects of this study was mainly and consistently focused on form prescribed by the teacher. The peer workshops and the teacher's comments on the process and on the papers were focused on form and not on the content of the paper and its relationship with the form. This leads to the question: if the students were directed to learn some new ideas first and then later use that learning in their writing, would they write better?

I wish to conclude by reiterating a direction for further research: what type of writing situations lead to learning? Would students learn through writing if their writing demanded that they interact with other texts on the subject and with other people who are informed rather than being taught to focus on the form of presentation? Do students develop their writing skills for future long-term use when they are being taught to only focus on the form of presentation at the expense of content? Such questions, and more, will prompt our inquiries into the writing process for many years to come.

APPENDICES

APPENDIX A

COMPOSITION TOPICS

time

APPENDIX A

COMPOSITION TOPICS

week one: "Body Language" (organization)

The editor of <u>The Kiamin</u>, Kevin McRae, has given you the opinion page for next Friday's edition. In this article demonstrate how and why you think your fellow students' behavior changes in different situations, different places and different times. An interesting article may include The places you choose to illustrate your ideas can be general (churches, bars, classrooms, stadiums, gyms, outdoors, grocery stores, malls, etc) or specific (Carousel, St. Paul's church, composition class, dorm, cafeteria).

week two: "Presidential Candidates" (transitions)

Again Kevin McRae has given you half of the opinion page for next Friday's edition of <u>The Kiamin</u>. This time he wants you to write a political essay. This year will be the first time for many students at U-M to exercise their right to vote in a presidential election. For this essay choose one of the presidential candidates (Bush/Jackson/Dukakis) and then explain what you think of the person who strongly supports that candidate for President.

week three: "Clothes" (development)

"Clothes Make the Person." Social psychologists are just beginning to understand the impact that clothing can exert on the person wearing the clothing and those who interact with that person. For your article in next week's <u>Kaimin</u>, develop your own position as the "Miss Manners" of the University of Montana by answering the question "what should I wear?" thinking of the many roles, personalities and backgrounds and goals of students at U-M. APPENDIX B

PRE-WRITING QUESTIONNAIRES

APPENDIX B

PRE-WRITING QUESTIONNAIRES

BODY LANGUAGE

student number _____

Instructions: Read the following questions and answer them by circling one of the numbers below the question. This is not a test-there are no right or wrong answers. Your answers will not affect your grade; in fact, your teacher will not see your answers. Please be honest.

1. How interested are you in writing a paper on this topic?

5 4 3 2 1 interested uninterested

2. How aware are you of how you and others dress?

5 4 3 2 1 aware unaware

3. How aware are you of your body language and that of others?

5 4 3 2 1 aware unaware

4. How aware are you of your style of talk and that of others?

5 4 3 2 1 aware unaware

5. How confident are you in your ability to write a quality paper on this topic?

5 4 3 2 1 confident uncertain

6. On the back of this sheet explain your answer to question 5.

PRESIDENTIAL CANDIDATES

student number _____

Instructions: Read the following questions and answer them by circling one of the numbers below the question. There are no right or wrong answers and your anwers will not affect your grade. Please be honest.

1. How interested are you in writing a paper on this topic?

5 4 3 2 1 uninterested interested

2. How aware are you of the current presidential campaign?

5 4 3 2 1 unaware aware

- 3. How strongly do you support the candidate you have chosen to write about? 5 4 3 2 1 much little
- 4. How confident are you in your ability to write a good paper on this topic?

5 4 3 2 1 uncertain confident

5. Explain your answer to question 4.

CLOTHES

student number _____

Instructions: Read the following questions and answer them by circling one of the numbers below the question. There are no right or wrong answers and your anwers will not affect your grade. Please be honest.

1. How interested are you in writing a paper on this topic?

5 4 3 2 1 uninterested interested

2. How much do you know of formal and informal rules of dress?

5	4	3	2	1
little				much

3. How confident are you in your ability to write a good paper on this topic?

5 4 3 2 1 uncertain confident

4. Explain your answer to question 3.

APPENDIX C

RESPONSES TO 'CONFIDENCE' QUESTION

APPENDIX C

Responses to 'Confidence' guestion

These are exact transcriptions of the students' written responses.

Body Language Pre Questionnaire

From those who were highly confident (5):

- I can write about anything.
- I'm a psych major, this stuff is my life! I've also written previous essays on body language and done research on the subject because I'm interest not because its required I've also taken a comm. class that delt with this subject.
- I feel I am being shown a good way to write with the help of others in the class.
- It seems like an interesting topic, ---- well for a student in school. Theres also a lot of psychology involved, and I've had a course in psych.
- I think I do pretty well at writing papers. I have always received good grades in English. If I apply myself I usualy do okay at turning out good essays.
- I feel I can do a good job because I'm aware of others in different situations and places that I go.
- I feel my writing is good. I am able to organize my thoughts and clearly express them in writing.

From those who were confident (4):

• I feel that the topic given was broad enough that I can't pick a section of it and elaborate quite well.

- I am confident in my ability to write a paper that I am satisfied with, but all the people I know have a different ideas of what constitutes a good one.
- I think I will do fairly well on this paper because it is an interesting topic and should be fairly easy to write.
- I feel fairly confident that I will be able to write this paper. It will be a matter of drawing in and organizing the types of things normally only subtly noticed.
- It doesn't appear to be a difficult topic. It should be interesting.
- I believe I am capable of writing a good paper on this subject because I pay attention already to what goes on around me.
- I'm in a sorority and alot of emphasize is put on how you look and dress by some people on the weekends. I know quite a bit about this topic.
- I feel I would rather write on something a little bit more exciting but this topic isn't bad. I have a nonverbal comm class and am usually aware of actions and messages between people. I feel I could write a pretty good paper on this topic.
- I am fairly confident with writing a paper on this topic. I have taken communication classes, both in high school and in college that identified human non-verbal communication.
- I can write on just about anything and end up with at least a C.
- I feel I am very confident when it comes to writing. I write poetry and I feel I can expression myself in writing clearly.
- I know several people that have changed since spring has hit and can use them as examples.
- I thought of a situation that will work good for the paper.
- I feel that this topic can be very interesting but I do not feel confident with my writing ability.

- I have thought about this subject before and I have noticed how myself and others change in different situations.
- I feel I can write a good paper on this topic because I enjoy observing people, especially if they are doing unique or strange things.
- I feel that I am a good writer on any subject.
- I haven't thought about it yet so I have no idea what I'm doing.
- I constantly watch people. I don't know that I'm aware of my own body language and dress, but I certainly take interest in others. I think I could write a pretty good paper if I took the time.

From those who were neither confident nor uncertain (3):

- none
- I really don't have very much time during next week. English is a subject that I have to take and it comes last after everything else.
- It matters on how much time I have to write it. For instance this week I didn't have the time to write my paper, so I turned in a 20 minute paper which will probably receive a 'C'
- I feel like I am very observant to the people around me. Depending on the situations people do wear different masks.
- I don't know how much time I would be able to spend on the paper and this may affect the quality of it.
- I have not throughly given this topic thought at this point. I believe that once I sit and concentrate on this topic I maybe able to write a quality paper on it, but maybe not.
- One problem I had witth writing this paper is that I'm not a very religious person. This made it difficult for me to put myself in a religious persons shoes. However, I do feel strongly about my point.

- no comment
- I don't really pay attention to how someone dresses, unless it is really odd. So I don't know if I can focus on one idea.
- I'm bored with the subject and quality of my writing is affected by boredom!
- I really don't have any desire to write this paper, no desire to write would tend a person not to really care of an outcome of a paper.
- I am not completely confident on writing and a quality paper on this topic. The time limit was very short, and I was unable to really get the good, strong evidence that was needed to make a strong paper.
- I'm never confident on many apper that I do write. I do not like writing papers. I have ahard time writing on paper what I really feel. I'm very aware of my style of talk, and I feel it is unfair to be counted off for wording a sentence different than the way the teacher might word it.
- don't really think about these things too much but can spot them if I am looking specifically for them.
- Although I am not interested in writing a paper on this topic I still believe that I am skilled enough to create a successful paper.
- I can observe and understand, it is just hard to put it into words and make a reader see what I did.
- I do not live on campus, nor do I know many students. I feel that my lack of exposure to traditional campus life limits my knowledge and experience on this subject.
- I don't know that I can make valid observations about sudents in general in this area because I think people are phony most of the time, and it's hard to tell if people have "real" personalities, and to see how they differ.
- organization has always been my weak point, but I'm fairly good in observance writing.

• I have written articles for a high school newspaper before, however, I have always found it difficult to analize people.

From those who were somewhat uncertain (2):

- The paper will probably come into a little more focus as it is discussed further. The main objective will be getting to know the topic a little better.
- It's hard to say because its hard to write a negative point of view on the mascot. Which is not too bad.
- I would need to sit and think extensively about the subject before I could write. I am not sure what ideas would come to mind.
- This is something I don't think about often
- I don't feel very confident in composing a paper on this subject because I'm a non-traditional student. Therefore I don't associate very much with the other students, I don't live in a dorm. I don't go to bars which cater to the college age around etc.

From those who were uncertain (1):

- I guess I haven't had enough time to think the assignment through.
- I don't have a lot to do with other students, just my family.
- I'm not confident on writing a paper on any subject, the topic of body language is one I have never thought much about so it makes it harder.
- I cannot write, I do not like to write. Writing, for me, is borring. If I had my choice I would never have to write an essay again.

Presidential Candidate

From those who were highly confident (5):

- I've read much on the candidates
- I follow politics closely and feel I could write a pertinent essay.
- Politics bores me, but since the assignment asks for a profile on a person who supports the candidate I'll take out my aggression in that manner.
- My major is political science and this sort of topic interests me.

From those who were confident (4):

- I'm no sure I have enough knowledge about each candidates.
- I'm finding it easier to narrow down what I want to say.
- I feel confident I could write on a presidential canadate because of all I have read.
- Because I am interested in Politics and I do follow the presidential race. I feel I will be able to write a decent paper.
- I can do it because I know a lot of people with strong political views.
- I tend to watch a lot of news and specials about the Presidential race.
- I know about the race so I'm confident that I can write a descent paper.
- The only thing that I can see having a problem with is my lack of knowledge about the candidates and current issues.
- I feel I am informed enough about the canditates and their followers that I can write a logical and clear essay.

From those who were neither confident nor uncertain (3):

- I have been following the presidential campaigns a little, so I feel confident enough to try and write a paper.
- I don't really know all the view points of each person running. I may have to do some research.
- I hope I'm able to write exactly what I'm thinking and being right.
- I'm not very political but I think the candidate I'm going to write about is honest and cares about all of the citizens of this country.
- no exaplaination.
- I'm not voting, I haven't been watching them.
- One probleme I have with presidential campaigns during the primaries is all each candidate does is accuse. They don't state their views.
- I don't know a lot about this year's campaign, except who not to vote for, so I don't know how good this paper will be.
- I don't know!
- I consider my english writing comes out okay when I write a paper.
- I have no feelings one way or the other since I don't yet know anything about the candidate.
- Am not sure person will provide me with enough info. that will support his true personality for satisfaction of instructor--2 halfs that will equal the whole?!

From those who were somewhat uncertain (2):

• As a poor college boy, I don't have a subscription to any newspaper, periodicles, etc. I know there's no excuse.

- I've kept up on the campaign trail fairly well and feel adequately prepared to write on the sub.
- I don't know enough about each candidate to write extensively about them.
- I am caught up on all the candidates.
- I'm able to write with greater detail and content when the subject is something I'm interested in and familiar with.
- Boring!! I think this topic crowds each individual. It is "digression" torture! I think this essay is testing us on our political knowledge, not on our knowledge and use of English structure!
- Since I don't have much knowledge I don't expect to much.
- I have my own feelings that can be transformed into an essay.
- I know who the candidates are but I don't know anything about their policies or ideas.
- I don't know much about the election and the candidates.

From those who were uncertain (1):

- I think this topic sux. It's really a touch assignment because I'm not too involved in politics.
- I am not very interested in the pres campaign and never find time to read the paper.
- I'm Canadian I don't care.
- I have not been following the Presidential campaigns at all, so I do not feel that I can make an educated selection. This in turn effect my ability to write on it.
- I don't know enough to write a good essay.

- I haven't been following the political campaign so I don't know much about any of the candidates. It is going to be hard to write on this subject.
- I don't follow the elections.

Clothes Guestionnaire

From those who were highly confident (5):

- Just being in social situations give you much knowledge. You don't need objective materials, as many did (including myself) with the presidential article.
- I've read almost everything concerning ettiquette and dress.
- I read Glamour and Miss Manners alot.
- Clothing is something I enjoy dealing with. I'm a people watcher, and that's usually the first thing I notice.
- Im a psych major this stuff curls my toes!
- I feel I can write a good paper on this topic.
- I'm always confident.
- It seems like a relatively easy topic write on because opinions on dress can vary so greatly, especially in the 80's.
- It something that I'm very conscious of socially.
- I feel I know enough about different types of dress and their influence on personalities to write an effective paper.

From those who were confident (4):

• I consider myself well informed about proper dress behaviors.

- I find it fairly intersting and relevant to me.
- This should be easier than the last paper. Its a subject I feel I know more about, and it is not so broad.
- I am confident of coming up with a good topic and having fun with it.
- Once again, I see a large potential for satire here.
- Well I just feel that the seed of an idea I have now is such that I have, enough knowlege to semi-confident.
- I feel my writing ability is fine. I just need to work on transitions and details in this paper.
- It isn't a really tough topic and also leaves room for some imagination.
- It is a fun topic, so it should be a fun paper to write and I'll work hard on it since it's so interesting to me!

From those who were neither confident nor uncertain (3):

- I'm not sure if I will right a good paper.
- I don't know much about appropriate clothes for all sort of formal and informal occasions.
- I have spent a few years away from society!
- I learned by watching others, but I surely have not been to the Ritz so I have no idea of how to dress formally.
- Not sure on my thesis-
- I know a lot about dress, but as far as writing a good paper go's I'm not sure.
- None

- I don't think about it and I really don't care.
- I have had many occasions where it's a black tie event an others that are the tore up levis kind.
- I think I can write a mechanically correct paper but the content may lack information.
- I think I would come up with a creative solution to this assignment.
- I feel I can write this, but a lack of interest may inhibit creativity.
- I don't know a whole lot about proper manners of dress, even if I know some do's and don'ts.

From those who were somewhat uncertain (2):

- Need more time to think about topic--and develop ideas.
- It difficult to write on a topic that you aren't interested in.

From those who were uncertain (1):

- This a broad topic and it is going to be difficult to narrow down.
- I don't pay much attention to what other people wear I really only care what I like or don't like.
- The topic itself seems unclear to me. Am I supposed to write an advice column.
- I never think much about what other people are wearing and I especially don't think about what they are wearing means.
- I know about fashions and nice clothes but I could care less about who's wearing what.

APPENDIX D

POST-WRITING QUESTIONNAIRES

APPENDIX D

POST-WRITING QUESTIONNAIRES

'Body Language' Post Writing Questionnaire

Student number _____

Instructions: You have finished your writing assignment, and now I would like you to answer some questions about your writing process. Please answer the following questions by circling one of the numbers or letters below the question. Again, there are no right or wrong answers and your anwers will not affect your grade. Please be honest. Thank you.

1. How did you like writing this paper?

5 4 3 2 1 disliked liked

2. How difficult did you find the writing?

5	4	3	2	1
easy				hard

3. How much did you learn about this topic from writing this paper?

5	4	3	2	1
little				much

4. How much did you learn about organization from writing this paper?

5 4 3 2 1 nothing much

5. What is your evaluation of the quality of your paper?

5 4 3 2 1 good poor

6. How did you feel about writing this paper.

5 4 3 2 1 waste of time didn't enjoyed it mind it

- 7. How much did you read for this paper?
 - a read more than 20 pages
 - b. read 10-20 pages
 - c. read 5-10 pages
 - d. read less than 5 pages
- 8. How much other "research" did you do for this paper?

5	4	3	2	1
observed/				thought about it
interviewed others				

- 9. About how much time did you spend writing the first draft?
- 10. From wednesday's workshop how much did you learn about the topic?

5 4 3 2 1 nothing much

11. How much did you learn about organization from the workshop?

5 4 3 2 1 nothing much

12. How much did you change your paper after the workshop?

- 54321complete rewritejust typed it up
- 13. How involved were you in writing this paper?

5 4 3 2 1 uninvolved involved

14. How interesting did you find the writing?

5 4 3 2 1 interesting boring

15. About how much time did you spend rewriting your paper?

16. What grade do you think you will receive on this paper?

17. On the back, please write any additional comments you have on how you feel about your paper or on how you wrote your paper?

'Presidential Candidates' Post-Writing Questionnaire

Student number _____

Instructions: You have finished your writing assignment, and now I would like you to answer some questions about your writing process. Please answer the following questions by circling one of the numbers or letters below the question. Again, there are no right or wrong answers and your anwers will not affect your grade. Please be honest. Thank you.

1. How did you like writing this paper?

5 4 3 2 1 disliked liked

2. How difficult did you find the writing?

5 4 3 2 1 easy hard

3. How much did you learn about this topic from writing this paper?

5	4	3	2	1
little				much

4. How much did you learn about transistions from writing this paper?

5	4	3	2	1
nothing				much

5. What is your evaluation of the quality of your paper?

5 4 3 2 1 good poor

6. How did you feel about writing this paper.

5	4	3	2	1
waste of time		didn	enjoyed it	
		mind	it	

- 7. How much did you read for this paper?
 - a read more than 20 pages
 - b. read 10-20 pages
 - c. read 5-10 pages
 - d. read less than 5 pages

8.	How	many	people	did	you	interview	for	this	paper?	
----	-----	------	--------	-----	-----	-----------	-----	------	--------	--

- 9. About how much time did you spend writing the first draft?
- 10. From wednesday's workshop how much did you learn about the topic?

	nothing	5 g	4	3	2	l much
11.	How much did you	lear	m abo	ut tra	nsitior	ns from the workshop?
	5 nothing	5	4	3	2	l much
12.	How much did you	cha	inge ye	our pa	per af	ter the workshop?
	complete r	ewri	5 te	4	3	2 1 just typed it up
13.	How involved were	you	in wi	iting (this pa	aper?
	tuninvolved	5	4	3	2	l involved
14.	How interesting di	d yo	u find	the v	vriting	?
	tinteresting	5	4	3	2	1 boring
15.	About how much t	ime	did yo	ou spe	nd rev	writing your paper?
16.	What grade do you	thi	nk you	ı will ı	eceive	e on this paper?

17. On the back, please write any additional comments you have on how you feel about your paper or on how you wrote your paper?

'Clothes' Post-Writing Questionnaire

Student number _____

Instructions: You have finished your writing assignment, and now I would like you to answer some questions about your writing process. Please answer the following questions by circling one of the numbers or letters below the question. Again, there are no right or wrong answers and your anwers will not affect your grade. Please be honest. Thank you.

1. How did you like writing this paper?

5 4 3 2 1 disliked liked

2. How difficult did you find the writing?

5	4	3	2	1
easy				hard

3. How much did you learn about this topic from writing this paper?

5	4	3	2	1
little				much

4. How much did you learn about development from writing this paper?

5	4	3	2	1
nothing				much

5. What is your evaluation of the quality of your paper?

54321 good poor

6. How did you feel about writing this paper.

5	4	3	2	1
waste of time		didn't		enjoyed it
		mind		

- 7. How much did you read for this paper?
 - a read more than 20 pages
 - b. read 10-20 pages
 - c. read 5-10 pages
 - d. read less than 5 pages

- 8. How many people did you interview for this paper?
- 9. About how much time did you spend thinking about your paper and writing the first draft?
- 10. From wednesday's workshop how much did you learn about the topic?

5 4 3 2 1 nothing much

11. How much did you learn about development from the workshop?

5 4 3 2 1 nothing much

12. How much did you change your paper after the workshop?

	5	4	3	2	1
complete rewrit	e				just typed it up

13. How involved were you in writing this paper?

5 4 3 2 1 uninvolved involved

14. How interesting did you find the writing?

5 4 3 2 1 interesting boring

- 15. About how much time did you spend rewriting your paper?
- 16. What grade do you think you will receive on this paper?
- 17. On the back, please write any additional comments you have on how you feel about your paper or on how you wrote your paper?

APPENDIX E

RESPONSES TO POST-WRITING QUESTIONS

APPENDIX E

RESPONSES ON THE POST-WRITING QUESTIONS

These are exact transcriptions of the students' written responses.

'Body Language' Post-Writing Questionnaire

- Developing my thesis statement was the most difficult obstacle in writing my paper. Creating a good ending was my second biggest obstacle.
- It was a fun topic but hard to fit all the ideas together.
- Very difficult to find a topic.
- My paper was good. The only problem I saw was flowing from 1 point to the next.
- I wasn't very interested in this topic so I had a hard time getting into the paper.
- I didn't feel that I did a very good job on the essay. I didn't really care about the topic so I didn't have enough interest to put enough time into it.
- I put a lot of thought into my paper, but I don't feel it is well written.
- I was incredibly bored with the subject. I had trouble sticking with the assignment and changed my story to something I thought was at least of any significance. I thought the assignment stifled all creativity and imagination and simply called on the students to rehash and organize things that are obvisous and that we've been told over and over again.
- I love to write about people almost as much as I love to watch them.

- I had a lot of problems starting the paper. I knew what I wanted to say but I just had problems putting it on paper. The first draft had no focus. So I tried to giv it more focus on the second draft.
- I wasn't very interested in this topic.
- Kind of a lame topic but not too bad.
- It sucks.
- I wasn't able to tie my logic into the paper properly. I strayed from my thesis a little in rewrite.
- Coming up with an idea was hard at first. After I came up with a subject to write about it went somewhat easier to write.
- This week was just terrible for me! I had 3 tests. This subject was also hard for me to write about because I didn't have enough time to really think about a good developed subject.
- Some of my answers so far may seem contradictory, but this is how I perceifed this paper: I didn't really understand the topic or what I was going to write about it. After choosing a topic it became fun.
- It was hard to start but came together well in the end.
- I wrote this paper according to my feelings. I made this paper deal with feelings between people for the same reason.

'Presidential Candidates' Post-Writing Guestionnaire

- This paper was easy to write than my last one.
- The paper flowed easier--ideas etc.
- I wrote my paper based mainly on his ideas. In a editorial, I figured you would not to mabe, run down his ideas because he can't come back with a arguement. So I just told what I thought about all of his thoughts in a couple of sentences, in the conclusion. I hope I did the paper right.

- To write a good paper on this topic it would have taken a lot more time for research then we had.
- I liked writing this paper, mainly because Reagan ripping and Bush bashing are 2 of my favorite things. This was a satarists dream.
- I don't feel real good about how my paper turned out. I had a hard time getting motivated for this topic.
- Like the past assignments, I thought this was extremely boring and dry. It puts too many guidelines on the students, and doesn't allow for creativity. Plus, started with the premise that Kevin McRae asked you write this type of editorial is ludicrous.
- Politics are a drag and having to research for this sucked but I squeezed out a decent paper.
- I had a hard time writing on this subject. It seemed way to broad for me. Plus who is that excied about the 1988 election.
- I wrote this paper on a different topic.
- It is funny, when I read my paper before its typed it seems complete. After it is typed there seems to be a lot of holes in it. I feel I'm focusing better on this paper.
- A little lost on what direction to go. Tryed to go away from the 'expected' way.
- I guess that it was hard for me to describe what a certain supporter was like. It seems like you were forced to make some large generalizations.
- none.
- I had a hard time writting this paper. I felt it was to general. I would rather of wrote the paper on one of the candidates.
• I think I effectivly B.S.ed this paper.

what is going on.

- It was a little hard to get started more so than the other papers we've done. After getting stared it was easier to write and interesting.
- I kind of thought that this topic was biased towards those who follow the elections or buy the Missoulian.
- I think this is one of my better papers.

'Clothes' Post-Writing Questionnaire

- At first I couldn't narrow topic down--I wrote out lots of different ideas and put them away for a day. When I went back to do my paper, The ideas easily fell into place.
- My previous grades don't correspond with what I think. I think my thought were good and I followed her terminalogy on writing this paper.
- It's funny.
- I had a difficut time with the topic and didn't get a chance to talk to Elizabeth about it, therefore my paper isn't really about the topic, other than it is about apparell.
- I had a problem thinking of a subject until I put on a C.D. . It brought back a lot of memories about watching different people at concerts.
- none
- Again this topic gave me some trouble since I had trouble focusing. Its hard to write an intelligent paper when you know very little about the subject and are not very interested.
- I found this paper very hard to write. Thinking of a topic to write about was almost impossible to come up with. I don't think I'll get as good as grade on this paper.
- I had to completely rewrite my paper because I didn't have enough info for my first subject. The second subject seemed more humors and interesting.

APPENDIX F

PRE- AND POST-KNOWLEDGE TESTS

APPENDIX F

PRE- AND POST-KNOWLEDGE TESTS

'Body Language' Knowledge Test

Student number_____

Instructions: Using the following words as prompts I want you to brainstorm or make free associations. As you read each prompt and form an impression or meaning from it, list your ideas or impressions using words, phrases or whole sentences. Make as many associations for each prompt as possible. If you draw a blank on one prompt, just go on to the next one and return to the troublesome one later. Please do the best you can.

PERSONAL SPACE

GESTURES

POSTURE

EYE MESSAGES

VOICE PITCH AND SPEED

SOLIDARITY AND POWER IN SPEECH

APPROPRIATE DRESS

PERSONAL STATEMENT THROUGH DRESS

'Presidential Candidates' Knowledge Test

Student number_____

Instructions: Now that you have finished writing your composition, I again would like you to answer the initial questions and then using the following words as prompts brainstorm or make free associations. List your ideas or impressions using words, phrases or whole sentences. Make as many associations for each prompt as possible. Please do the best you can. Thank you.

Name the current presidential candidate you wrote/will write about?

What is his political party?

Where is he from?

What is his position or job now?

KIND OF VOTER HE APPEALS TO

INTERNATIONAL EXPERIENCE

TAXES--DEFICIT

IMAGE

POTENTIAL CONTROVERSY

MILITARY SPENDING

WILDERNESS BILL

ISRAEL--PALESTINE

WOMEN'S ISSUES

INTERNATIONAL TRADE

DRUGS

CONTRAS

ARMS REDUCTION

U. S. INVOLVEMENT IN THE PERSIAN GULF

'Clothes' Knowledge Test

Student number_____

Instructions: Now that you have finished writing your composition, I again would like you to brainstorm or make free associations using the following prompts. List your ideas or impressions using words, phrases or whole sentences. Make as many associations for each prompt as possible. Please do the best you can. Thank you.

SOCIAL POSITION

OCCUPATIONAL GOALS

ATTRACTIVENESS

CREDIBILITY

MOOD

SELF-DEFINITION

APPENDIX G

KNOWLEDGE TESTS EVALUATION

APPENDIX G

KNOWLEDGE TESTS EVALUATION

Much (3) incorporations of abstract, superordinate pinciples

superordinate concepts--higher class category

definitions--precise meaning

analogies--substitution or comparision for a literal concept or expression

linking--connecting one concept with another

Some (2) concrete, functional responses

examples--equal class, but more specific

attributes--subordinate to larger concept

defining characteristics--defines a major aspect of the concept

Little (1) diffuse, associational responses reflecting little understanding of the concept

associations--peripheral cognitive links

morphemes--echoes smaller unit of meaning such as prefixes, suffixes or root words

sound alikes--similar phonemic unites

first hand experiences--peripheral responses based on recent exposure

Rules for rating the word associations

- 1. Rate the responses in light of the assigned topic.
- 2. Rate the whole response to one prompt on its own--don't evaluate it in conjunction with other responses
- 3. Try not to read into the responses.
- 4. Score simple value judgments--good or bad--as little prior knowledge equals 1 point.
- 5. Imprecise use of words or incomplete definitions will drop a level on the rating scale, from much to some.
- 6. To assign the fluency score: If the student has written a paragraph, divide it into sentences, phrases or ideas. Count the total number of responses on the whole tests.
- Chesky, John. The Effects of Prior Knowledge and Audience on <u>Writing</u>. Dissertation. University of Kentucky, 1984. Ann Arbor: UMI, 1984. 8428407
- Langer, Judith. The effects of available information on responses to school writing tasks. <u>Research in the Teaching of English</u> 18:27-44, 1984

APPENDIX H

SCORING KNOWLEDGE TESTS AND EXAMPLE

APPENDIX H

SCORING KNOWLEDGE TESTS AND EXAMPLE

'Body Language' Knowledge Test Score Sheet

Student	IIIIII
personal space	IIIIII
gestures	
posture	
eye messages	
voice pitich and speed	
solidarity-power	
appropriate dress	
personal statementdress	
total organization	!!!!!!
total fluency	IIIIII
av organization	IIIIII
combination	IIIIII

'Presidential Candidate' Knowledge Test Score Sheet

Student	
nam etc	IIIIIII
voter appeal	IIIIIII
internat'l experience	IIIIIII
taxes-deficit	IIIIIII
image	IIIIIII
potential controversy	IIIIIII
military spending	IIIIIII
wilderness bill	IIIIIII
Israel-Palestine	IIIIIIII
women's issues	IIIIIII
international trade	IIIIIII
drugs	IIIIIIII
contras	IIIIIII
arms reduction	
U.S. in Persian Gulf	!!!!!!!
total organization	IIIIIIII
total fluency	IIIIIII
average organization	IIIIIII
combination	··

172

173

'Clothes' Example of Knowledge Test Scoring

Sample Test:

SOCIAL POSITION

Clothes make the person, Businessman wear suits granolas wear tied-died and woolen--I'm so stereotypical!

OCCUPATIONAL GOALS

With higher income, there is usually more expensive clothes in the closet! Business people wear suits and dresses, painters wear old t-shirts and jeans

ATTRACTIVENESS

They don't make enough clothes that look good on fat people! Most clothes can bring out features on people

CREDIBILITY

Most people would not trust a person with dirty torn-up clothes.

MOOD

Clothes bring out all sorts of moods in certain people.

SELF-DEFINITION

I like clothes. I wished I had more money to buy more.

IMAGE

Brings out specific personalities

Sample Score Sheet	grader A
Student	<u> </u>
social position	<u> 3 </u>
occupational goals	<u>_3_</u>
attractiveness	<u>_2</u>
credibility	<u>3</u>
mood	<u>_2</u>
self-definition	IIIIIIII
image	I <u>I</u> IIIIIII
total organization	<u>15</u>
total fluency	<u>_14</u>
av organization	<u>2.14</u>
combination	<u>_11</u>

APPENDIX I

WRITING MEASURES CRITERIA AND SCORE SHEETS

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APPENDIX I

WRITING MEASURES CRITERIA AND SCORE SHEETS

Holistic Scale

Includes thesis, organization, development, syntax and mechanics

6 = excellent in all areas except for perhaps one clearly stated thesis three or more good reasons for support no irrelevant statements clear and complete organization--definite beginnings and endings many supporting details--interesting and appropriate varied and mature sentence structure accurate and interesting word choices few or no mechanical errors

5 = good in all areas or excellent in most and average in others clear thesis two reasons given few irrelevant statements good organization many details--appropriate but not all are innovative varied sentence structure which is mostly correct and appropriate accurate but not vivid word choice or a few clumsy experiments few mechanical errors

4 = slightly above average in all areas or above average in most areas and below average in few areas

stated or easily inferred thesis one good reason--others are weak some irrelevant statements or cliche's but a few substantial ideas has an organizational plan but may digress details are usually appropriate variety in sentence structure but may have some errors or simple syntax some mechanical errors

3 = slightly below average in all areas or in most areas thesis is not clear but with some work the reader can infer it weak support-- two reasons or simple reasons many irrelevant statements may have one good idea--others are cliche's some variety in sentence structure but errors or very simple syntax many mechanical errors

2 = below average in most areas

fails to state thesis completely or explicitly has only one reason for support many irrelevant statements unclear organization a few substantial ideas but not many mostly simple word order poor word choice--some obvious inaccuracies some or many mechanical errors

1 = poor in all areas

failure to state thesis and support it irrelevant passages no apparent organization few details--unsupported generalizations no variety in did not vary sentence structure simple syntax and word choice many mechanical errors Includes reader orientation, organization, placement and use of supporting detail, paragraph and sentence transitions, and cohesive ties

6 = 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

5 = Mostly Coherent

Writer identifies the topic

Writer may have one minor digression

Writer provides some reader orientation

The support is organized according to a plan with only minor details misplaced

Writer uses cohesive ties and for the most part uses them well

Writer mostly concludes with a statement that gives the reader a sense of closure

- 4 = Partially Coherent
 - If writer does not explicitly identify the topic, s/he provides enough details so that readers can probably identify the specific subject

Writer has one main topic but there may be a few digressions Writer provides only a little reader orientation

Writer has a plan in mind, but may not sustain it throughout or may list details in inappropriate parts of the essay

Writer uses some cohesive ties such as lexical cohesion, conjunction, reference, etc., to link sentences/paragraphs together not always effectively

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

3 = Mostly Incoherent

Writer probably does not explicitly identify the topic but reader may be able to guess the topic

The paragraphs include many digressions and shifts

Writer provides little or no orientation for the reader

Writer uses a few cohesive ties but many are not used successfully

Writer does not attempt a statement of closure

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

Writer creates no sense of closure

Disourse 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 writer omits structure words, inflectional endings and/or makes numerous grammatical and mechanical errors that continuously interrupt the reading process.

Adapted from Betty Bamberg 1984. Assessing coherence: A reanalysis of Essays Written for National Assessment of Educational Progress, 1969-1979. <u>Research in the Teaching of English</u> 18: 305-319.

Sophistication Scale

Includes audience awareness, content, innovative ideas, choice of supporting detail, sentence structures, word choice

- 6 = Sophisticated
 - The writer presents a thoughtful thesis statement--probably a new way to look at the topic for the reader
 - The writer clearly directs his paper toward the university audience with respect to content and langauge
 - Writer carefully choses examples--may show some research into the subject
 - Writer uses several uncommon words or familiar words in an uncommon setting
 - Writer shows an interest in words and in putting them together in slightly unusual ways (syntax)

Writer uses words correctly and with imagination

5 = Sophisticated for the most part

Writer's thesis is thoughtful but probably not innovative Writer chooses examples well--probably from thoughtful observations

Writer chooses words to have an effect on audience Writer's words are varied, pleasing and innovative Writer's point of view is consistent and clear Writer demonstrates consistent audience awareness Writer uses words correctly

- 4 = Not sophisticated but above simplicity
 - Writer's thesis statement is clear but not innovative Writer chooses appropriate but mostly typical examples Writer attempts to speak to the audience but is inconsistent Writer attempts to use uncommon words but not always accurately
 - Writer uses mostly repetitive sentence structure but a few attempts at diversity

3 = Not Sophisticated almost simple

- Writer's thesis may be clear but is repetitive, simple or a cliché Writer is somewhat aware of audience but does not speak directly to it
- Writer does not consider the appropriateness of the word to its context

Writer's word choices are repetitive and some are inaccurate

2 = Simple

Writer's thesis probably is not immediately clear to the reader or perhaps s/he includes no thesis statement

Writer's details and support are minimal--mostly generalizations

Writer uses no variety in word choice--simple language Writer's syntax is full of tired old phrases Writer demonstrates little if any awareness of audience

1 = Very Simple

Writer presents no thesis Writer is egocentric Compostion is full of generalities Word choices are simple or inaccurate Many mechanical errors

Content Scale

Includes amount and thoughtfulness of the included detail and support

6 = lots of thoughtful content

- Writer has thought much about the topic and writes what s/he really thinks
- Writer discusses each main point long enough to show clearly what s/he means
- Writer supports each main point with arguments, examples, or details
- Writer gives the reader many thoughtful reasons for thinking this way
- Writer's points are clearly related to the topic and to the main idea or impression s/he is trying to convey

No necessary points are overlooked and there is no padding

5 = much and mostly thoughtful content

Writer has thought about the topic

Writer discusses each main point satisfactorily

- Writer supports each main point more than adequately
- Writer's points are related to the topic--perhaps one minor digression
- 4 = average
 - Writer includes perhaps one idea that is not obvious to the reader
 - Writer has good support but mostly generally accepted--not innovative

Writer usually will have some padding

Writer probably does not support every point completely adequately

3 = slightly below average

Writer probably does not really believe what s/he is writing or does not fully understand what it means

- Writer tries to guess what the teacher wants and writes what s/he thinks will get by
- Writer does not explain the points very clearly or make them come alive to the reader
- Writer writes what s/he thinks will sound good--not what s/he believes or knows.

Writer uses typical examples

The thesis statement is overworked

2 = little and poorly thought out content

Writer has not seriously considered the topic Writer does not support each point--one point may be well supported or each point poorly developed Writer uses some untrue facts

1 = mostly overworked generalizations

Writer is only trying to get something down on paper

- Some ideas may not make any sense to the reader or the writer may even contradict her/himself later on in the paper
- Writer does not explain his points; s/he only asserts them and then goes on to something else, or he repeats them in slightly different words
- Writer does not bother to check his facts, and much of what he writes is obviously untrue

Includes ideas, audience awareness, sincerity, innovative presentation, choice of words and sentence structures, choice of details

6 = Very interesting and engaging

Writer sounds like a person, not a committee
Writer seems quite sincere and candid
Writer writes about something he knows well, often from personal experience.
Writer chooses very interesting examples
Writer's presentation of the thesis is very interesting--probably

new to the reader

5 = Interesting and engaging Writer is genuine Writer usually writes about ideas s/he knows well Most examples are interesting and innovative Writer's thesis is interesting

4 = Partially interesting

Writer may try to appear better or wiser than s/he really is. Writer may use lofty sentiments and broad generalities.

Writer uses a few homely details that show that s/he knows what s/he is talking about and the second second

Writer is mostly correct but colorless, without personal feeling or imagination.

Perhaps one interesting idea

3 = Uninteresting

Writer reveals that little thought was put into the paper Details and examples are not thoughtful--they are easy for the reader to anticipate

Writer may include some inaccuracies

For the most part the writer is not aware of the audience

2 = Boring

Composition is full of cliché's--may have one interesting thought

Writer presents no new point of view

Writer includes inaccuracies

- Writer does not reveal her/himself--may sound like an encylopedia entry
- 1 = Very boring

Writer has included no interesting thoughts or sentences Writer makes no effort to entertain audience Composition is only cliché's May include many inaccuracies

Interest Scale

Includes ideas, audience awareness, sincerity, innovative presentation, choice of words and sentence structures, choice of details

6 = Very interesting and engaging

Writer sounds like a person, not a committee
Writer seems quite sincere and candid
Writer writes about something he knows well, often from personal experience.
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1 = Very boring

Writer has included no interesting thoughts or sentences Writer makes no effort to entertain audience Composition is only cliché's May include many inaccuracies Example Score Sheet

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	Holistic Quality	6	5	4	3	2	1	
	Coherence	6	5	4	3	2	1	
	Sophistication	6	5	4	3	2	1	
	Content	6	5	4	3	2	1	
	Interest	6	5	4	3	2	1	
Stud	lent	_						
	Holistic Quality	6	5	4	3	2	1	
	Coherence	6	5	4	3	2	1	
	Sophistication	6	5	4	3	2	1	
	Content	6	5	4	3	2	1	
	Interest	6	5	4	3	2	1	
Stud	lent	_						
	Holistic Quality	6	5	4	3	2	1	
	Coherence	6	5	4	3	2	1	
	Sophistication	6	5	4	3	2	1	
	Content	6	5	4	3	2	1	
	Interest	6	5	4	3	2	1	

A REAL PRIME IN LARGE

Example Master Score Sheet

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APPENDIX J

SCORING GUIDELINES FOR T-UNIT AND ERROR MEASURES

APPENDIX J

SCORING GUIDELINES FOR T-UNIT AND ERROR MEASURES

Mullis and Mellon's Guidelines for Describing three Aspects of Writing (1980) was used to delineate T-units and determine errors in the compositions. To score the essays for syntactic complexity, two trained graders marked off the sequence of T-units and divided the number of T-units by the number of words in the essay to determine mean T-unit length. This number was the T-unit score for that composition. Each main clause with its phrases and subordinate clauses counted as one T-unit. Compound sentences with two or more main clauses, are divided into as many T-units. Tunits were marked regardless of the students' punctuation.

The trained raters also examined the composition for errors. Errors were grouped under three types: sentence errors, punctuation errors, and word level errors. The student's mechanics score was the mean number of errors per 100 words of the essay. The following paragraph and sample score sheet illustrates these procedures.

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Sample Paragraph:

He not only has the great speaking abilities of Martin Luther King, but he cares about the little guys like King did. / When I say "little guys", I don't mean the people off of the Wizard of Oz. / The little guys are the unemployed, the elderly, the welfare families, etc. / Jackson wants to try and help these people get jobs, receive better benefits, or try to get some type of programs going so the welfare mothers can go to work. /

Sample Score Sheet:

topic Presidential Candidates

Student	<u>Ex</u>
words	<u>81</u>
T-units	<u>_4_</u>
sent errors	<u></u>
punc errors	_2_
word errors	<u>_3</u>
total errors	I <u>_6</u> IIIIIIII
T-score	<u>203</u>
E-score	<u>7.4_</u>

APPENDIX K

RAW SCORES

midpoint St		LICSIDENTIA	Cand	ldates	CIOCINCS		
	udents	midpoint	Stud	ents	midpoir	at Stu	idents
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1.4 9	*******	9.	0	*	1.2	0	******
1.6 4	* * *	æ	2	*****	1.4	٦	•
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2.0 9	******	1.2	Ø	*****	1.8	Ŋ	* * * *
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		2.0	ო	* *			

PRIOR-KNOWLEDGE TEST--ORGANIZATION SCORES (Table 40)

PRIOR-KNOWLEDGE TEST--FLUENCY SCORES (Table 41)

	dents	*	* * * *	*****	******	****	* *	*	* *
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Body Langu	midpoin	œ	12	16	20	24	28	32	36

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(Table 42)
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Presidenti	midpoi	0	7	4	9	œ	10	12	14	16	18
	dents	*	****	*******	*******	******	***	•	•		
uage	nt stue	6	ø	10	ດ	ø	က	0	-		
Body Lang	midpoli	0	4	œ	12	16	20	24	28		

DIFFERENCE BETWEEN PRIOR- AND POST-KNOWLEDGE TEST--ORGANIZATION SCORES (Table 43)

	lents	•	*	* * *	****	* * * *	*******	******	*	*	+
	Stud	1	3	4	Ŋ	4	-	1	6	7	-
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age	t Str	-1	0	0	3	4	9	2	က	3	-
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Body Lang	midpoi	-15	-10	-5 -	0	ß	10	15					

DIFFERENCE BETWEEN PRIOR - AND POST-KNOWLEDGE TEST--COMBINATION SCORES (Table 45)

	udents	**	**	ŧ	+	***	****	***********	* *	***	ŧ
	Str	3	3	٦	2	ß	œ	17	2	က	٦
Clothes	midpoint	-12	-10	ø	9-	-4	-2	0	2	4	10
didates	dents	ŧ	**	*******	**********	*******	•		*		
Canc	Stu	-	ი	0	ß	3	l	0	-		
Presidential (midpoint	-12	8 -	-4	0	4	80	12	16		
	idents	* *	* * * *	*******	*******	******	* * *	*	•		
Ş	Stu	က	ß	10	10	00	4	0	l		
Body Langua	midpoint	-12	~	-4	0	4	ø	12	16		

PRE-QUESTIONNAIRE--INTEREST (Table 46)

	lents	******	***	*********	*********	****
	it Stud	œ	4	11	13	7
Clothes	midpoin	1	7	က	4	ß
lidates	dents	******	****	******	******	***
al Canc	nt Stu	6	9	0	0	10
Presidenti	midpoli	1	7	က	4	ß
1	dents	****	****	*********	*******	*
Re	t Stue	9	9	14	13	4
Body Langu	midpoint	-	6	က	4	ß

PRE-QUESTIONNAIRE--CONFIDENCE (Table 47)

	idents	****	*	*********	*********	******
	t Stu	Ŋ	0	14	12	10
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didates	dents	*****	*******	********	******	***
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esidential	midpoin	-	6	က	4	വ
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POST QUESTIONNAIRE--LIKED WRITING THE PAPER (Table 48)

	tudents	***	***	*****	*******	***
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didates	dents	*******	********	****	* * *	***
Can	t Stu	10	12	13	4	4
Presidential	midpoin	-	7	က	4	ъ С
	dents	******	*******	*******	******	**
e Se	Stu	ø	11	12	ი	ო
Body Langua	midpoint	'	7	က	4	ъ С

Posr -QUESTIONNAIRE FEELINGS (Table 49) Presidential Candidates Clothes I 3 1 3 I 3 1 3 18 I 3 15 1 3 18 I 3 15 18 3 18 I 9 9 9 4 8 5	Student Student	Body Languag midpoint 2 1 3 2 4 1 Body Languag midpoint	POST - GUESTIONNAIRE FEELINGS (Table 49)	Body Language Presidential Candidates Clothes midpoint Students midpoint Students midpoint Students midpoint Students	1 3 1 3 1 3 1 3 1 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3	Post-GUESTIONNAIREINVOLVEMENT (Table 50)	Body Language Presidential Candidates Clothes midpoint Students midpoint Students midpoint Students 1 2 **
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	udents	*	***	***********	********	****
	Str	2	4	17	13	2
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Can	Stu	ო	6	12	11	œ
Presidential	midpoint	-	6	က	4	ഹ
	dents	*	******	*********	********	****
2	Stu	3	ŋ	14	12	9
Body Langua	midpoint	-	7	က	4	ß

POST-QUESTIONNAIRE--INTEREST (Table 51)

	t Students	*** ©	******	16 *********]] *********	4 ****
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Presidentis	midpoir	-	6	8 *******	4	ß
	idents	****	****	******	*****	*
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Body Langu	midpoin	-	2	က	4	Ŋ

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	dents	•	*	*****	****	***
le 52)	t Stu	1	0	ω	20	12
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NNAIRE]	dy Langu midpoin	2	ი	* 4	Ŋ	
POST-QUESTIC	Boents	•	****	*********	********	
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	Dress midpoint	6	က	4	0 U	

POST-QUESTIONNAIRE--KNOWLEDGE ABOUT THE PRESIDENTIAL CANDIDATES (Table 53)

Support	midpoint Students	1 16 *************	2 4 ****	3 17 ***************	4 2 **	5 4 ****
esidential Campaign	t Students	7 ******	******** O	6 *****]] ********	10 ********
Aware of Pre	midpoint	-	6	က	4	വ

POST-QUESTIONNAIRE--PRIOR-KNOWLEDGE ABOUT CLOTHES (Table 54)

Clothes midpoint Students

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			Post-Gues	NNOIT:	AIREDIFFICULTY	(Table 59)		
Body Langt	lage		Presidently	al Can(didates	Clothes		
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4	12	*********	4	13	********	4	13	*****
ß	7	*	ß	7	•	ß	9	* * * * *
		POST	r- G uestion	NAIRE-	AMOUNT OF READI	NG (Table	60)	
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Body Language	ľ	Presidential	l Can	didates	Clothes			
midpoint St	udents	midpoin	t Stu	dents	midpoi	int Stu	idents	
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4 5	****	က	ო	***)		
5 7	****	4	1	ŧ				
	Posr-Q	UESTIONNAL	REA	MOUNT OF WRITI	ING TIME (Tab	le 62)		
Body Language		residential	Can	didates	Clothes	Č	-	

POST-QUESTIONNAIRE--NUMBER OF INTERVIEWS (Table 61)

	dents	* *	*****	****	*******	*****	•						•	•
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sidentia	midpoin	ທຸ	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5 .5	6.0	
Pre	idents	•	* *	****	**	*********	ŧ	***		*	•	*		•
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Body Langu	midpoin	0.0	ເບ	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0

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		PO	st-Guestio	NNAIRE	ANTICIPATED GRAI	DE (Table 6((9		
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			WRITING ME	ASURE	Holistic Scores	(Table 67)			
Body Langus midpoint	t Stu	idents •	Presidenti midpoli	al Canon nt Stu	didates idents	Clothes midpoint	t Stu	dents	199
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Body Langua	ġ	£	esidential (Cand	lidates (Clothes		
midpoint	Str	udents	midpoint	Stu	dents	midpoin	it Stu	dents
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	idents	*	*****	******	*****	***	
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Body Langu	midpoin 4	<u>م</u>	9	œ	ດ	10	l

WRITING MEASURE--COHERENCE SCORES (Table 68)

WRITING MEASURE--SOPHISTICATION SCORES (Table 69)

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WRITING MEASURE--T-UNIT LENGTH (Table 72)

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	lents	•	* * *		*******	*****	* * * * *	•	****	•	* *	•	
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	nt		•	•	Γ			•••			••		
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WRITING MEASURE--NUMBER OF MECHANICAL ERRORS PER 100 WORDS (Table 73)

WRITING MEASURE--TEACHERS' GRADES (Table 74)

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