A DESCRIPTION OF READING IN THE COMPOSING PROCESS:

SKILLED AND UNSKILLED COLLEGE WRITERS

by

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(ABSTRACT)

A theoretical construct for examining the use of

reading in composing, developed from the literature review

and pilot study, was tested using audio-videotaped protocols

of students composing two drafts of an essay, followed by

retrospective interviews.

Fifteen skilled and fifteen unskilled college writers,

so designated by tests and a writing sample given by the

English department, participated in the study at a rural,

two-year technical college in a Sunbelt state during the

1984-85 school year.

The construct for examining reading in composing

included the focus of reading: word, multi-word, sentence,

multi-sentence, paragraph, multi-paragraph, and draft

levels; the purpose of reading: to verify, clarify, provide

direction, edit, or refresh memory; the effect (or outcome)

of reading: no/change or change, using Faigley and Witte's revision classification scheme to describe changes; and the amount of reading, which was a count of all occurrences of reading. The construct was useful in identifying the aspects of reading in composing. Thus, a major benefit of the study is empirical data on reading-in-composing for both skilled and unskilled writers.

A profile of each group's use of reading was developed. Then a comparison of reading by the two groups was made using chi-square and percents.

The findings revealed that (1) 29 of the 30 students were readers of their texts; (2) the skilled writers wrote and read twice as much as the unskilled writers did, but the proportion in both drafts was the same; (3) reading occurred within and between drafts for both groups; (4) both groups read most often at the multi-word level; (5) both groups read for all five purposes and when ranked by frequency, the order was the same for both groups; (6) the effect of reading differed significantly in the no-change/change categories with the skilled writers making more changes.

Findings which were statistically significant included:

the size of the corpus; the focus of reading; the difference in no-change/change decisions; and the categories of change at surface, meaning-preserving and meaning-changing levels.

The study confirmed that writing is a recursive process with reading as a major component and that both skilled and unskilled writers are readers of their texts.

The study revealed that protocol analysis and the Faigley and Witte classification scheme for revision can work well together. Second, the amount, focus, purpose, and effect of reading can be examined through thinking-aloud composing protocols. Third, reading is a more appropriate term than re-reading to describe the reading which occurs during the composing process.

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INTRODUCTION

Background of the Study

Writing is a recursive process (Murray, 1980, 1984;
Shanklin, 1981). The reading which a person does as he
produces text acts as a guide by which the writer makes
meaning of his text. We are just beginning to unravel the
complexity of this process and to understand the dimensions
of the process. Studies which address the specific role of
reading during the process can aid our understanding
(Atwell, 1981; Selfe, 1983; Stallard, 1972). Further, as
studies of skilled and unskilled writers are conducted, the
determination of differences in how writers read their own
text can be made. Those skills which unskilled writers
lack may be incorporated into more effective instruction
in composition classes.

The studies which have been conducted on the composing
process over the past fifteen years have provided
information which has expanded ways of thinking about and
teaching writing (Bridwell, 1979; Berkenkotter, 1983;
Britton, 1975; Emig, 1971; Flower and Hayes, 1977,1981a,
1981b; Graves, 1975; Matsuhashi, 1981; Mischel, 1974; Perl,

1980a; Pianko, 1979; Selzer, 1983; Sommers, 1980; Stallard, 1972). New theories have evolved as well as methods of studying composing (Murray, 1980; Shanklin, 1981). Earlier pedagogical emphasis on the written product has been enhanced by a broader emphasis on both the process and the product, or the means as well as the end. The earlier belief that writing is a linear activity made of pre-writing, writing, and editing has also broadened as the research in the composing process has revealed that most writers move back and forth from planning to translating to reviewing in a recursive manner. Also, where once composition was both studied and taught as an isolated subject dependent upon the factors of rhetorical tradition, today there are more and more advocates for linking writing and reading together as complementary activities. However, there are more descriptions of instructional programs which link writing and reading than there is actual research (Bazerman, 1979; Brook, 1981; Merkel, 1982; Lehr, 1981; Petersen, 1982; Petrosky, 1982; Trosky and Wood, 1982).

One of the greatest changes in viewing composing more broadly is the emphasis on the composer/author. Process analysis may include individually taped protocols, observation, and interviews conducted before and/or after

writing sessions (Flower and Hayes, 1981b; Perl, 1980a; Pianko, 1979; Atwell, 1981; Selfe, 1983). Various characteristics and behaviors of writers have been delineated, and paradigms have been developed from them for use in further studies.

Research has also been conducted with different groups of writers (Bridwell, 1979; Faigley and Witte, 1981; Sommers,1980). "Expert," "skilled," and "traditonal" are terms used to describe writers who know and use the traditional rules and patterns in composing. "Basic," "remedial," and "unskilled" are terms used to describe writers who are not yet prepared for the traditional writing assignments. For example, current research in similarities and differences of skilled and unskilled writers has described such aspects as composing rates (Pianko, 1979); goal-setting skills (Flowers and Hayes, 1981b); coherence (Atwell, 1981); and types of revision (Faigley and Witte, 1981; Sommers, 1980).

A new avenue to examine similarities and differences in writers is the use of reading during the composing process. Early researchers who viewed composing as a linear process of pre-writing, writing, and editing, for instance, said that reading occurred after the writing of a draft when the

author reread the draft in order to make reformulations or corrrections (Britton, 1975; Graves, 1975; Mischel, 1974; Selzer, 1983). On the other hand, those who view it as a recursive process describe reading as an integral part of the process used at any or all stages of composing (Atwell, 1981; Berkenkotter, 1983; Flower and Hayes, 1977; Matsuhashi, 1981; Murray, 1980; Perl, 1980a; Pianko, 1979; Stallard, 1976). For example, much of the work on behaviors during pauses in writing (Flower and Hayes, 1981b; Matsuhashi, 1981) addresses the use of reading throughout the process since it serves, along with mental planning, as the recursive aspect of composing.

Three studies directly address the role of reading during the composing process. They describe variety in the focus--the number of words read at a time--and purpose of reading for different types of writers: skilled and randomly selected high school writers (Stallard, 1972); traditional and basic college writers (Atwell, 1981); and high and low apprehensive college writers (Selfe, 1983). These studies also suggest differences in the results of reading of their subjects. Stallard, for example, observed thirty high school students as they wrote papers to determine, among other things, the amount, focus, and purpose of reading by

individuals and by the two groups. Atwell (1981)
video-taped twenty college students in a twenty-minute
composing session using visible and blind writing with
invisible ink conditions. She observed gross eye movements
to gauge the role of reading in the product, the process, in
interaction, and in transaction. Selfe (1983) used
video-taped data of case studies of one high and one low
apprehensive writer to examine reading as a writing
strategy. The three activities she coded as (1) reading a
word or several words; (2) reading a sentence or several
sentences and (3) reading a larger portion of the text. She
then determined the effect of the reading on the product.

Research, then, gives us evidence that reading is used
by the author during the composing process. However,
information on the amount, the focus, the purposes, and the
effects of reading is minimal and various. A question is:
Are there differences in the reading used by skilled and
unskilled writers during the composing process, and if so
what do the differences suggest about how we teach reading
as a writing strategy?

Statement of Purpose

This study examines the use of reading of thirty
skilled and unskilled college writers during the composing

process. Reading is defined as a constructive mental process of returning to one's own text during the composition of an essay. The amount, focus, purpose, and effects of reading will be determined through audio-video-taped protocols of two drafts of an essay plus a retrospective interview with each of the thirty subjects. Secondly, a comparison will be made of the use of reading by the two groups of students.

Research Questions

The following questions will guide the research:

1. What is the amount of reading during composing?

2. At what level is the reading focused, using a scale from single words to the completed draft?

3. What are the purposes of reading?

4. What are the effects of reading?

5. Are there differences in the use of reading of the skilled and unskilled groups?

Design of the Study

Guided by the research questions, I, the researcher, will act as observer and unobtrusive participant as thirty students from the developmental writing and college composition classes write two drafts of an expository essay according to the forms they use in their writing classes.

The video-tapes, transcripts made from the tapes, the products, and post-taping interviews will be the sources of the data.

The data will be analyzed to determine the role of reading by examining the amount of reading, the focus, the purpose, and effect. Interviews will be used for further clarification by students. Two faculty members will also participate by verifying decisions about the purpose and effect of reading.

All instances of reading will be coded and tabulated for individuals and for the groups in order to provide comparative data for the last research question.

Definitions

The following definitions are given for use in this study.

amount of reading: the number of times the writer stops to read something he has already written during the composing process; the frequency of reading

composing process: events that occur which take the writer from blank page to completed essay

effect of reading: decision on whether or not to change something in the text; may be at the surface or meaning level; the outcome of reading

focus of reading: the number of words a writer reads at one time; the levels of focus range from single words to draft

purpose of reading: the reason for reading a portion or all of one's draft in order to verify, provide direction, clarify, edit or refresh memory

reading: the behavior or returning to one's own text to review it for meaning as it is being produced; a constructive process which may be used within a draft or at its completion

skilled writer: an undergraduate college student with above average verbal ability, as measured by an English department writing sample and grammar test

unskilled writer: an undergraduate college student who has been designated by the English department as needing a developmental writing class prior to entering or in conjunction with freshman composition, based on a writing sample and grammar test

Limitations

Sample size, subjectivity, and the method of protocol analysis are limitations of the study. The size of the sample, thirty students, is only representative of the students in one college. While care has been taken to eliminate extremes of students with severe learning disabilities or handicaps, those selected comprise a very small group for a research study.

Second, the study is subjective by its nature. The researcher will make judgments on purposes and effects of reading, so in order to maintain as much objectivity as possible, the student subjects themselves and other faculty will be called upon to check the researcher's decisions.

The third, and perhaps, greatest limitation is the nature of protocol analysis itself. Talk/writing is not a natural method of writing for most students, so the thinking processes used can only be approximated. As Flower and Hayes (1981) suggest, what verbalizing does is give us only the tip of the iceberg "by capturing concurrent thought--the immediate contents of short-term memory" (p. 7). In spite of this limitation, it is, however, the best method of gathering data of this type.

Significance of the Study

Writing teachers continue to seek more effective ways to teach writing. Process studies in composing help them better understand what happens as students write. This study of reading as a strategy in composing adds another link to the chain of understanding about the writing process. Further, as differences in the reading of skilled and unskilled writers during composing are revealed, the problems of the less skilled writer/reader can be assessed.

Presentation of the Study

Chapter I includes the background of the study, the statement of purpose, research questions, design, definitions, significance, and limitations. Chapter II contains a review of the literature on the composing process in general, models of the process, aspects of reading in composing, a comparison of the writing/reading processes of skilled and unskilled writers, studies addressing the role of reading in composing, and methods of studying composing. Chapter III contains a presentation of the research design, the subjects, collection of data, and the method of data analysis. Chapter IV contains findings and the analysis and interpretation of the data. Chapter V includes the

conclusions and considers the implications of the study for future research and pedagogy.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

While studies of the composing process are relatively
new, there are sufficient studies to provide background and
direction for the proposed study. They include theory,
models, dimensions of reading, comparisons of types of
writers, and methodology. Donald Murray's (1980)
comprehensive theory and subsequent model address reading as
a major dimension of the composing process. From research
studies, models of the composing process with reading as a
major dimension have developed, and the major dimensions of
reading in composing--the amount, the focus, the purposes,
and the effects--have been addressed variously. Comparisons
have also been made of various types of writers.
Methodologies for these studies have included observation in
the natural environment, thinking-aloud protocols, and
interviews. Each of the aspects of composing is presented
in this review.

The Composing Process

Donald Murray's theory of composing addresses the
question of how reading helps writing find its own meaning.
What is the role of reading in the evolution from blank page
to the finished product? While Murray believes that the

process is complex with numerous instantaneous actions occurring simultaneously, he separates the elements for the sake of study into three stages: rehearsing, drafting, and revising (see Figure 1).

Rehearsing occurs when the writer looks at an assignment and makes plans for the writing. This stage is similar to Flower and Hayes' planning stage in that ideas are generated and relationships among various ideas are sought. Murray speaks of time for "experiments in meaning and form, for trying out voices, for beginning the process of play...vital to making effective meaning" (1978, p.5).

Drafting rather than writing is his term for the central stage of the writing process. He suggests that the "writer drafts a piece of writing to find out what it may have to say" (p. 6). With each succeeding draft, the writer moves himself farther away from the draft in the attempt to gain both independence and discovery in the piece.

Revising is the third operation. The writer "moves from a broad survey of the text to line-by-line editing" (p. 5). Revising becomes rehearsing, a type of rehearing (or re-seeing as in Brook, 1981). Here the backward movement becomes a "retrospective structuring," or a chance to get the feel of the text, (Perl, 1980a, p. 10) which then allows for forward movement.

1st draft	2nd draft	3rd draft

Self ⟶ to ⟶ Others

Exploration ⟶ to ⟶ Clarification

rehearse, draft	rehearse, draft	rehearse, draft
revise	revise	revise
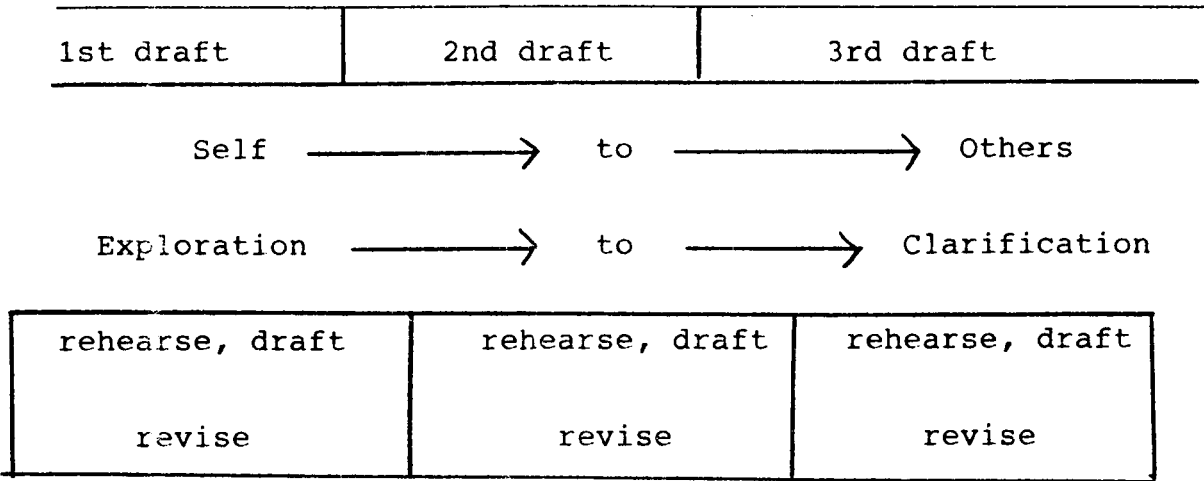
Figure 1. The mental process in composing.

Note. From "Writing as Process: how writing finds its own meaning" by D. M. Murray, 1978, in Eight Approaches to Teaching Composition, Urbana, Illinois: NCTE, p. 6.

Murray describes two activities which occur in the successive attempts of rehearsing, drafting, and revising until the final draft is completed. They are exploration and clarification. Initially, exploration gives composing its thrust. As more and more decisions are made, the ideas become more solidified or clarified until the composer is satisfied with the message.

According to Murray's theory, there are also four forces involved in the composing process as the composer moves from exploration to clarification. They are collecting, connecting, writing, and reading. He says that humans are such collectors of information that there comes a time when they begin to connect the information into reasonable or significant groupings. These two forces work together to provide a productive tension. Writing and reading are the countervailing forces at work. The creative tension begun by the collecting and connecting are communicated in print which the composer uses to further clarify his message. The back and forth movement ↕ of reading and writing influence one another; they also draw from the collecting and connecting aspects <---> of the process.

Writing

Collecting   Connecting
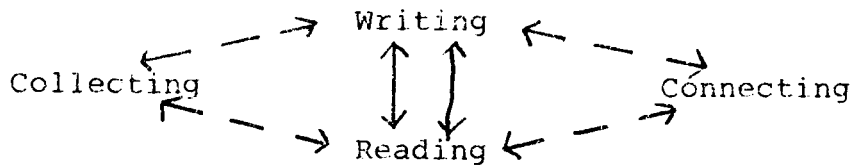
Reading

Figure 2. The writing forces.

Note. From "Writing as process." Murray, 1980, p.

10.

He states that "in action writing, we do not make the
separation of reading and writing that we make in school.
We writeread or readwrite" (1980, p. 10). The goal of the
writer is to develop a balance of the forces to complete the
desired message. Therefore, there is the constant
instantaneous movement among all of the parts.

The effect of the work of the four forces is displayed
by Murray in his model of the parts of the process as one
writes to learn (1984, p. 8). In this model, he moves away
from the earlier concept of stages (rehearsing, drafting,
revising,) into the simultaneous activities which occur (see
Figure 3).

Murray states:

The writing process, however, is recursive. We
move from an emphasis on collecting to focusing
to ordering to drafting to clarifying, but it is
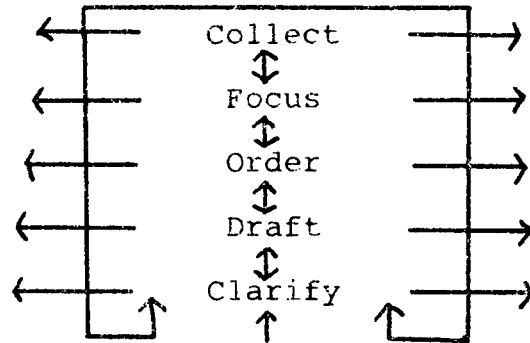
Figure 3. Composing activities.

Note. From Write to Learn (p. 8) by D. M. Murray,

1984, New York: Holt, Rinehart, and Winston.

not a neat, linear process. Often when we focus
we find we have to go back and collect new
information, and as we collect that information
we have to refocus...(1984, p. 9).

Figure 4 shows the writing process at work with the
interaction which occurs as one pursues the activity. This
process model itself is a refinement and further
clarification of Murray's earlier description of the writing
process. Its emphasis is the interaction of activities
which occur. The writer collects and recollects
information. From it, he focuses on a specific idea or bit
of information, puts it in some type of order, drafts it,
and then goes through all of that process in various ways in
order to clarify it. A writer's attention may run in any
direction as any of the activities is used. Murray does
suggest, however, that there are periods when emphasis is
greater on one aspect than another. This is seen in the
diagram when greater emphasis is placed on collecting at the
beginning and on clarifying at the final draft. This is, of
course, similar to the earlier diagram of the mental
processes in composing from draft to draft as displayed in
Figure 1.

Before the blank page . . . . Final draft

Collect← ← ← ←

Focus ←

Order ←

Draft ←

Clarify
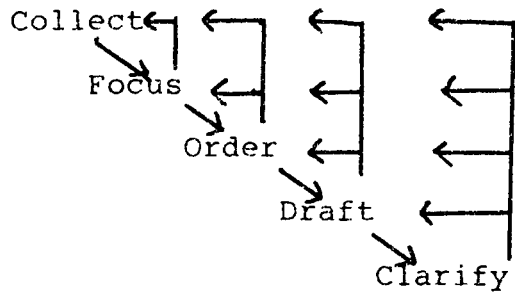
Figure 4. Process model interaction.

Note. From Write to Learn (p. 9) by D. M.

Murray, 1984, New York: Holt, Rinehart, and

Winston.

Summary

In summary, Murray's theory and model provide both sensible and manageable insight into the aspects of composing. The forces in the process are collecting, connecting, writing, and reading. The purpose is for exploration and clarification as one discovers meaning in what he writes. The focus is movement from discovering meaning for oneself to rewriting or focusing for a selected audience. The symbols of language through writing and reading bring the message from the mental image to the printed page. In each succeeding draft, the writer refines his message and in each draft, reading is a guide.

Recent research in composing supports and further expands Murray's notions. Atwell (1981), Bridwell (1979), Flower and Hayes (1977, 1980a, 1981b), Perl (1980a), Pianko (1979), Selfe (1983), and Stallard (1972), although with emphasis on varied aspects of composing, address in some way the use of reading in composing as the writer seeks to discover meaning in his own composition. These reseachers' studies are discussed in terms of models of the process, the role of reading in their studies, studies of reading in composing, and the writing of skilled and unskilled writers followed by the methodologies used to study composing.

Models from research which address reading are presented
first.

Models of the Composing Process

Which Address Reading

Murray's theory and model of the composing process are
based upon his research, teaching, and experience as a
composer over a number of years. Several other models of
composing have evolved through recent research on composing.
Reading is an important dimension in each of these paradigms
also. Among the best articulated are the models of Flower
and Hayes (1981a), Pianko (1979), Perl (1980a), and Bridwell
(1979).

Flower and Hayes

Linda Flower and John Hayes' cognitive-process model
incorporates reading as a sub-process used for reviewing the
text produced so far, called the task environment. It may
lead to editing in order to "improve the quality of the text
produced by the translating process." (1981a, p. 12).

> It does this by deleting and correcting weaknesses
> in the text with respect to language conventions
> and accuracy of meaning, and by evaluating the
> extent to which the text accomplishes the
> writer's goals (p. 12).

The movement is demonstrated in this example of the
structure of the reviewing process in Figure 5.
This reviewing process fits into their larger process model
as the third aspect of the writing process, after planning
and translating. At the bottom of the writing process model
is a guide or monitor which works back and forth from stage
to stage for deletion, correction, or evaluation.
Interacting with the processes are the writer's long-term
memory and the task environment, especially the text
produced so far. Flower and Hayes caution that the arrows
in the model do not mean that information flows "in a
predictable left to right circuit" (1981a, p. 387).

> One of the central premises of the cognitive
> process theory presented here is that writers
> are constantly, instant by instant, orchestrating
> a battery of cognitive processes as they integrate
> planning, remembering, writing, and rereading.
> The multiple arrows...are unfortunately, only
> weak indications of the complex and active
> organization of thinking processes which our work
> attempts to model (1981a, p. 387).

The Flower and Hayes' model is another interpretation
of Murray's collecting, connecting, writing, and reading
forces at work (see Figure 6).

Read next segment of text

Edit text

Text done

No ←→ Yes

Exit
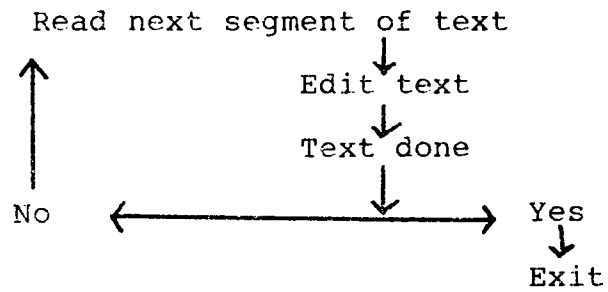
Figure 5. The reviewing process during composing.

Note.From "A Cognitive Process Theory of Writing" by

L. Flower and J. Hayes, 1981, College Composition and

Communication, 32(4), p. 17.

24
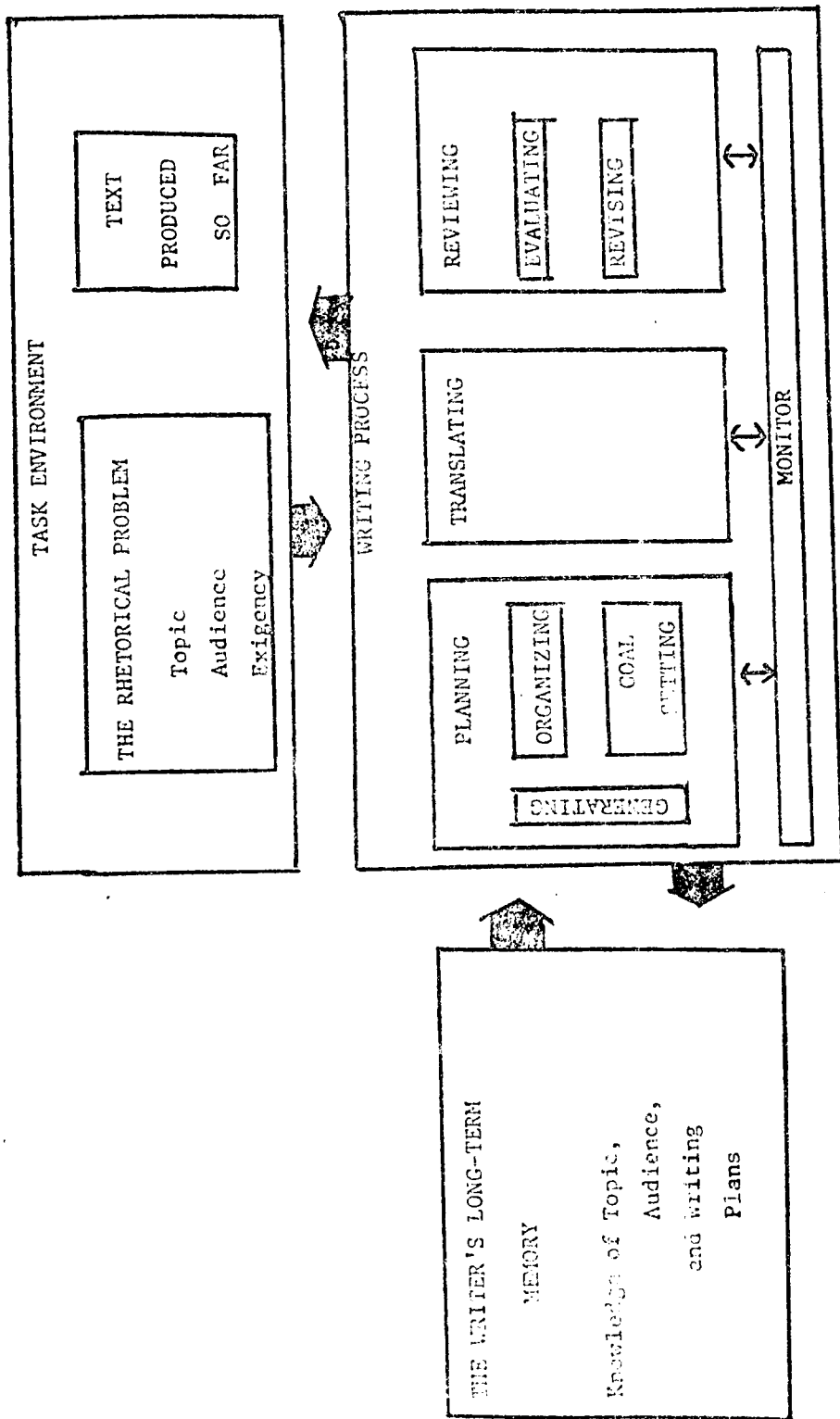
Figure 6. A cognitive-process model of composing.

Note. From "A cognitive" by L. Flower and J. Hayes, 1981,

College Composition and Communication, 32(4), p. 370.

A second model (Figure 7) which describes reading in the composing process is from Pianko (1979). In her study of the composing processes of remedial and traditional college freshmen, she identified a number of behaviors with reading described in two ways: as rescanning and rereading. She defined rescanning as "rereading of a few words, or sentences, or a paragraph" (p. 8). Rescanning is not a rereading of the entire text. During rescanning, revisions are usually made, most of which are single words, multiple words, or punctuation changes. At this time the writers contemplate what they are writing. But it is reading as a major role of the process that Pianko calls rereading.

> When this occurs, writers reread the entire script for the purpose of seeing what has been accomplished, revising and proofreading, and in some cases, for deciding on a conclusion. In many instances, rereading is done also for the counting of words (1979, p. 8).

Pianko's major dimensions of the process are pre-writing, planning, composing, rereading, stopping, contemplating the finished product, and handing in of the product. The composing dimension is sub-divided into writing, pausing, and rescanning. Even though she placed rescanning in a minor position, she found that rescanning

Pre-writing → Planning → Composing → Rereading → Stopping

Composing:
- Writing
- Pausing
- Rescanning

Rescanning → rereading, word, sentence, paragraph for revision to

(1) change single or multiple word or punctuate

(2) contemplate the writing

Rereading → entire script for

(1) content
(2) revision
(3) proofreading
(4) conclusion
(5) word count

Stopping → Contemplating the finished product (brief look over) → Handing in product

Figure 7. The Composing Processes of Traditional and Remedial College Freshmen.

Note. From "A description of the composing processes of college freshmen writers" by S. Pianko, 1979, College Composition and Communication, 13(1), p. 7.

significantly influenced the composing time and rate of composing. This indicates that reading filled an important role in the composing processes of her subjects.

One difference in Pianko's model and the models of Murray and Flower and Hayes is the separation of reading into two types. The first is rescanning, which occurs during composing, and the second is rereading, which occurs after a draft has been completed. Pianko did establish the aspects of focus (word, sentence, paragraph, entire script), purpose for reading (contemplate, evaluate content, revise, proofread, count words), the effect of reading (change or no change), and she also determined the amount of reading by counting the instances.

Reading also played a major role in the composing processes of Sondra Perl's subjects (1980a). Reading provided the back and forth movement to give the text meaning and direction. This model is derived from her study of basic college writers (see Figure 8).

Perl uses the term dimension rather than stages due to the concept of recursiveness. In her model, reading is used in the sustaining, shaping, and readying dimensions for direction, meaning, distancing, and editing. Bridwell, among others, stated that in a review of her own 1979 study that the basic writer seldom reached the readying dimension,

Readying self for writing   planning--mental scheme,

idea, commitment

Sustaining flow of writing - Translation of mental to

graphic; back and forth

movement for direction

Shaping discourse for self - Reading to match graphic

display with intended

meaning.

Rework and refine to

accomplish above.

Readying discourse for others - Read and rework for

others. Distancing self

to see if others can

follow thinking. Editing

for surface features.

Figure 8. A model of the composing process.

Note. From "A Look at Basic Writers in the Process

of Composing" by S. Perl, 1980, Basic Writing, p.

31.

the highest stage of Perl's model, stating that "what they
were not doing was rereading or rethinking their pieces as
whole texts." (1981, p. 97).

Bridwell's model for revision in the composing process
is the fourth study which addresses the importance and use
of reading. She uses the terms rescanning and rereading
which may occur either during the writing or between drafts.
The production cycle may move directly from the concept of
production to the end with no changes or re-reading
occurring. Or, as in most cases, the writer may move to the
segment she titled "discrimination of meaning or form."
This is the decision-making process which may move the
writer in one of two directions: (1) verification of
correspondence with the concept requiring little or no
further reading, or (2) the writer may find dissonance.
When the writer finds dissonance, he may decide to make a
change or not make a change. Not making a change allows the
writer to go back to the product and continue the draft.
The decision to make a change may occur in-process or
between drafts. When it is in-process, the writer goes back
to the product. A between-draft change will then move the
writer to the recopying part of the cycle. The rather
linear concept of moving directly from production to
discrimination of meaning to verification to the end

describes the pattern most often used by basic writers as reported in the literature (see Figure 9).

But the linear concept was also found in Selzer's investigation of a practicing engineer's composing process (1983). Her subject stated that he followed a well-organized mental plan, so he apparently did not find dissonance in his draft. The more recursive example is found in the protocols of skilled writers and professional writers such as in Berkenkotter's recent study of Murray (1983). Bridwell's study of revision addresses purpose and effects of reading in composing. In her model, the purpose of rescanning and rereading is to determine (1) whether there is dissonance with meaning or form or (2) whether the concept or forms are verified. The effect of such reading consists of change or no change.

The studies from which these models developed were not specifically designed to discover the role of reading in composing. However, the protocols and subsequent models reveal some information about reading; and that information can be classified as the focus of reading, the purpose, and the effect. Further, by adding up all the instances of reading, the amount of reading can be established. In the following section, the role of reading in composing is more specifically addressed. It contains an explanation of three
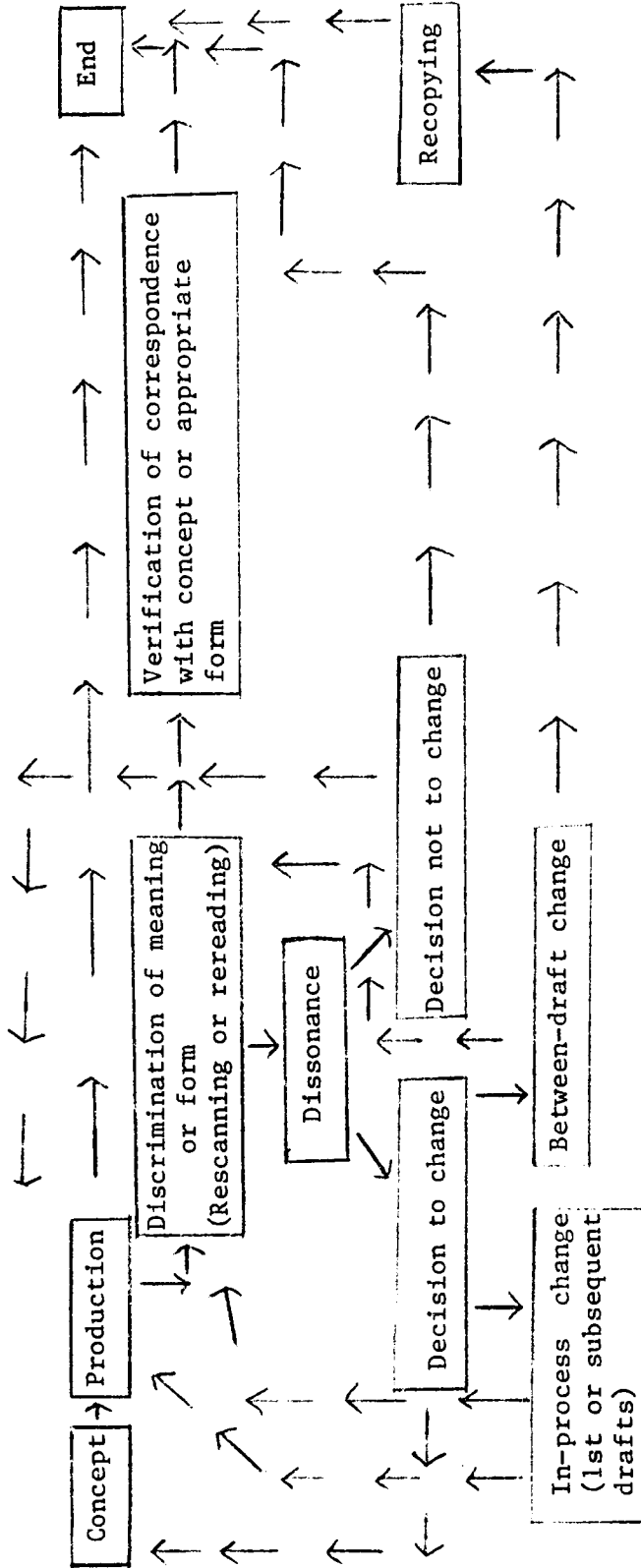
Figure 9. Revising processes in 12th grade students' transactional writing
Note. From "Revising processes," by L. Bridwell, 1979,
Dissertation Abstracts International, 80-10570, p. 152.

studies which directly examined the use of reading in composing.

Studies Addressing the Role of Reading in Composing

Further help for the design of the study comes from the three studies which specifically addressed the role of reading in composing. Charles Stallard (1972) conducted a study of high school students in an effort to compile a profile of good student writers while Margaret Atwell (1981) and Cynthia Selfe (1981) studied college writers. Atwell was interested in the relationship between how a person reads his own writing and its coherence. Selfe's interest was the relationship between writing apprehension and the use of reading during composing.

Stallard followed the lead of Janet Emig (1971) in conducting a process study. Using thirty high school writers, divided into good writers and randomly selected writers according to the STEP test, Stallard observed as each student wrote an expository essay; he then interviewed each student about the writing behaviors. Next he used the written product to determine types of revisions made. The information he sought about the students' use of reading included these questions:

1. Does he read what he has written before finishing the paper?

2. Note the time each reading behavior occurred,
   indicating whether all or a segment of the paper
   was read.

3. If he reads all of the segments of his work as he
   writes, does he make changes as he does so?

(1972, p. 30)

Stallard observed that the good writers stopped more
often than the other writers. All of the good writers
stopped to contemplate while only seven of the others did,
so he characterized good writers as readers of their texts.
In answer to question one, he compared the number of times
stopped and the mean time per student. The good writers
stopped fifty-six times while the random writers stopped
only ten times. Mean stops per student for the good writers
was 3.73 and for the random writers it was .66. The
difference in means was statistically significant at the
$p<.01$ level (1972, p. 59).

For the focus of reading, he found that the good
writers most often hesitated at the word level. He was
unable to determine the focus of reading for the random
group. His third question dealt with the effect of reading
as change or no change. However, due to the nature of the
study, he was unable to determine an exact count of
revisions made during the hesitations to read. He did use

the product, which had no erasures, to determine the nature
of revisions. He divided the revisions into spelling,
punctuation, syntax, word, multi-word, and the paragraph.
He found that revisions were made by all of the good writers
and made only twice by the writers in the random group.
Stallard stated:

> It seems quite clear at this point that a major
> behavioral characteristic of the good writer is his
> willingness to put forth effort to make his
> communication clearer to the reader. The time spent
> in writing beyond that spent by the randomly selected
> writer is time in which he reads what he has written
> and changes elements that do not suit him. (1972,
> p. 60).

Later in his profile of good student writers, one
characteristic he described as "contemplating or reading the
product of their writing at intervals during the process."
(1972, p. 61). As part of his comparison of groups, he
stated "on the basis of the evidence derived from this
study, writers in general seldom engage in such activity."
(p. 62).

Stallard's study did show writers as readers of their
work. He used several methods to collect his data. He did
classify revisions, but due to his methodology he was not

able to capture the effect of reading as it occurred. Instead, he later used the unerased product for determining effect. A question that has puzzled me was his selection of groups. All of one group were categorized as good writers, but the random sample could also have included good writers. For instance, were the six randomly selected writers who did read their texts also good writers who just happened to be placed in the random category? While that methodology question does not change the profile of good writers, it could have changed the random profile. Stallard, like Emig, does establish the importance of observation in process studies. By addressing reading, he also recognizes the recursive aspect of composing.

In the second study, Margaret Atwell's thesis was "we do a lot of reading in the process of writing any piece of text" (1981, p. 1). In order to test this idea, she set up an experiment during which reading could and could not occur. The subjects, ten traditional and ten basic skills college writers, were given twenty minutes to write a personal essay which was video-taped. For the first ten minutes the text was visible as the student wrote. During the second ten-minute segment, the subjects wrote with a pen without ink on paper which had carbon paper and another sheet atttached beneath it. In this way, the text was not

visible during the writing. This twenty-minute impromptu writing sample served as the data for analysis. The writing session was then followed by an interview during which each subject read his essay and "retrospected about the entire writing episode and the strategies he employed." (1982, p. 3).

The levels of focus toward the text established in the interviews consisted of the following: structure of discourse itself, syntax, word or surface, and external factors. Atwell used four types of analyses. The first was a propositional analysis of the product to discover the extent of global and local coherence under both conditions. The traditional writers had more of both than the basic writers did. In her examination of the process, Atwell noted thirteen specific behaviors under both conditions. Among them were reading the text under the visible condition (fifty-one times for traditional and twenty-five for basic), reading the outline or plan (eight traditional and none basic), and reading the directions (three traditional and none basic).

Atwell stated that all writers were readers of their texts, but traditional subjects read more and with a larger picture in mind. Further, when not able to read the emerging text, the traditional writers relied on mental

plans to continue developing text. The basic writers, on the other hand, made many short pauses and tended to write word by word without mental planning under the blind condition. Atwell established that both groups of students were readers as authors. The focus of reading varied from single words to the entire draft. She did not examine the effect of reading as change or no change; instead she did a transactional effect examination by having outside readers read the essay to check the effect of changing conditions on coherence. Their decisions agreed with hers.

Using the two conditions, Atwell was able to agree with others that reading and mental scheme are both part of the recursiveness of composing. The traditional writers were just better able to do both in her study.

Two questions arose about her study. First was the idea of examining reading when reading could not occur. It seemed to me to limit her study and also to put more emphasis on the role of mental planning than on reading. The second question relates to the collection of data. How many people can write a well-developed essay in twenty minutes? She did follow Britton's lead to establish the validity of her method, but an experimental condition for writing does not meet the need for studying the composing process under normal circumstances.

Atwell discovered what she set out to discover:

that the coherence of the text and character

of the process would change across conditions

that allowed the writer to read his emergent

text and one which constrained the ability

to read (1981, p. 116-A).

Atwell's study was the first video-taped process study
to examine the role of reading in composing. In that alone,
it was an improvement over Stallard's study because she
captured all that occurred as it occurred.

The third study which directly addresses the role of
reading in composing was conducted by Cynthia Selfe (1981).
Her original study was a collection of protocols of
composing and retrospective interviews about the composing
to compare the effect of one's being "writing apprehensive"*
on his composing efforts (1981). The new study is a
reexamination of those protocols to determine how reading
was used as a writing strategy for two of her original
subjects--one a high apprehensive and one a low apprehensive
(1983). She refers to Murray's (1982) suggestion that
"reading may be a kind of generative strategy" (Selfe, 1983,
p. 1).

*defined as "some form of anxiety when
faced with the task of encoding written
messages" (Daley and Miller, 1975 in
Selfe, 1981, p. 1)

She states

A careful look at the composing processes of these two

students indicates that Jim, the highly apprehensive

writer, employs a much more limited range of writing

and reading strategies and employs them less

productively in his writing than does Dan, the low

writing apprehensive. (1983, p. 1).

Selfe states further that research on apprehensives to date

has been concerned with defining the construct and

establishing the validity of a test for apprehension.

To date, no substantive research has been done to

define the relationship between writing apprehension

and reading processes students employ as they

compose. It is not even certain, for example,

how or to what extent writing apprehension is

evidenced in an individual's reading strategies

during the act of composing (p. 4).

Selfe went back to the video-tapes and retrospective

interviews conducted three years prior to study the work of

the two students. She found that they exhibited similar

patterns of writing and reading activities. They both often

reread or rescanned portions of their text. However, they

read for different purposes and in different ways. A look

at their strategies during the three stages of writing
(using Selfe's scheme) follows in Figure 10.

It appeared that for each student the concerns in
pre-writing continued into the drafting stage. Jim used
re-reading time to find specific words while David's
purposes varied. Selfe's low apprehensive writer matches
the good writer of Stallard's study and the traditional
writer of Atwell's study. Similarly, the high apprehensive
writer matches the randomly selected and basic writers of
their studies.

Selfe's methodology of case-studies using video-tape
and interviews is similar to that of the other composing
studies mentioned in the literature review. She used a
roleplay (sample composing session), two writing sessions
video-taped, and the retrospective interviews for discussion
of the tapes. The evidence she found in her re-examination
of earlier data supports the notions of Murray and others
who believe that reading plays an active role in the
composing process. Selfe's look at the time spent in
reading and the purposes for reading give us something to
build upon using more and other types of students.

These three studies provide a background and suggest
direction for further study. Stallard followed the lead of
Janet Emig (1971). Atwell built her research on the ideas

Jim (High)

Pre-writing   Scanned directions "Glanced to get general

idea of direction; limited concern for

audience--"I didn't think about them."

David (Low)

Read directions twice "extracting rhetorical

information," (p. 11); interest in audience,

aim of situation; organization.

Initial Draft   Both writers reread portions frequently.   The

table from page 15 shows the reading

strategies during the draft.   She used Ra,

Rb, and Rc to present focus.

Ra: reading a word or several words.

Rb: reading a sentence or several sentences.

Rc: reading a larger portion of the text.

	Ra		Rb		Rc	
Draft	1	2	1	2	1	2
Jim	25	5	17	6	1	2
David	136	46	144	33	74	57

(Note: All numbers represent units of five seconds;
i.e. 57 is equal to 4 minutes 48 seconds or 0:4.48)

Post-drafting   Jim

Purpose was correction; did not read to

"re-see"; less time spent.

David

Purpose was to see what was said and how;

more time spent.

Figure 10. Reading strategies of high and low apprehensive

writers.

Note. From C. Selfe, a draft, 1983, p. 14.

of James Britton (1975), while Selfe used ideas from Linda

Flower and John Hayes (1977), Linda Flower (1979), Sondra

Perl (1980a), and Ellen Nold (1979). The work of Stallard,

Atwell, and Selfe is an example of a new branch in the

composing research. A composite of their concerns and

findings also includes such aspects as the amount of reading

done by subjects, the focus of the reading, the purposes for

reading, and the effect. These three studies have

established the importance of reading to the composing

process and suggested the need for further study.

Summary

Murray's theory and model explain the importance of

reading to the composing process. The other models present

descriptions using various ways and terms of how reading is

a part of the composing process. The three studies of

reading in composing move to a more specific consideration

of reading's role in composing. Using these ideas and

research information, four dimensions or aspects of reading

have surfaced. They are the amount of reading, the focus,

the purpose, and the effect. The next section of the

literature review addresses each aspect more completely.

The Role of Reading in Composing

The literature confirms Murray's belief that we "writeread" or "readwrite" (1978, p. 10). However, partly because of the newness of this field of studies, there has not yet developed a paradigm for studying the role of reading in composing. The studies previously mentioned have touched upon reading in varying degrees, but both terms and their meanings are quite varied. In order to develop a model from which to study the role of reading in composing, this section of the review explores the literature as it relates to the research questions. Its purpose is to synthesize the information in order to build a model for the proposed study. The order for presentation follows that of the research questions: the amount of reading, the focus, the purpose, and the effect. It ends with the design of the model built for the study as synthesized from the literature review.

Amount of Reading

The amount of reading as used in this study is "the number of times the writer stops to read something he has written during the composing process." The amount of reading subjects do has been counted several ways. One way has been simply to count the number of changes made in the

product drafts as in Stallard's (1972) study. In the
audio-taped studies, the researcher can listen for reading
and examine the drafts for changes (Perl, 1980a). In the
video-taped studies, instances can be counted as they occur
during the process and in product changes (Pianko, 1979).
The fourth method is using audio-video-taping. In this
method, the instances of reading can be counted by observing
draft changes during the process as well as by listening to
the composer talk while writing. Another method which was
used by Atwell in her study of reading in composing was to
follow eye movements from a split-screen video for each
return of the writer to the text (1981). All of these
methods check the return to earlier parts of the text. The
most comprehensive method for data-gathering which appears
to provide the most accurate count is the audio-video-taped
protocol. There are three reasons for this. The researcher
observes the student actually writing; the student talks as
he writes so that reading can be heard while the student is
writing and when the video-tape is reviewed; the video-tape
and the student's product verify what occurred. Counting
the instances of reading helps the researcher to determine
how much reading occurs per individual and group.

Focus of Reading

Focus of reading as used in this study is "the number of words a writer reads at one time." Reading focus is addressed in general terms in the studies of Flower and Hayes (1981) and Perl (1980) as being in-process or between drafts. Pianko (1979) used three levels for focus: a few words, sentence, and paragraph. Selfe (1983) used a similar coding scheme of three groups but which actually indicates five levels: word or several words, sentence or several sentences, and larger portion of the text. These levels of focus can be combined thusly in order to gather more specific data: words, few words, sentence, several sentences, paragraph, and larger portion of text. This list matches reasonably well the scheme used by Bridwell (1979) as the levels for revision: surface, word, phrase, clause, sentence, multiple sentence, and text. (I am making a deduction that a reading of these elements preceded the revision.) A synthesis of all of these levels of focus which also agrees with what occurred in my pilot study is the model for this part of the study.

Plan

Word

Multi-word (phrase or clause)

Sentence

Multi-sentence (but not a paragraph)

Paragraph

Multi-paragraph (but not entire draft)

Draft

The multi-word, multi-sentence, and multi-paragraph levels provide for a more specific description of just how much of the text was read at a particular time.

Purpose for Reading

Purpose for reading is used in this study as "the reason for reading a portion or all of one's draft." In general, the purposes are two-fold: to check content and to edit. Both Murray (1984) and Shanklin (1981) address this in their theories.

The fifth component of Murray's model is clarification. He states:

It is important to remember that you are your own first reader. You have to read your copy to make sure that it is clear to you, that you are saying what you want to say (1984, p. 165).

There are four ways, he suggests, that we clarify: by discarding all or part of the text, by reconceiving, by proofing, and by editing (1984, p. 165). A writer may discard because the draft does not say what the writer wanted it to say.. He may reconceive because he needs to recollect, refocus, or reorder. Third, the writer may proofread to eliminate superficial problems, or he may edit to discover meaning and be able to share it with another reader (1984, p. 166). The purpose of the first reading is to discover meaning. The second reading's purpose is for order (1984, p. 181). The reading for meaning is to find out what it says; reading for order gives the writer a chance to check development and right order; and reading for language lets the writer check grammar, sentence variety, word choice, and transitions.

Nancy Shanklin's constructive theory of reading in composing agrees with Murray's theory. She states:

> When text production is viewed as a constructive
> process rather than a reconstructive process,
> writers must read their prior text to (1) confirm
> or disconfirm hypotheses as to whether intended
> meaning has been expressed, (2) let prior text
> help to constrain upcoming text predictions, (3)

allow prior text to help develop new perceptions,

and (4) overcome memory limitations (1981, p. 129).

These purposes she puts into three categories: for feedback,

to constrain predictions, and to discover new perceptions.

When one reads for feedback, he does so "to confirm or

disconfirm hypotheses as to whether intended meaning has

been expressed" (p. 130). This reading reduces uncertainty

about whether or not the message has been communicated.

When the reader's purpose is to constrain predictions, he

"monitors past text for meaning in order to limit meaning

choices for up-coming text" (p. 130). The third purpose is

to discover new perceptions. "At each reading, meanings not

previously apparent appear" (p. 132).

From the three studies which included the function of

reading in composing, several other purposes are given.

Stallard's general statement about purpose was that one

reads his draft so that he can make "clearer" his

communication (1972, p. 60). Atwell found that "reading

allows a writer to return in the text to pick up threads to

the discourse, recall what has been released from immediate

attention, or engender new thought" (1981, p. 12). Selfe's

good writer used reading to

retrieve words and phrases from his long term memory;

to recapture some part of that narrative thread he had

identified during his planning period; to evaluate

parts of his text in terms of his rhetorical aim; to

edit spelling, grammar, and punctuation; and to add,

delete, or substitute words in his existing text

(1983, p. 16).

All of the terms used by all five researchers fit under the

categories of checking content and editing. It appears that

even with the variations in terminology that most instances

of reading can be united into four groups. They tie

together the elements above with student comments about

their purposes for reading. The student who says, "I'm

reading to see if the meaning is clear" has clarification as

his purpose. The writer who says, "Does this say what I

meant"? is expressing the need to verify his message. The

third reader says, "I'm reading to find out where to go

next" or "I've lost my train of thought." This uses prior

text to provide direction for continuing the process. These

three elements--clarification, verification, and

direction--are the content elements. The fourth is, of

course, for editing. Questions such as "Did I say it

right"? or "Should I leave the comma between the sentences"?

provide a clue to this important aspect of composing. The

four terms selected for use in the construct are
clarification, verification, direction, and editing.

Effect of Reading

The fourth aspect of reading is effect. Effect is
defined in this study as "the decision on whether or not to
change something in the text; it may be at the surface or
meaning level." The effect of reading one's own text falls
into one of two categories: the decision to make no change
or the decision to change (Bridwell, 1979). Changes may
involve surface editing (Bridwell, 1979; Flower and Hayes,
1981b; Perl, 1980a; Pianko, 1979) or major or minor
revisions to content. The effects of reading reported in
composing are many, but they are often very general. In
order to discuss changes which occur as the result of
reading, a specific scheme is needed. There is no such
scheme yet in the reading-in-composing literature, but
Faigley and Witte (1981) have developed a research tool in
order to classify revision changes in the product. It
addresses both surface and content changes, which they call
surface and text-base changes. Their scheme consists of a
number of specific instances to categorize what happens as
writers revise. Further, when the scheme was developed,
expert raters reached ninety percent agreement or

reliability on types of revisions (1981, p. 405). Faigley
and Witte state:

> Our taxonomy of revision changes is based on
> whether new information is brought to the text
> or whether old information is removed in such a
> way that it cannot be recovered through drawing
> inferences. We call changes that do not bring
> new information to a text or remove old information
> Surface Changes...Meaning Changes...involve adding
> of new content or the deletion of existing
> content (p. 402).

The relationship between Faigley and Witte's work and this
study is the presumption that reading precedes revision and
subsequent changes which may occur. This relationship looks
like this:

> READING ---> DECISION TO CHANGE ---> EFFECT

In order to examine this, Faigley and Witte offer "a simple,
yet robust, system for analyzing the effects of revision
changes on meaning" (p. 401). It seems appropriate that
their system can be adapted for use in this study of the
effects of reading upon the text. A description of their
classification system follows.

Surface Changes

Surface changes are non-meaning changes. They may be
formal changes, usually referred to as grammar and mechanics
which include spelling, tense and modality of verbs,
abbreviations, and punctuation as well as the format, or
paragraphing. A second type of surface change is called
meaning-preserving change. The words used to describe them
are the same as for the second large category of changes,
the text-based, or content, changes. The six types of
changes with definitions are:

addition	raise to the surface what can be inferred
deletion	reader forced to infer what had been explicit
substitution	trade words or longer units that represent the same concept
permutation	rearrangement or rearrangement with substitutions
distribution	when material in one text segment is passed into more than one segment
consolidation	opposite of distribution; elements in two or more units are combined

into one unit; similar to sentence
combining (Faigley and Witte, 1981,
p. 403).

When any of these types of change occurs but there is no
meaning change, the change is considered a
meaning-preserving surface change.

Text-base Changes

Text-base changes involve changing the content either
of the microstructure or the macrostructure. A
microstructure change does not affect the summary or gist of
the text while a macrostructure change does alter the
summary. The macrostructure change is considered a major
revision. The same six types of changes listed above also
apply to these two groups of content changes. Figure 11 is
the classification scheme designed by Faigley and Witte
(1981).

We know from the composing models and other research
that writers make both surface and meaning changes.
Researchers such as Perl (1980a), Selfe (1983), and Sommers
(1980) devised their own lists of changes which are similar
to but not as extensive as Faigley and Witte's scheme. A
second advantage to Faigley and Witte's scheme is that it is
consistent and do-able. The changes students make as they

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SURFACE

Formal	Meaning-preserving
spelling	addition
tense	deletion
number	substitution
modality	permutation
abbreviation	distribution
punctuation	consolidation
format	

TEXT-BASE

Micro-structure	Macro-structure
addition	addition
deletion	deletion
substitution	substitution
permutation	permutation
distribution	distribution
consolidation	consolidation

Figure 11. A classification scheme of revision changes.

Note. From "Analyzing revision" by L. Faigley and S. Witte,
1981, College Composition and Communcation, 32(4), p. 403.

read/write, if similar to the pilot study conducted for this study, will fit into the categories in most cases. Third, the categories are specific enough to help the researcher describe specific data on changes which are surface and meaning in nature.

The only aspect not addressed by Faigley and Witte's scheme which did occur in the pilot study was revision of the writer's plan when it was not consistent with the message as it evolved during the draft. By adding revision of the plan to the scheme, the no-change or change effects encompass the activities which result from reading. Faigley and Witte (1981) themselves suggest that their model can "add a research tool which can be used in combination with other research tools such as protocol analysis." (p. 401). The experience gained in the pilot study of classifying the effects of reading during composing bears out their suggestion.

Summary

The purpose of this section of the review of the literature has been to present the various aspects of composing which involve reading. From that information, the first four research questions developed. Thus, for each instance of reading during composing, what is the focus, the

purpose and effect? For each aspect, a coding scheme has been devised using the many features described iin earlier studies. From analysis of each aspect, the model for examining the role of reading in composing has been developed (see Figure 12). It is a theoretical construct, built upon the information in the review of the literature and the pilot study.

The next section of the review addresses the reading behaviors of skilled and unskilled writers. This information provides background for the fifth research question which explores whether or not there are differences in reading as used by the two groups and if so what they are.

Writing/Reading Processes of Skilled and Unskilled Writers

Descriptions of the writing process vary according to the type of writers examined. Graves (1978) and others studied the processes of young children; Berkenkotter (1983) and Selzer (1983) studied professional writers at work. Other researchers such as Perl (1980a) and Shaughnessy (1977) have studied basic or unskilled college writers in an effort to understand what occurs in their writing and what may cause problems they have in transcribing thoughts to the printed page. More recently, comparative studies of college

Focus at which reading occurs   Number of Occurrences

    plan

    word

    multi-word

    sentence

    multi-sentence

    paragraph

    multi-paragraph

    draft

Purpose of reading   Number of Occurrences

    verify

    clarify

    provide direction

    edit

    refresh memory

Effect of reading

    no change

    change

        surface

            formal: spelling, tense, modality, abbreviation, punctuation, format

            meaning-preserving: addition, deletion, substitution, permutation,

                        distribution, consolidation

        text-base

            micro-structure: addition, deletion, substitution, permutation,

                        distribution, consolidation

            macro-structure: addition, deletion, substitution, permutation,

                        distribution, consolidation

Figure 12. Model for examining the use of reading during composing.

students have been conducted (Atwell,1981; Pianko, 1979;
Selfe (1983) using two types of writers: skilled (or
traditional) and unskilled (remedial or basic), which shed
light on the similarities and differences in the two groups.

From the analyses of the studies of college student
writers conducted by Bridwell (1979), Faigley and Witte
(1981), Flower and Hayes (1981b), Perl (1980a), Pianko
(1979), and Sommers (1980), a chart of writing behaviors has
been constructed (see Figure 13). The information has been
divided by writing stages in the composing process because
they were discussed by stages. Comments are placed under
the group in which the behavior was observed. Where a
researcher examined only one group, comments are placed with
that group. The aspects of composing for use in the
proposed study have not been used in the chart because none
of these studies looked directly at the role of reading.
However, pause time is often used for reading and the amount
of time spent in pauses can affect the amount of change or
no-change decision-making for the writer. What the chart
does establish is that there are some differences in the
composing strategies of skilled and unskilled writers.
Further, the differences are divided in Murray's (1980)
earlier dimensions of rehearsing (his newer terms are

collecting and focusing;)); drafting, when the text is being produced; and revision, when the writer clarifies or verifies the message. Those behaviors which show statistically significant differences are marked as the researchers reported them.

According to the results from the six studies listed in Figure 13, the skilled writers used the broader scope in ideas generated with their response toward the more traditional audience, genre, and topic rather than to the single topic. Also, the mean scores of pre-writing time were greater, although not much greater, than the unskilled writers. Statistical significance was not given for this data.

During the drafting period, the skilled writers paused more often than did the unskilled writers, and their use of the pause time was also different. Skilled writers tended to use the time in planning, rescanning, or reformulating while the unskilled writers glanced around the room and/or correctly spelling. We cannot, however, assume that the unskilled writer's glancing around the room was wasted time. It may have been his/her time of mental planning.

The revision behaviors were also somewhat different for the two groups. Changes for skilled writers were described

During the rehearsing stage	Skilled	Unskilled
A. Ideas generated		
1. Flower and Hayes (1981, p. 5)	60% response to audience, genre, topic	70% response to topic (sentence-level planning)
2. Perl (1980, p. 23)		return to assignment or previous sentence (sentence-level planning)
B. Time spent pre-writing Pianko (1979, p. 13) (Significant at or beyond p .05 level)	Mean score of 1.64 minutes	Mean score of less than 1 minute

During drafting		
A. Composing time Pianko, p. 13) (not significant)	Mean of 43.29 minutes	Mean of 35.75 minutes
B. Pauses Pianko, p. 13 (Significant at or beyond .01 level) Frequency	More: Mean of 23.43 Used to plan, rescan reformulate Mean frequency of 11.71	Less: Mean of 11.4 Used to glance around room, correct spelling Mean frequency of 3.70
C. Amount of rescanning Pianko (p. 13) (significant at .01 or beyond)		

During revision		
A. Bridwell (1979, p. 142)	Fewer changes	Greater changes
B. Sommers (1980, p. 386)	Large, sweeping changes	Word as unit of change (tidied-up first draft)
C. Faigley and Witte (1981, p. 406) (no significance data given)	24% were meaning changes	Surface changes: 12% meaning changes

Figure 13. Behaviors of composing of skilled and unskilled writers.

by Bridwell (1979) as fewer, by Sommers (1980) as larger and sweeping, and by Faigley and Witte (1981) as more and as meaning-changing changes rather than meaning-preserving ones. In contrast, the unskilled writers' behaviors consisted of tidied up first drafts with the word as the unit of revision (Sommers, 1980), meaning-preserving and most often single word changes (Faigley and Witte, 1981), and more changes with the majority at the surface level. The amount of time spent in revision also varied. The skilled writers had significantly longer rescanning pauses than the unskilled writers. Pianko found that the skilled writers paused twice as often and used rescanning three times as often as the unskilled writers.

Pianko's statement about the evolution of the drafts summarizes the causes of differences in the two types of writers: "What basically separates the two groups of writers is the ability to reflect on what is being written" (1979, p. 20). In her study, the skilled writers had the sense of the evolution of the whole while the unskilled writers did not.

The proposed study also assumes differences in the processes of the skilled and unskilled writers. First is the amount of time spent in reading. Evidence for the

amount of time spent comes from the studies on pauses and use of time during pauses in Flower and Hayes (1981b) and Pianko (1979). In the chart, we can see that reporting is done in different ways and with different terms. We can agree from this display that both groups of writers are readers of their texts. Second, the focus of reading was not always the same; third, the purpose was also different as some writers read for content and others for correcting spelling. Last, the effect of reading is also addressed in the revision studies of Bridwell (1979), Faigley and Witte (1981), and Sommers (1980).

Building from this base of studies on the composing process and from the comparisons made of different writers in the three studies on reading, this study proposes to examine the differences more explicitly following the aspects developed from the literature study: amount, focus, purpose, and effect.

Methods of Studying Composing

The composing studies to date have included one or more methods of gathering the data. Since Flower and Hayes' first study (1977), video-taped protocols have been popular. Observation of the writer has been used since Emig's (1971) case studies, and the researcher has served a role as

unobtrusive observer (Stallard, 1972) or as an active
participant to encourage the writer and to elicit oral
responses as the composing is done. Most studies have
included some type of interview whether it be a
pre-composing interview about attitudes toward writing or as
a post-composing interview for information and clarification
of what occurred during the writing session.

Adapting from studies of problem-solving by cognitive
psychologists Newell and Simon (1972), Flower and Hayes
developed rich data and a model of the composing process
using protocol analysis (1981a). Since that time, it has
remained a popular way to generate data. Of their study on
pauses in composing, Flower and Hayes characterize protocol
analysis thusly:

> ...these studies are based on analyses of thinking-
> aloud protocols of four subjects...asked to verbalize
> their flow of thought as they composed. We should
> emphasize that such protocols do not depend on
> writers' retrospections but are designed to capture
> thought--the immediate contents of short-term
> memory as one is writing. If accurately handled,
> thinking aloud protocols yeild enormous amount of
> information without significantly changing the

focus or content of thought. Giving a protocol is much like talking to oneself while writing. Naturally, a verbalization will not capture all the associations, resonance, and richness of a given thought, but it will tell us that such a thought was occurring. More importantly, protocols give us an extraordinarily detailed, blow-by-blow record of a writer's constantly shifting conscious attention, and by capturing the flow of concurrent thought processes, protocols avoid the unreliability of retrospective generalization. (1981a, p. 7).

Collecting protocols from thirty students is not as in-depth an activity as a case study such as the case studies of Berkenkotter (1983), Emig (1971), Graves (1975), and Weller (1982). On the other hand, protocols provide much richer data than studies restricted to product analysis` because of the glimpses they give of underlying mental processes. Flower and Hayes (1981a) state that "analyzing a protocol is like following the tracks of a porpoise, which occasionally reveals itself by breaking the surface of the sea" (1981a, p. 9).

One criticism of the thinking-aloud protocol is that by requiring a person to talk while he writes, the writing environment is not the normal one and therefore the data may be different. Another is that a more verbal subject has an advantage over the non-verbal subject thereby possibly confounding the study. The researcher needs to be aware of the advantages and disadvantages of the chosen data-collection method and do all possible to make the writing session as natural as possible. This is one reason that most studies include a sample writing session or roleplay as Selfe (1983) called it. One of the safeguards is the careful observation of the subject's behaviors during the writing session. This, too, has been used in each study to add new information and to verifyu information on the video-tapes.

The interview is the third method of data collection used in the composing studies. Kerlinger (1973) states that one of the main purposes of interviews is to "follow up unexpected results, validate other methods, and go deeper into the motivation of respondents and their reasons for responding as they do" (p. 480). After a discussion of structured and unstructured interviews, he says that

(T)he best instrument available for sounding

people's behavior, future intentions, feelings,

attitudes, and reasons for behavior would seem

to be the structured interview coupled with

an interview schedule that includes open-ended,

closed, and scale items (1973, p. 488).

Stallard, Atwell, and Selfe all used a semi-structured

interview in that they had a general list of questions to

start discussion about the student's writing. However, each

left openings for new information or discussion. Their

interviews were open-ended in their attempt to elicit

information which shed light on the composing process.

Interviewing as a technique does have weaknesses. A

student can answer the way he thinks he ought to rather than

the way he really does or believes. Also, the answers can

be so general that they add little or no worthwhile

information to what has already been gathered.

All three methods of data collection have weaknesses.

All are subjective in nature. But as long as the researcher

is aware of the limitations and works to provide the best

circumstances for the data collection, the data will be

valid.

The model proposed for this study takes into account

the advantages and disadvantages of protocol analysis,

observation, and the interview. Further, it draws from the
earlier studies to present a composite view of the role of
reading in composing (see Appendix A).

Conclusion

The review of the literature has presented an overview
of theory and studies which directly relate to the role of
reading in composing. Secondly, that information has been
used to build a theoretical construct appropriate for
gathering and analyzing data which will more explicitly
describe that role. Chapter Three presents the methodology
designed for the study. Chapter Four presents the findings
and analysis and interpretation of data. Chapter Five
presents conclusions and implications.

CHAPTER THREE

METHODOLOGY

Introduction

This study examined the role of reading during the
composing processes of skilled and unskilled college
writers. The number of occurrences of reading the text, the
focus of reading, its purposes, and effects have been
extracted from the data. The review of literature provided
theory and models of the composing process which were used
to develop the construct for explaining the use of reading
in composing. However, because former studies were designed
for different purposes, or with different types of subjects,
the amount of data available is both varied and small.
Furthermore, the composing research and studies are still in
the exploratory stages. Emig's and Stallard's studies of
high school writers using observations and descriptions of
the finished products were followed by Flower and Hayes'
thinking-aloud protocols. Since then, protocols on
composing have been audio-taped, video-taped, video-taped
using a split screen in order to time pauses and eye
movement, and audio-video-taped in an effort to record what
was said and written as it occurred.

The research method in this study was that of protocol
analysis with retrospective interviews. The oral and

written record of the composition process on video-tape provided the data needed to explore the use of reading during composing. In the retrospective interviews, each subject viewed his or her video tape and the transcription to clarify the purposes for reading and to explain strategies used. The protocols, products, and interviews generated the data required for the research. They were designed to provide an orderly description of the role of reading in the composing processes of the subjects.

Research Design

Subjects

The subjects selected for the study were full-time students in a small, public, two-year college in the rural southcentral section of the country. The students, from large cities and small towns in a five-state area, are enrolled in arts and sciences, business, and technology programs. Based on scores of the ACT and a writing sample evaluated by the English faculty, students were placed in a traditional college-level composition class or the basic skills fundamentals of writing course. The term skilled writer refers to the student in the college freshman composition class and unskilled writer refers to the student in the fundamentals of writing course.

The students in the highest ACT group, with a score of 22 or above and with a writing sample which had few errors in content, grammar, punctuation, and mechanics comprised the skilled writers' group. The "typical" unskilled writer had an ACT score below 16 and a writing sample with major errors in content, grammar, punctuation, and/or mechanics. From this group, the unskilled writers were selected. Those students with the very lowest scores were eliminated from selection due to their possibly having other learning problems besides writing ones. There were fifteen students in each group.

While the students fit into two groups as writers, as college students they represented the wide spectrum of today's two-year college students. Among the skilled writers, there were five white and one black males, seven white and two black females. The unskilled group consisted of seven white and two black males, no white females, and six black females. The ratio of nineteen white and eleven black students was not representative of the college white/black ratio of 85/15 percent. However, the population in the basic skills writing is usually fifty percent white males and fifty percent black males and females so the proportion in the study is typical of the writing classes. There were fifteen males and fifteen females in the sample.

The average age of the student body is twenty-eight.
Seven skilled and thirteen unskilled writers were
twenty-eight or under. Eight skilled and two unskilled
writers were over twenty-eight years old.

Collection of Data

The students were each asked to participate in three
writing sessions and one individual interview after the
writing sessions. All of the writing sessions and interviews
were held in an area of the Learning Center set up as a
studio. This was an attempt to make the writing situation
as similar as possible to what the students would experience
in the composition classroom. Since the unskilled writers
had writing class in the center and the freshman composition
students came there frequently for writing and other
purposes, students stated that they did not feel
uncomfortable with the setting.

The first protocol was used as a training session for
each subject to learn the technique of composing while
talking aloud and being video-taped. The writing assignment
was given just prior to composing. The students were asked
to talk/write a narrative about an experience which had
influenced their lives or to write a description of
something. Upon completion of the protocol, the students

saw the video-tape and discussed their writing and the technique with the researcher.

The second session consisted of the writing of a first draft of an expository or narrative essay. Students were asked to write a paper similar to what they would write in composition class. The topics were a career interest, a job experience, or one of the writer's own choosing. Ten of the skilled writers selected future careers while five wrote about past job experiences (see Appendix C). Nine of the unskilled writers selected career interests, four selected present jobs, and one a past job experience. Subjects were given instructions to use their usual methods for writing except that each time they stopped to read any part they were to tell why they were reading. The time limit for this part of the protocol was two hours. (Both groups normally wrote a first draft in a fifty-minute class period, so the time was more than adequate.)

During the third session, the subjects reread, reworked, revised, and/or recopied as they desired, also using the audio-video-taped protocol. The time limit was again two hours. In all three of these sessions, the researcher observed, took notes of behaviors, and encouraged the subjects to continue talking as they wrote, especially to explain their stops for reading.

The purpose of the fourth session was to interview the students. They were asked to state their knowledge about the role of reading in composing, the protocol experience, and about the essay just written. They also viewed portions of their video-tapes and the transcripts so that the researcher could elicit further information about purposes and effects of their reading.

In summary, the data collected for each subject consisted of the transcription of each video-taped writing session, the products of drafts one and two, and the interview information (see Appendixes D and E).

Analysis of the Data

The data were analyzed according to the classification scheme designed from the review of literature in Chapter Two. This analysis segment is organized in the following manner: (1) identification of the variables studied; (2) the manner in which variables were located and identified within the transcripts; (3) the use of analysis forms for individuals and groups; and (4) the interviews.

The major variables determining the role of reading in composing were the amount of reading, defined as the number of times the subject stopped to read the text; the focus of reading, defined as the number of words or portion of the text read orally; purpose for reading, defined as the reason

for reading the text; and effect, or what happened as the result of reading.

The amount of reading was determined by counting the occurrences of reading consecutively from the beginning of the first draft to the end of the second draft for each subject. The amount of reading, then, was the frequency of reading rather than how much was read at a time. A description of the other aspects of reading required the development of sub-sets of variables to provide more specific information.

The "focus of reading" variable was divided into eight sub-variables: a single word; multiple word which was either a phrase or clause but not a complete sentence, designated as M-W; a complete sentence; multiple sentences but not a paragraph, designated as M-S; a paragraph but not a complete draft; multiple paragraphs but not a complete draft, designated as M-P; the complete draft; and any part or all of the plan/outline, designated as plan. On the analysis form, the focus variables were listed as plan, word, M-W, sentence, M-S, paragraph, M-P, and draft.

The purpose for reading was the third aspect of reading examined. Four purposes for reading surfaced from the literature: verify, defined as confirming that the text said what the writer meant it to say; provide direction, defined

as using prior text as a guide to continuing; clarify,
defined as reading to evaluate whether or not the text was
clear; and edit, defined as using reading to correct or
improve content, grammar, and/or mechanics. A fifth purpose
for reading was added to the scheme when it became apparent
that many students at the beginning of the second session
were reading the first draft to refresh their memories
before working on the second draft. Thus, refresh memory
was added as a purpose for reading. The five sub-categories
of purpose, then, became verify (abbreviated as V); provide
direction (P.D.); clarify (Cl.); edit (Ed); and refresh
memory (R.M.).

The fourth major variable for determining the role of
reading was the effect (or outcome) of reading. It
addressed the result of reading a portion of the text. This
was a multi-level variable, the first level being that of
making no change or making a change. The effect of change
was then divided into the types of change as designed by
Faigley and Witte's classification scheme for revision in
composing. The second level which divided the change
element was surface and text-base. Each of these was
further sub-divided: surface into formal and
meaning-preserving; text-base into meaning-changing. Thus,
the no change/change scheme:

```
Level 1    No Change                      Change
                                        /        \
                                       /          \
Level 2                      Surface              Text-Base
                           /        |                |
                          /         |                |
Level 3    Formal    Meaning-Preserving       Meaning-Changing
             |              |                        |
Level 4    Spelling       Addition                Addition

           Punctuation    Substitution            Substitution

           Number         Deletion                Deletion

           Tense          Permutation             Permutation

           Format         Consolidation           Consolidation

           Modality

           Abbreviation
```
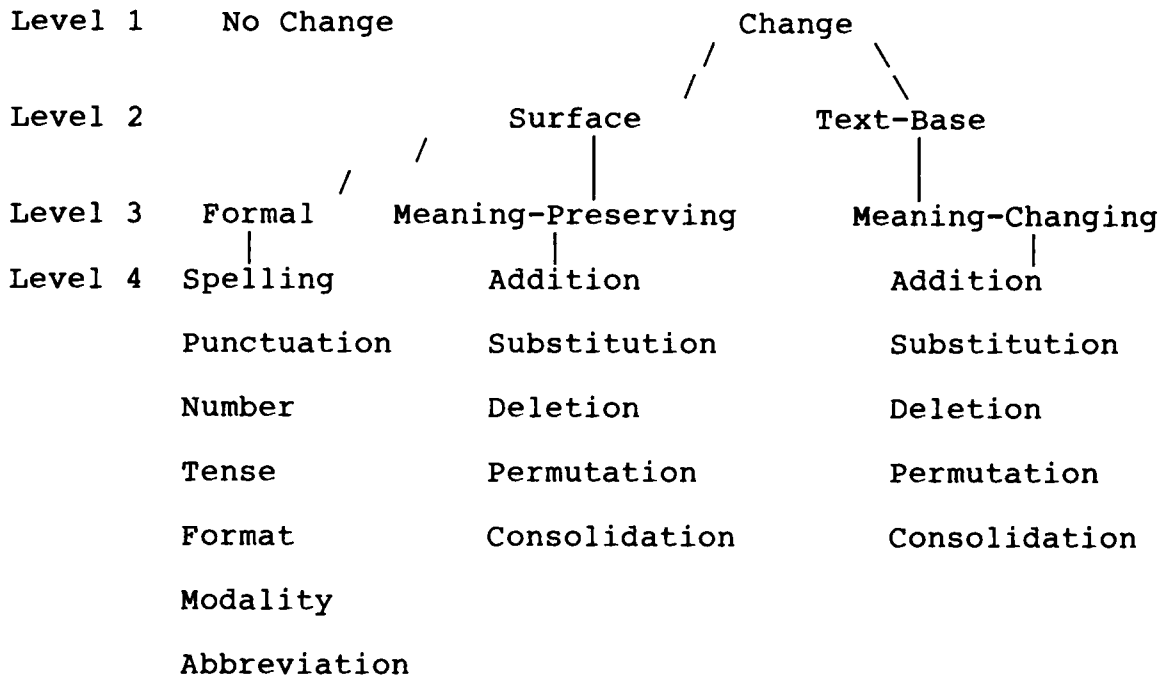
The formal surface changes involved any changes in grammar, mechanics or format. The surface changes preserved the meaning of the text, and the text-base ones changed the meaning in the text. Faigley and Witte identified two types of meaning-changing changes. Micro-structure changes would not change the gist or summary of the text while macro-structure changes would. None of the meaning-changing changes in this study changed the gist of the text, so all were considered text-base micro-structure changes.

The analysis of data followed the construct developed in Chapter Two from the literature review. The actual process used for data analysis is presented in Figure 14.

1. Find focus ⟶ ⟶ ⟶ 2. Determine purpose

Plan/outline
Word, Multi-word
Sentence, Multi-sentence
Paragraph, Multi-paragraph
Draft
Total

Verify
Refresh memory
Provide direction
Edit
Clarify
Total

3. Determine Effect

No Change

Change

Surface

Text-Base

Formal

Meaning-preserving

Meaning-changing

Spelling
Punctuation
Number
Tense
Format
Modality
Abbreviation

Addition
Substitution
Deletion
Permutation
Consolidation

Addition
Substitution
Deletion
Permutation
Consolidation

4. Total Amount of Reading.

Figure 14. Analysis process for Determining the Use of Reading in Composing.

After the variables and coding scheme were identified,
the next step was to determine how to mark the transcripts
for the location of reading and subsequent indication of the
variables.

The video-tapes were transcribed verbatim, using the
following scheme to differentiate activities during
composing. Single underlining denoted the written text,
double underlining denoted each instance of reading, and
talking/discussion by the composer as well as researcher's
observations were inserted where they occurred during the
composing session in parentheses. For example,

Wth (I spelled with wrong.) With my work

experience... (Subj. SK, 14)

Next, all the instances of reading were recorded in the
right-hand margin of the transcript page on the line where
the reading occurred using the code developed for the
construct. For example, if 6 V Sub appeared in the margin,
it indicated that reading instance number 6 was for the
purpose of verification and its effect was a substitution.
The focus for that instance was marked in the text itself by
the number of words double-underlined in that segment of the
text as in this example.

Of late, (M-W; changes to Lately) Lately, ...

(Sk; 13)   6 V Sub

Each occurrence of reading was reviewed several times by the researcher to establish consistency in the decisions about reading purpose and effect. Determining the purpose was a subjective judgment, and therefore possibly the most problematic aspect of interpretation. Consequently, one of the purposes of the retrospective interviews was to share the transcripts with the students so they could verify their purposes for reading portions of the text. Questions about effect of reading also occurred. Two English faculty members participated in determining whether changes were surface or text-base, meaning-preserving or meaning-changing. All changes made by the students and the original text were typed for external evaluation. The faculty members were asked to read the material and use the Faigley and Witte definitions to decide whether the changes were meaning-preserving or meaning-changing. Agreement on the changes by two faculty members and the researcher was 89 percent (see Appendix F).

The information from each transcript was transferred to an individual analysis sheet. The analysis grid listed all the focus variables on the vertical and purpose and effect across the top. All of the instances of reading were then marked in the appropriate cells (see Appendix B). Items were totalled across rows and down columns. Other

information on the analysis included the subject's

designation as skilled or unskilled, his number, and

information about the writer: the number of the video-tape,

the number of instances of reading, and the number of words

in the text.

The individual analysis sheets were used to compile the

individual profiles and from them the group profile. From

this the comparison data was listed on the form similar to

the model used for analysis (see Appendix A). Two columns

were added at the top of the page to indicate to which group

the numbers applied.

Percentages and the chi-square test for independent

samples were used to determine differences between the

groups which were statistically significant. That

information was compiled in tables and figures for use in

discussion of results.

The interview information was also compiled for each

group using interview sheets (see Appendix G). Responses

were listed, matched within the group, and then compared

between groups. The original interview guide had a section

for discussion of specific questions about portions of the

video-tapes. As the interviews proceeded, however, it

became apparent that a better plan was to write the answers

to specific questions about the texts on the transcription

pages themselves. Therefore, following discussion of the
eight questions in the interview guide, the researcher went
to the transcriptions to record the responses during
discussion with each writer.

Analysis and Interpretation

The results of the data analysis and interpretation of
the data are found in Chapter IV of the study. Conclusions
and implications are found in Chapter V.

CHAPTER FOUR

FINDINGS, ANALYSIS AND INTERPRETATION

Introduction

This study sought an explanation about the role of reading during the composing processes of skilled and unskilled college writers. From the literature, the researcher developed and tested a model of reading in composing. The goal was accomplished by video-taping and observing student writers as they wrote two drafts of a composition, by producing transcripts of the video-tapes, and by interviewing the students about their compositions. The transcripts, products of composing, and the interviews provided the information for the data base.

This chapter is divided into four parts. The first section presents the findings on the role of reading in the composing processes of the skilled and unskilled college writers in the study. The second part is a profile of the skilled writers' use of reading; third is the profile of unskilled writers' use of reading. Last is the comparison of the two groups on the major variables of amount, focus, purpose, and effect of reading in the protocols.

Findings

1. Twenty-nine of the 30 subjects used reading as they composed.

2. The <u>amount</u> of reading ranged from a total of 0
   to 49 times for the writers in the two drafts of
   their essays with a total of 391 occurrences
   of reading.

3. Of the 391 instances of reading in the corpus,
   44 percent were at the multi-word level of <u>focus</u>
   and another 21 percent were at the sentence level
   of focus.

4. The most common <u>purpose</u> for reading was
   verification, which occurred 46 percent of
   the time.

5. The <u>effect</u> (outcome) of the decision to change or
   not change was 46 percent not to change and 54
   percent to change. Of the possible effects of
   change, surface level meaning-preserving
   substitution occurred most often (31 percent)
   followed by meaning-preserving addition (25
   percent).

6. The major <u>differences</u> in the two groups were in
   the length of the compositions and the effect of
   reading.

The Skilled Writers

The profile of each group of writers contains two types
of information. The first is basic information about their

compositions. Second is a description of reading in the protocols with the variables of the construct discussed in the order they are presented in the findings.

The compositions of the skilled writers contained a total of 6452 words with a total of 2905 words in their first drafts and 3547 in the second drafts. The compositions were divided into 41 paragraphs in the first drafts and 49 in their second drafts making a total of 90 paragraphs or an average of 6 paragraphs per writer.

Amount of Reading

There were 273 occurrences of reading in the protocols of the skilled writers. Of this amount, sixty-five (26%) were found in the first draft session protocols and 206 (74%) in the second. The skilled writers did three times as much reading during the second draft as the first. That reading was divided within and between drafts. One hundred ninety-nine (73%) of the instances of reading occurred within the drafts and 74 (27%) occurred between drafts. Thus, the majority of reading occurred during composing for the skilled writers.

Focus of Reading

The focus of reading levels by frequency is presented in Table 1. The levels are ranked from the focus which occurred most to the one which occurred least. The table

Table 1

The Focus of Reading by Level with Frequency and Percent for Skilled Writers   (N = 15)

Level	Frequency	Percent
Multi-Word	114	41.8
Sentence	67	24.5
Multi-Sentence	32	11.7
Word	28	10.3
Draft	22	8.0
Paragraph	8	2.9
Multi-Paragraph	1	.4
Plan	1	.4
TOTAL	273	99.9

gives the focus level, the number of occurrences at that
level, and the percentage of the total focus for the skilled
writers. The levels are reading of the plan/outline, a
word, multi-word, sentence, multi-sentence, paragraph,
multi-paragraph, and the complete draft.

The multi-word and sentence levels comprised two-thirds
of the occurrences of reading. The multi-sentence and word
levels comprised another 22 percent. The 8 percent at the
draft level added to the first three makes a total of 96.3
percent of the focus. The other three levels were so seldom
used that they accounted for less than 4 percent of the
focus of reading. Some examples of multi-word passages read
by skilled writers follow. Each passage is followed by the
subject's study number and the instance of reading in the
protocol. (Student spelling is used.)

stashed the money on their bodies the money and
merchandise... (3, 18)

I was I was pleased... (7, 15)

I wish it were posable to explore all of them, all
of them, but the... (13, 8)

The multi-word passages were phrases and clauses of
varying lengths and located at various places within the
sentences.

The Purpose of Reading

The purposes for reading were to verify, provide direction, clarify, edit, or refresh memory. Table 2 displays the frequency and percent of reading purpose for the skilled writers.

The skilled writers most often read to verify what was in the text. The 113 occurrences of reading to verify made up 41 percent of the total purposes for reading. The refreshing memory purpose was next, a total of 57 times. The provide direction and edit purposes followed closely behind with 47 and 43 instances, respectively. Clarification was the least used purpose--only 13 times.

The Effect of Reading

The count for the effect (or outcome) of reading was different from the totals for the other major variables because some occurrences of reading resulted in more than one effect. Thus, there were 279 effects for the 273 occurrences of reading among the skilled writers. The major breakdown of effect as no/change (129) and change (150) showed little difference between the two. Forty-six percent of the effects were not to change and fifty-four percent resulted in changes.

The effect of change was further broken down into the sub-variables of formal, meaning-preserving, and

Table 2

The Frequency and Percent of the Categories of Purpose for

Reading by Skilled Writers   (N = 15)

Purpose	Frequency	Percent
Verify	113	41.4
Refresh Memory	57	20.9
Provide Direction	47	17.2
Edit	43	15.7
Clarify	13	4.8
Total	273	100.0

meaning-changing changes. Table 3 presents the effects of change in order ranked from most to least. Over half of the changes for this group were meaning-preserving changes while the formal and meaning-changing ones were somewhat equally divided.

Table 3

The Effects of Change Ranked by Frequency and Percent for Skilled Writers (N = 15)

Effect	Frequency	Percent
Meaning-preserving	75	51.7
Formal	38	26.2
Meaning-changing	32	22.0
TOTAL	145	99.9

By dividing each of the above variables into sub-categories, the types of change which occurred become more specific. The meaning-preserving changes in Table 4 include the categories of addition, deletion, substitution, permutation, and consolidation. Substitutions resulted most often (33 times) followed by addition. Those two categories accounted for 80 percent of the meaning-preserving changes.

The 38 formal surface changes were divided thusly:

Table 4

Frequency and Percent of Categories of Meaning-Preserving

Change of Skilled Writers   (N = 15)

Change	Frequency	Percent
Substitution	33	44.0
Addition	27	36.0
Deletion	12	16.0
Permutation	2	2.7
Consolidation	1	1.3
Total	75	100.0

18 punctuation, 6 spelling, 6 number, 4 tense, and 4 format. Abbreviation and modality were not results of reading for the skilled writers. Table 5 shows the frequency and percents of the formal surface changes.

There were 32 meaning-changing changes. Sixteen (50%) of those changes were additions, 7 (21.9%) were substitutions, 5 (15.6%) permutations, 4 (12.5%) deletions, and none were distribution or consolidation.

The texts of the skilled writers contained most of the variables identified in Faigley and Witte's revision study (1981). There were more change decisions made than no-change decisions. The other five effects were divided into three to reread and two to edit.

In summary, reading played an important role in the composing processes of the skilled writers. There were 273 instances of reading in their protocols. Reading was used at all levels of focus, with the multi-word level of reading used most often. All purposes of reading in the construct were used with verification being the major purpose for reading. Most of the effects of reading specified in the analysis construct were present. The major outcome (effect) was to make a change; the highest-ranking change category was meaning-preserving substitution.

Table 5

Frequency and Percent of Formal Surface Changes by

Categories for Skilled Writers (N = 15)

Change	Frequency	Percent
Punctuation	18	47.4
Spelling	6	15.8
Number	6	15.8
Tense	4	10.5
Format	4	10.5
Modality	0	0.0
Abbreviation	0	0.0
Total	38	100.0

The Unskilled Writers

Fourteen of the fifteen unskilled writers used reading as they composed. The results of reading for this group on each variable are discussed below.

The fifteen unskilled writers wrote a total of 3381 words in the two drafts of their protocols. There were 1637 words in the first drafts and 1744 in the second drafts. The first drafts contained a total of 23 paragraphs, while the second drafts contained 28 paragraphs for a total of 57 paragraphs in the essays. The mean number of paragraphs per writer was 3.8 or almost 2 paragraphs per draft per writer. Their essays ranged from 1 to 8 paragraphs.

The Amount of Reading

The amount of reading varied greatly among the group with a range of 0 - 16. The number of instances of reading was 118. Thirty-seven instances were found in the first drafts and 87 in the second drafts, thus revealing that reading occurred more than twice as often in the second drafts of the unskilled group. Reading for this group also occurred within and between drafts. Of the 118 occurrences of reading, 91 (77%) occurred within drafts and 27 (23%) between drafts. The unskilled writers were readers most often during drafting.

The Focus of Reading

The second variable studied was focus of reading. Of the eight sub-variables or levels of focus, only five occurred with the unskilled writers. They were the word, multi-word, sentence, multi-sentence, and draft levels. If a draft was only one paragraph in length and if it was read, it was considered on the draft level rather than paragraph level. There were 22 one-paragraph drafts in this group. Table 6 presents the level of focus, the frequency of occurrences, and the percent of total focus for this group.

Reading at the multi-word level was more than twice as great as any of the other levels of focus and almost half of the total. Word, sentence, and draft levels accounted for another 45 percent of focus for reading. One writer was responsible for four of the six instances of reading at the multi-sentence focus.

Purpose for Reading

The unskilled writers used all five purposes in their reading. Table 7 gives the frequencies and percent of reading for each category of purpose.

Most of the reading done by the unskilled writers was to verify or refresh memory. The amount of reading to verify was more than three times greater than for any other category.

Table 6

Ranking by Frequency and Percent the Levels of Focus of Reading for Unskilled Writers (N = 15)

Level	Frequency	Percent
Multi-word	58	49.2
Word	23	19.5
Sentence	16	13.5
Draft	15	12.7
Multi-sentence	6	5.1
Paragraph	0	0.0
Multi-paragraph	0	0.0
Plan/Outline	0	0.0
TOTAL	118	100.0

Table 7

The Frequency and Percent of Categories of Purpose for

Reading by Unskilled Writers   (N = 15)

Purpose	Frequency	Percent
Verify	68	58
Refresh Memory	21	18
Provide Direction	13	11
Edit	12	10
Clarify	4	3
Total	118	100

Effect of Reading

There were 119 effects for the 118 instances of reading. The no-change effect occurred 85 times (71%) and a change resulted 34 times (29%). The effect of change was divided into the categories of formal, meaning-preserving, and meaning-changing changes. Table 8 presents the change effects in order from those occurring most to those occurring least.

The 17 formal changes included all but one of the formal effects of change in the construct. They were divided as shown in Table 9.
The most frequent formal change was spelling. The remainder of the changes were scattered among the other categories.

The other effects of change--meaning-preserving and meaning-changing--were also scattered. They were also the smallest effects of reading in the study. Table 10 contains the meaning-preserving changes. Over half of the meaning-preserving changes were additions to the texts. Only four of the five categories of this effect were used by the unskilled writers.

There were very few meaning-changing changes made by the unskilled writers. The 6 meaning-changing effects were 2 addition (33%), 2 deletion (33%), and 1 (16.6%) each of

Table 8

The Frequency and Percent of Effects of Change by Categories
for Unskilled Writers (N = 15)

Effect	Frequency	Percent
Formal	17	50
Meaning-preserving	11	32
Meaning-changing	6	18
Total	34	100

Table 9

The Frequency and Percent of Formal Surface Changes for
Unskilled Writers   (N = 15)

Change	Frequency	Percent
Spelling	8	47.0
Punctuation	3	17.6
Number	2	11.8
Format	2	11.8
Tense	1	5.9
Modality	1	5.9
Abbreviation	0	0.0
Total	17	100.0

Table 10

The Frequency and Percent of Categories of

Meaning-Preserving Changes of Unskilled Writers (N = 15)

Change	Frequency	Percent
Addition	6	54.5
Substitution	3	27.2
Deletion	1	9.0
Consolidation	1	9.0
Permutation	0	0.0
Total	11	99.7

substitution and permutation. Consolidation was not an
effect in this category.

The data for the effect of reading for this group
contained most of the variables found in the Faigley and
Witte scheme. There were no instances of the "other"
category added for the skilled writers.

The profile of the unskilled writers describes them as
readers of their own texts. Reading was used at all levels
of focus with the multi-word level used most. They read
using all five purposes with verification occurring most
often. The effect or outcome which occurred most often was
not changing the segment read. Of the changes made, the
most frequent were the 8 formal spelling changes.

Comparison of Skilled and Unskilled Writers

The comparison of groups presents differences in the
use of reading by the two groups in the study. It begins
with a general comparison and moves to the specific
variables and the number of writers in each group
responsible for the instances of reading. The chi-square
test was used to determine statistically significant
differences between the groups' use of the variables.

The first set of comparisons concerns the number of
words and paragraphs in the corpus. Table 11 shows words
per draft and the percentage of words per draft per group.

Table 11

Comparison of the Number of Words per Draft (with Percent) in the Total Corpus for Skilled and Unskilled Writers   (N = 30)

Group	1st draft	2nd draft	Total
Skilled	2905 (45%)	3547 (55%)	6452 (100%)
Unskilled	1637 (48%)	1744 (52%)	3381 (100%)
TOTALS	4542	5291	9833

x^2 = (1, $\underline{N}$ = 30) = 10.2, $\underline{p}$<.01 = 6.63

The chi-square was statistically significant at $p<.01$ with the greatest difference in the second draft for the unskilled writers.

The skilled writers' compositions contained almost two-thirds of the corpus and the unskilled writers' one-third. There was an increase of over 600 words in the second drafts of the skilled writers but only 100 in the unskilled writers' drafts. The skilled writers' first drafts contained 45% and the second drafts 55% of the their total words. The unskilled writers' drafts contained 48% and 52% respectively, so the proportion of words per draft was almost the same.

Table 12 is a comparison of the number of paragraphs per draft using the chi-square test for significance. The difference in the number of paragraphs per draft was not significant at the $p<.05$ level. The proportion per group on the number of paragraphs was the same. Also, the second draft for each group had more paragraphs than the first draft. The difference in the groups was in the magnitude rather than the proportion.

The Amount of Reading

Both groups of students read as they composed. The amount of reading was determined by counting all of the instances of double-underlined portions in the transcripts.

Table 12

Comparison of Number of Paragraphs per Draft by Skilled and
Unskilled Writers with Frequency and Percent (N = 30)

Group	1st draft	2nd draft	Total
Skilled	41 (45%)	49 (55%)	90 (100%)
Unskilled	23 (45%)	28 (55%)	51 (100%)
Total	64	77	141

X^2 (1, $\underline{N}$ = 30) = .001 $\underline{p}$<.05 = 2.48

This variable is described by the amount of reading per draft per group, a breakdown per group of who did the reading, the distribution within and between groups, and the location of reading within and between groups. Table 13 shows the amount of reading by group by drafts.

Table 13

The Amount of Reading (Frequency and Percent) per Draft of Skilled and Unskilled Writers (N = 30)

Group	1st draft	2nd draft	Total
Skilled	65 (23.8%)	208 (76.2%)	273 (100%)
Unskilled	37 (31.4%)	81 (68.6%)	118 (100%)

x^2(1, N = 30) = 2.42, p<.05 = 2.48

The difference in the amount of reading per group was not significant at the p<.05 level. For both groups the amount of reading at least doubled during the second draft. The proportion of reading for the two groups was similar, but the magnitude was different.

However, the number of occurrences of reading by individual writers in the groups was different (see Figures 15 and 16). For the skilled writers, the 273 occurrences of reading fit the normal distribution as 9 (60%) of the skilled writers' reading frequencies were between -1 and +1

Subject

```
15        +

14              +

13                    +

12                            +

11  +

10                    +

 9                        +

 8    +

 7                                          +

 6                +

 5                  +

 4

 3      +                  +

 2                      +

 1  +
```
```
    0    5   10   15   20   25   30   35   40   45   50
```

(Frequency of Reading per Writer)
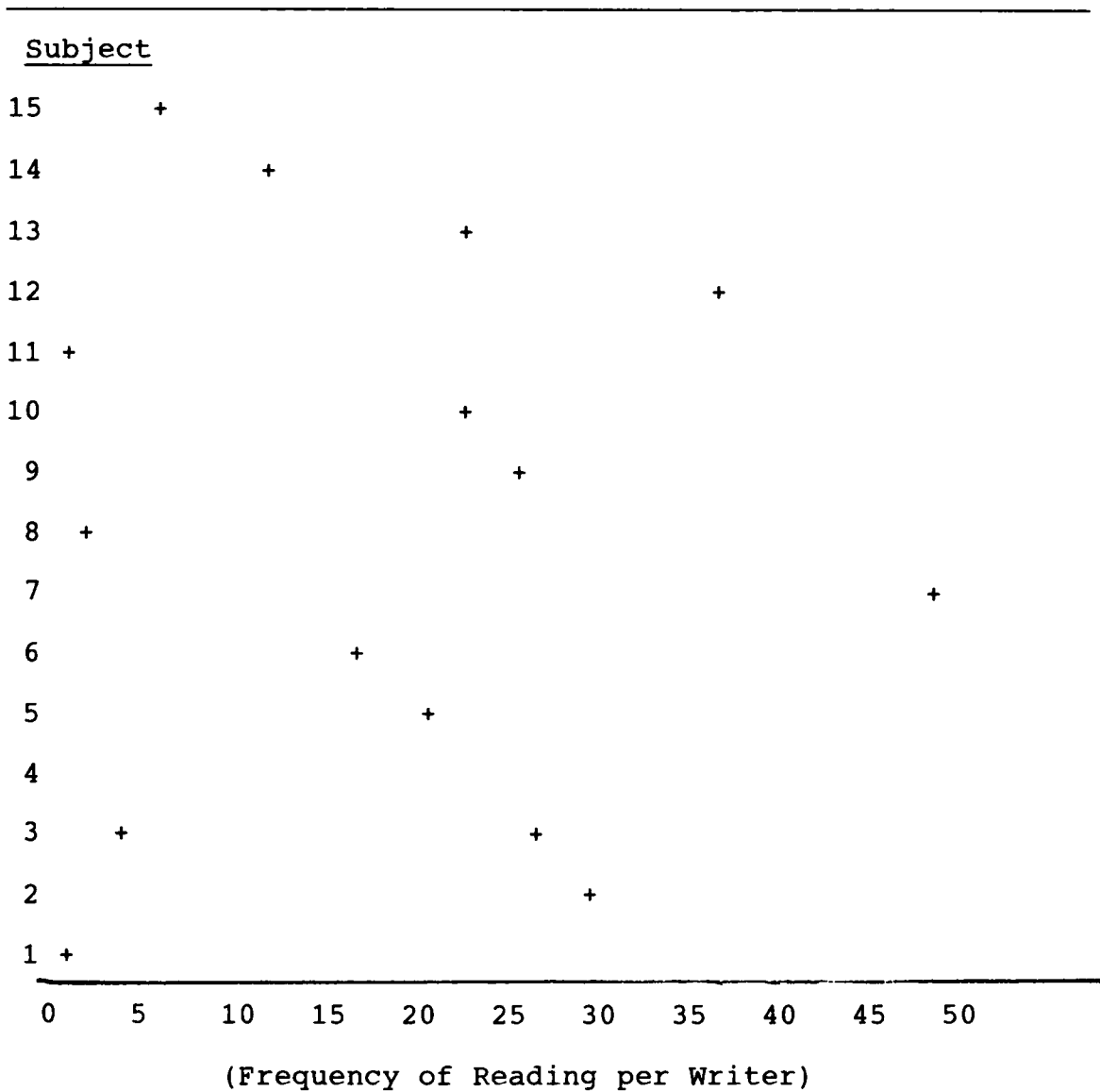
Mean = 18.2; SD = 13.5

Figure 15.

Distribution of Frequency of Reading for Each Skilled Writer

(N = 15)

standard deviations from the mean of 18.2 with a range of 5 - 10 occurrences of reading.

Only 2 (13.3%) of the unskilled writers' instances of reading were between -1 and +1 standard deviations from the mean of 7.9. The distribution for this group was bi-modal. The 8 writers in the lower range had frequencies of 1 - 5 (53%), while the 5 writers in the group at the upper end had scores ranging from 8 - 12 (33%). The difference in the amount of reading within the groups was greater for the unskilled writers than for the skilled writers. The extreme scores for the skilled writers were 1 and 49; for the unskilled writers, they were 0 and 25. Figure 16 displays the distribution of reading for the unskilled writers.

The amount of reading which was done can be divided into two locations: that which occurred within the drafts and that which occurred between drafts. Of the 391 instances of reading, 290 (74%) occurred within the drafts and 101 (26%) occurred between drafts. Table 14 is a breakdown of this information.

The majority of reading for both groups occurred within their drafts rather than between. All of the readers (29) read at some point within the drafts. Eighty percent of the skilled writers (12) read between drafts and 79% of the unskilled writers (11) read between drafts. The location

Subject

15

14   o   o

13   o

12   o

11   o

10   o

 9   o

 8   o

 7o

 6   o

 5   o

 4   o

 3   o

 2   o

 1   o

    0   5   10   15   20   25

        (Frequency of Reading per Writer)
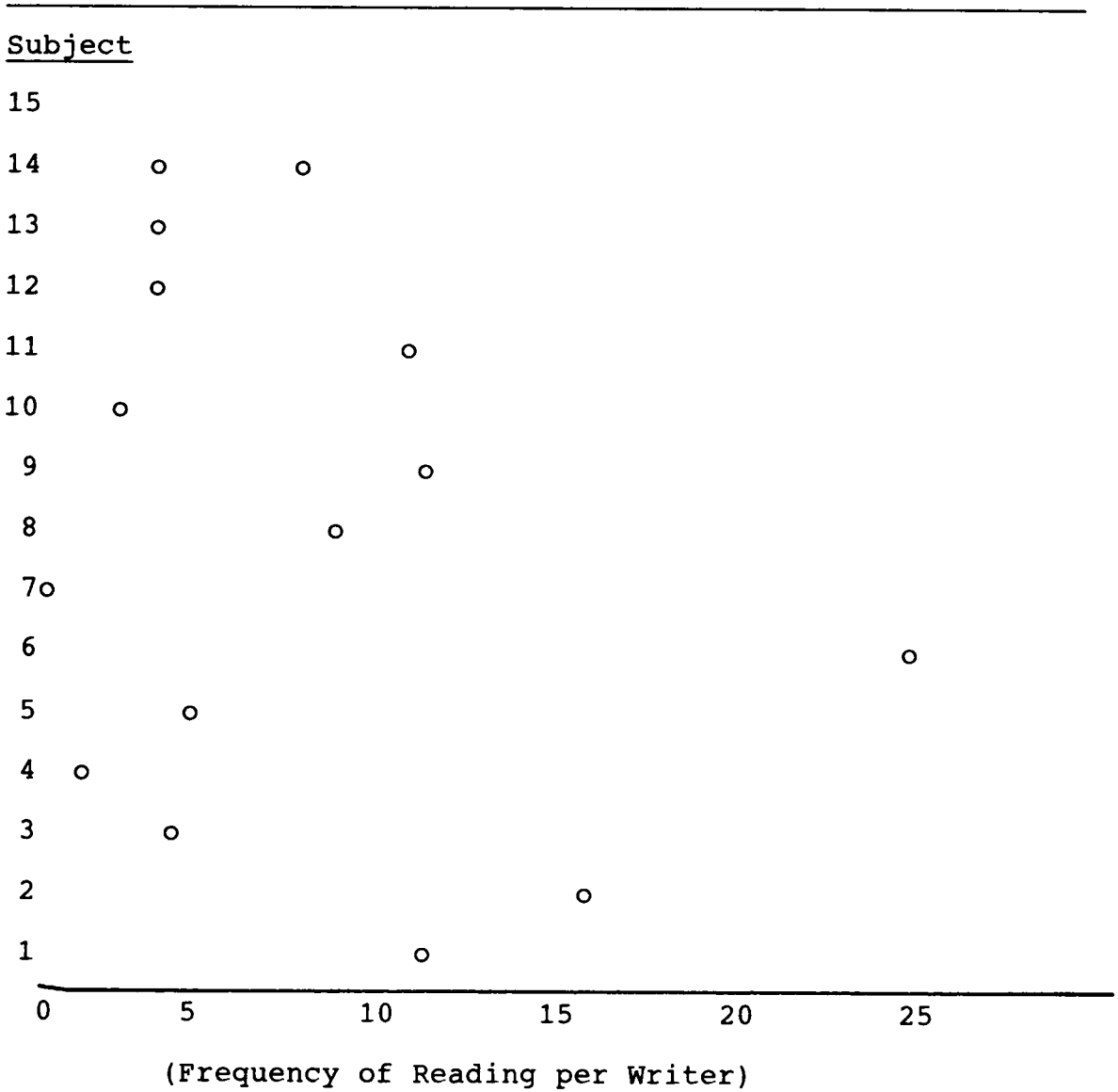
Mean = 7.9; SD = 2.2

Figure 16.

Distribution of Frequency of Reading for Each Unskilled

Writer (N = 15)

Table 14

The Frequency of Reading Within and Between Drafts for

Skilled and Unskilled Writers (N = 30)

Group	Within		Between		Total
Skilled	199	(73%)	74	(27%)	273
Unskilled	91	(77%)	27	(23%)	118
Total	290		101		391

x^2 (1, $\underline{N}$ = 30) = .77, $\underline{p}$<.05 = 2.48

where reading occurred was similar for most instances. The
difference was in the magnitude of instances of reading.
The chi-square test resulted in no statistically significant
difference in the groups in location of reading.

The difference in the two groups was not in the
location of reading within or between drafts but rather in
the fact that the skilled writers wrote longer compositions
and thus had more occurrences of reading. The mean scores
were 13 within and 5 between for the skilled writers and 6.5
within and 1.9 between for the unskilled writers. The
skilled writers read twice as much within as between drafts
while the unskilled writers read three times as much within
as between the drafts.

The Focus of Reading

Focus of reading is defined as the number of words a
writer reads at one time. The focus was divided into eight
levels: reading the plan/outline, word, multi-word,
sentence, multi-sentence, paragraph, multi-paragraph, or
draft.

The comparison of the two groups on use of the levels
of focus is found in Table 15. A chi-square on the
comparison of levels of focus was statistically significant
at $p<.05$.

Table 15.

Comparison of Level of Focus for Skilled and Unskilled Writers using Frequency and Percent.

	Plan	Word	Multi-word	Sentence	Multi-sentence	Paragraph	Multi-paragraph	Draft	TOTAL
Skilled	1 (.4%)	28 (10%)	114 (42%)	67 (24%)	32 (12%)	8 (3%)	1 (.4%)	22 (8%)	237
Unskilled	0 (0)	23 (20%)	58 (49%)	16 (14%)	6 (5%)	0 (0)	0 (0)	15 (13%)	118
	1	51	172	83	38	8	1	37	391

X^2 (7, N = 30) = 16.62, p .05 = 14.06

The main difference in level of focus was the greater use of the word-level by unskilled writers and sentence-level use by the skilled writers. The difference in paragraph-level reading is accounted for by the unskilled writers completed essays of single paragraphs being considered as drafts. Again, much of the difference was due to magnitude in the frequency of reading. The distribution of focus variables among the writers in the two groups was similar. According to Figure 17, the pattern of use of levels of focus was similar for the groups, but the skilled group had a greater frequency at every level. The multi-word level was highest for both groups with 114 (41.8%) for skilled and 58 (49.2%) for the unskilled writers. The second highest frequency for the skilled writers was the sentence level (24.5%) and the word level (19.5%) for the unskilled writers.

In conclusion, there were significant differences in the focus at the multi-word, sentence, multi-sentence, and draft levels for the two groups with the skilled writers having the higher mean scores at all but the word level.

Purpose for Reading

Purpose for reading is defined as the reason for reading a portion of the text. The categories of purpose developed from the literature include reading to verify,
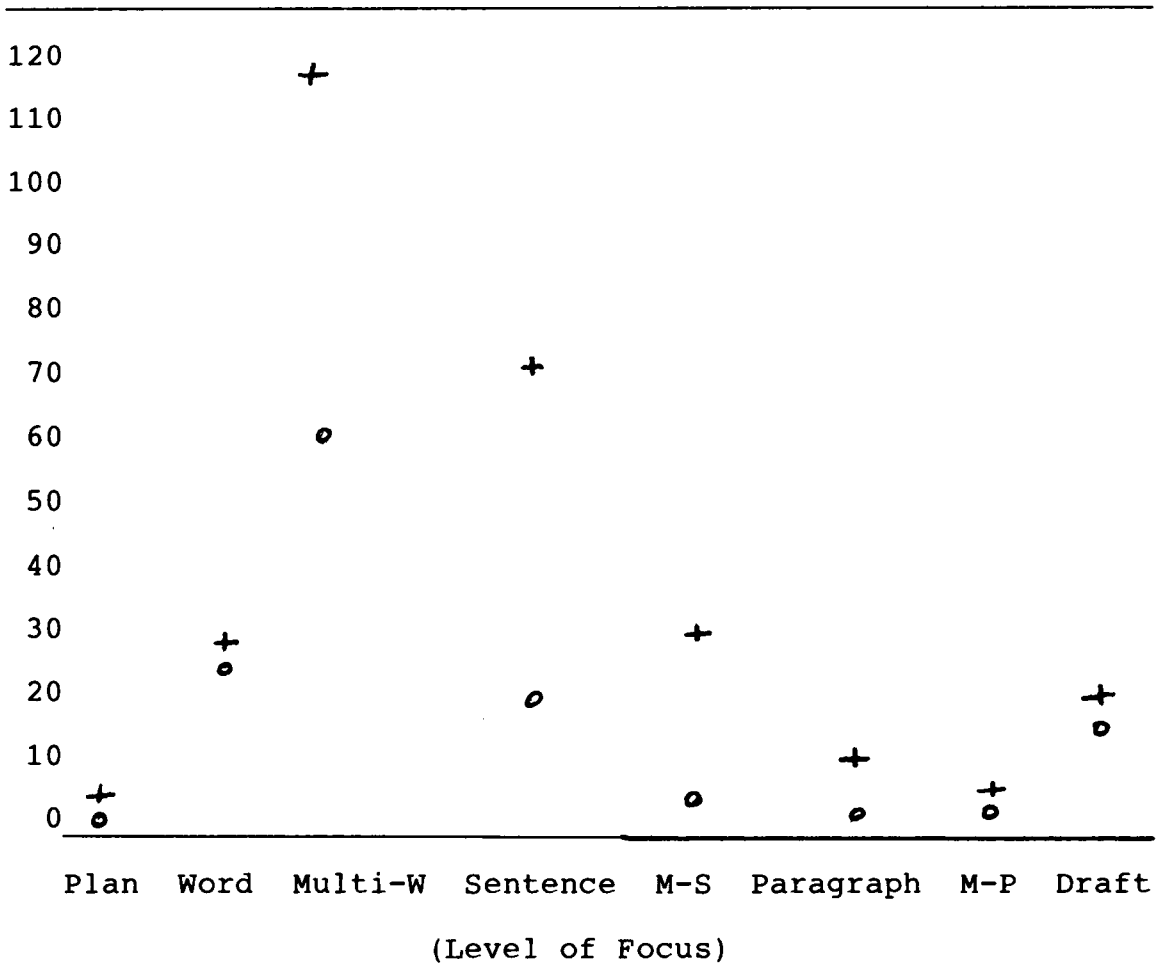
+ = Skilled; o = Unskilled

Figure 17.

Frequency of Each Level of Focus for Skilled and Unskilled

Writers ($\underline{N}$ = 30)

provide direction, edit, and clarify. Reading to refresh
memory was added to the model to explain the reading done
after an absence from the draft or after a period of time
during drafting such as after using the dictionary to check
the spelling of a word.

The two groups were similar in their selection of
purpose categories. In comparing frequencies, all
categories ranked the same with reading to verify occurring
most often, followed by refresh memory, provide direction,
edit, and clarify (see Figure 18). The skilled writers had
the higher frequency in each category.

Using mean scores, the proportion of difference
varied: verify was 2:1 with means of 7.7 and 4.1; refresh
memory was two-and-a-half to one with means of 3.8 and 1.4;
edit was 3:1 with means of 2.6 and .8; clarify was 3:1 with
means of .9 and .3. The chi-square test resulted in no
statistically significant difference at $p<.05$ (see Table
16).

Reading to verify (58%) by unskilled writers was the
highest percent in all cells for purpose of reading.
Sixty-two percent of purpose for the skilled writers
consisted of reading to verify and refresh memory while the
same purposes were 76% for the unskilled writers.

+ = skilled; o = unskilled
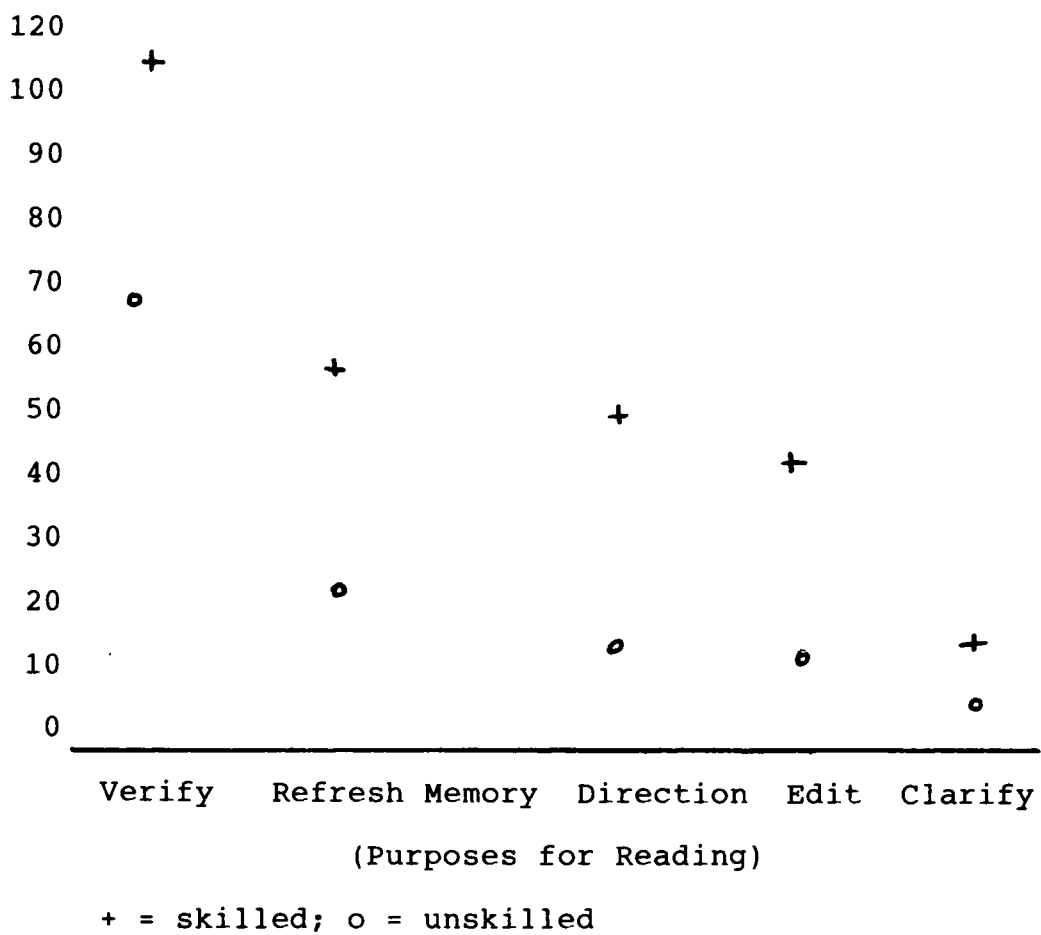
Figure 18.

Comparison of Frequency of Categories of Purpose for Skilled
and Unskilled Writers ($\underline{N}$ = 30)

Table 16

Comparison of Purpose for Reading using Frequency and
Percent for Skilled and Unskilled Writers ($\underline{N}$ = 30)

	Verify	Refresh	P. Direct.	Edit	Clarify	Total
Skilled	113 (41%)	57 (21%)	47 (17%)	43 (16%)	13 (5%)	273
Unskilled	68 (58%)	21 (18%)	13 (11%)	12 (10%)	4 (3%)	118
Total	181	78	60	55	17	391

X^2 (4, $\underline{N}$ = 30) = 9.3, $\underline{p}$ <.05 = 9.48

Both groups read for all five purposes. All categories ranked in the same order by frequency. There was no statistically significant difference in the use of purpose. The difference was in the magnitude of use based on the 273 and 118 occurrences of reading for each group.

The Effect of Reading

The effect of reading is defined as the result or outcome of reading. The major variables in the model are no-change and change. The change variable is further divided into three sub-categories of formal surface change, meaning-preserving change, and meaning-changing change.

The number of effects was greater than the instances of reading. The effects total was 398 while the instances of reading total was 391, since some instances of reading resulted in more than one effect. For example, reading of a multi-word passage may have resulted in one word added and another word substituted within the same segment.

The greatest difference in the two groups of writers was found in the effect of reading. The skilled writers read more and made more changes than the unskilled writers.

Comparison of the effects is presented in order from the major variables of no/change-change to the sub-variables of effect. Table 17 reports the effects of major variables.

Table 17

Comparison of Instances of Reading Leading to the

No-Change/Change Effect for Skilled and Unskilled Writers

(N = 30)

Group	No Change	Change	Total
Skilled	134 (47.8%)	144 (51.8%)	278
Unskilled	86 (71.6%)	34 (23.3%)	120
Total	220	178	398

X^2 (1, $\underline{N}$ = 30) = 18.7, $\underline{p}$<.001 = 10.8

The chi-square for the no-change/change outcome was statistically significant at the $p<.001$ level. Because the category "other" cells were so small and because they also resulted in a no-change effect, they were combined with no-change in the chi-square calculation. The difference is clear when observing the percent of each effect for each group. The skilled writers' outcome was almost a 50 percent choice each of no-change and change. The unskilled writers, however, chose no-change 70 percent of the time and change 30 percent of the time. For the skilled writers the frequency of change was slightly higher than for no-change, but the no-change frequency for unskilled writers was more than twice as high as for change.

This is the major difference in groups found in the study. While the proportion of the amount of reading to the number of words in their compositions was similar for both groups, the outcome of reading was different.

There were also differences within the sub-categories of the change variable. Table 18 displays the effects of change.

The chi-square was statistically significant at $p<.05$. The greatest difference was the unskilled writers' frequency of formal change (50%) and the skilled writers' frequency of meaning-preserving change (52%). The greatest difference

Table 18

Comparison of Major Categories of Effects of Change by
Skilled and Unskilled Writers ($\underline{N}$ = 30)

	Formal	Meaning-Preserving	Meaning-Changing	Total
Skilled	38 (26%)	75 (52%)	32 (22%)	145
Unskilled	17 (50%)	11 (32%)	6 (18%)	34
Total	55	86	38	179

x^2 (2, $\underline{N}$ = 30) = 7.4, $\underline{p}$<.05 = 5.99

was located in with the unskilled writers in the formal and meaning-preserving categories. The division and analysis of the sub-categories of these three variables revealed no significant difference as noted in Tables 19, 20, and 21. The three categories are discussed in the order given above.

The analysis of difference of formal surface change was not statistically significant at $\underline{p}$<.05. While the unskilled writers' major change was in spelling, the skilled writers changed punctuation. The remaining cells were quite similar in percent of use for the two groups (see Table 19). The category "other" included changes in tense, format, and modality. All of those individual cells had a frequency less than five, so they were combined for the calculation (Hinkle, 1979, p. 348).

The pattern of formal surface change is further displayed in Figure 19. In four areas, the skilled writers had higher frequencies, but in two areas the unskilled writers made more change. Neither group made any change to or from abbreviation. The skilled writers made twice as many formal changes, again consistent with the difference in the length of compositions. The main difference in frequency for formal change was the 6:1 ratio in punctuation changes of the skilled and unskilled groups.

Table 19

Comparison of the Formal Change by Skilled and Unskilled

Writers using Frequency and Percent ($\underline{N}$ = 30)

	Spelling	Punctuation	Number	Other	Total
Skilled	6 (16%)	18 (47%)	6 (16%)	8 (21%)	38
Unskilled	8 (47%)	3 (18%)	2 (12%)	4 (23%)	17
Total	14	21	8	12	55

x^2 (3, $\underline{N}$ = 30) = 7.3, $\underline{p}$<.05 = 7.81

```
20

18              +

16

14

12

10

 8    o

 6   +                    +

 4                              +         +

 2            o                 

 0                 o        b         o        o
                                                +
    _____
   Spelling  Punctuation  Number  Tense  Format  Modality
```
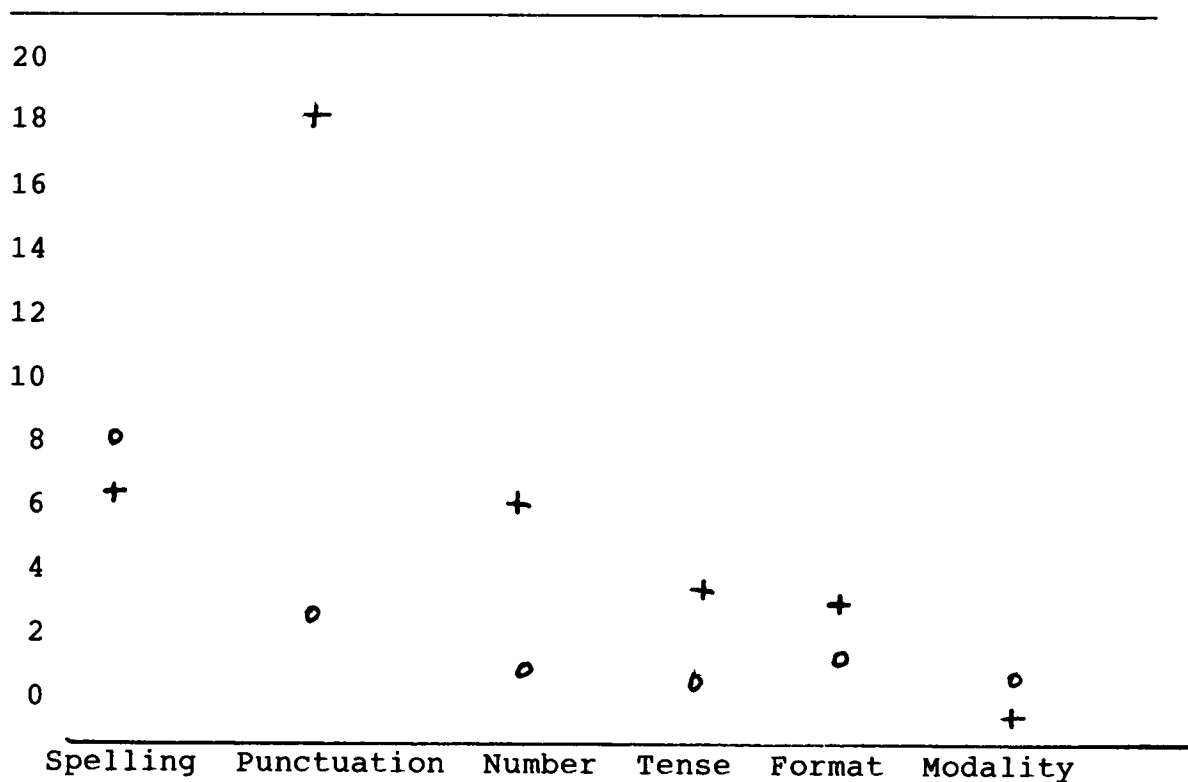
(Categories of Formal Change)

+ = skilled; o = unskilled

Total changes: skilled (38); unskilled (17)

Figure 19.

Comparison of Frequency of Categories of Formal Change for

Skilled and Unskilled Writers   (N - 30)

The second sub-category of change was meaning-preserving change. The combined frequency for groups for this type of change was 86, with 75 of those for the skilled writers and 11 for the unskilled writers (see Table 20). The chi-square was not statistically significant for this category. Again cells were combined (permutation and consolidation) due to frequencies fewer than 5. The primary contrast, though not statistically significant, was the switch by groups in substitution and addition. The skilled writers had their greatest frequency (44%) in substitution while the unskilled writers' greatest frequency was in addition (55%).

The difference rate in frequency of formal change was only 2:1, but the difference in meaning-preserving change was almost 7:1 with the skilled writers having the higher number.

Figure 20 shows these differences in meaning-preserving change. In this category, the skilled writers had greater frequency in four areas, and both groups had 1 consolidation change. The higher scores for skilled writers are representative of the 7:1 ratio of this type of change; the skilled writers having 75 changes and the unskilled 11. The difference was in magnitude rather than type of change.

Table 20

Comparison of Meaning-Preserving Change for Skilled and

Unskilled Writers using Frequency and Percent ($\underline{N}$ = 30)

	Substitution	Addition	Deletion	Other	Total
Skilled	33 (44%)	27 (36%)	12 (16%)	3 (4%)	75
Unskilled	3 (27%)	6 (55%)	1 (9%)	1 (9%)	11
Total	36	33	13	4	86

x^2 (3, $\underline{N}$ = 30) = 2.5, $\underline{p}$<.05 = 7.81

35	+			
30		+		
25				
20				
15				
10			+	
5		o		
	o			
0			o	+o
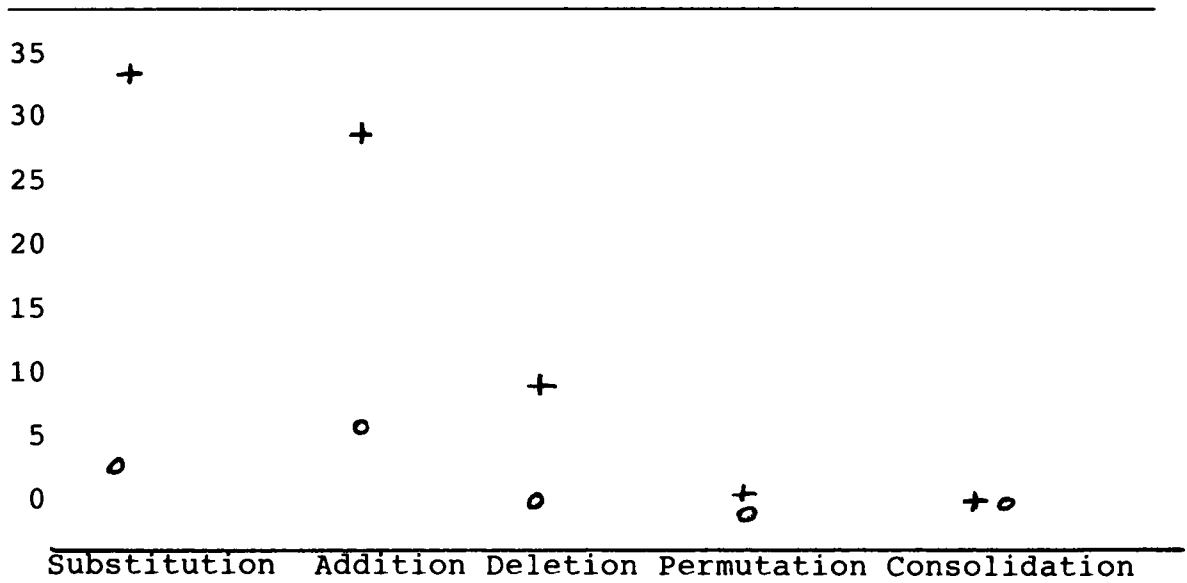
Substitution   Addition Deletion Permutation Consolidation

(Categories of Meaning-Preserving Change)

+ = skilled writers; o = unskilled writers

Figure 20.

Comparison of Frequency of Categories of Meaning-Preserving

Change for Skilled and Unskilled Writers   ($\underline{N}$ = 30)

The third sub-category of change was the micro-structure, meaning-changing change. The change was not to the gist or summary of the text but to a small segment of the text. The number of changes for both groups was 38, with 32 of those for skilled writers and 6 for unskilled writers or a 6:1 ratio. Table 21 shows that chi-square at $p<.05$ was not statistically significant.

The major change for skilled writers was addition (16; 50%) while the unskilled writers made 2 changes each of addition and deletion (33% each). Permutation, consolidation, and deletion were combined as "other" in the calculation due to small frequency in each individual cell. Figure 21 shows the continuing pattern of higher frequencies for the skilled writers but similarity in the selection of categories. The frequencies for the skilled writers were higher in four areas; neither group had meaning changes for consolidation.

In summary, the major variable of effect (outcome) of reading differed significantly for the groups. There was a significant difference in the no-change/change decision at the $p<.001$ level. Under the categories of change, there was also a significant difference in formal and meaning-preserving change between the groups at $p<.05$. Of the three sub-categories of change, there were 86

Table 21

Comparison of Meaning-changing Change by Skilled and

Unskilled Writers using Frequency and Percent ($\underline{N}$ = 30)

	Addition	Substitution	Other	Total
Skilled	16 (50%)	7 (22%)	9 (28%)	32
Unskilled	2 (33%)	1 (17%)	3 (50%)	6
Total	18	8	12	38

x^2 (2, $\underline{N}$ = 30) = 1.03, p<.05 = 5.99

```
16  +

12

 8                +

 4                         +         +
      o          o         o
 0_____o_____+_o___
```

Addition Substitution Deletion Permutation Consolidation

+ = skilled; o = unskilled
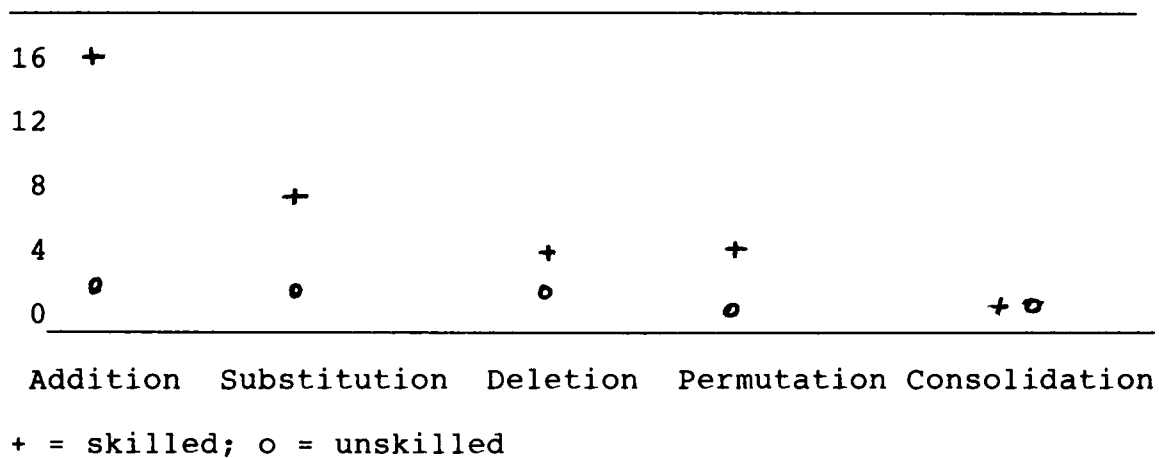
Figure 21.

Comparison of Categories of Meaning-Changing Change for

Skilled and Unskilled Writers (N = 30)

meaning-preserving changes, 55 formal, and 38

meaning-changing. There were no macro-structure changes to

the summary of the text.

The Model

The process used by the researcher to determine reading

in composing involved finding the segments of text in the

protocols which were read orally, determining the purpose of

the reading, determining the effect, and counting the

instances of reading (see Chapter Three). The steps of the

decision process used by the writers in the study were to

find the focus, determine the purpose, determine the effect,

and decide whether to continue the draft or to stop. The

focus and purpose frequencies were equal because each focus

had a purpose; however, the number of effects was different

because two or more effects were several times the result of

reading. Thus, the amount of reading equaled the frequency

of focus and the purpose but not the effect.

What actually happened in the protocols describing the

use of reading in composing is found in the model in Figure

22. The writers first decided to read a portion of the text

for one of the five reasons given. Then the decision was

made about how much to read--what level of focus was needed

to fulfill the purpose. This was followed by the decision

1. Decision to read a portion of text:

```
┌─────────────────────────────────┐
│          PURPOSE                │
│            ↓                    │
│   Verify,  Refresh memory       │
│                                 │
│      Provide direction          │
│                                 │
│        Edit,  Clarify           │
└─────────────────────────────────┘
```
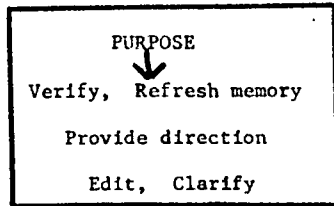
2. Decision on how much to read:

```
┌─────────────────────────────────┐
│           FOCUS                 │
│            ↓                    │
│       Plan/Outline              │
│                                 │
│      Word, Multi-word           │
│                                 │
│   Sentence, Multi-sentence      │
│                                 │
│  Paragraph, Multi-paragraph     │
│                                 │
│          Draft                  │
└─────────────────────────────────┘
```
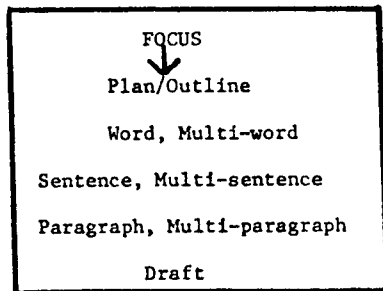
3. Decision on what result will be:

```
┌──────────────────────────────────────────────────────────────────────┐
│      ← ─ ─ ─ EFFECT ─ ─ ─ →                                          │
│                                                                      │
│ ┌──────────┐              ┌──────────┐                               │
│ │No Change │              │  Change  │                               │
│ └──────────┘       ← ─ ─ ─    ↓    ─ ─ ─ →                          │
│                                                                      │
│  ┌──────────────┐  ┌──────────────────┐  ┌──────────────────┐       │
│  │ Formal       │  │ Meaning-preserving│  │ Meaning-changing │       │
│  │              │  │                  │  │                  │       │
│  │ Spelling     │  │ Addition         │  │ Addition         │       │
│  │              │  │                  │  │                  │       │
│  │ Punctuation  │  │ Substitution     │  │ Substitution     │       │
│  │              │  │                  │  │                  │       │
│  │ Number       │  │ Deletion         │  │ Deletion         │       │
│  │              │  │                  │  │                  │       │
│  │ Tense        │  │ Permutation      │  │ Permutation      │       │
│  │              │  │                  │  │                  │       │
│  │ Format       │  │ Consolidation    │  │ Consolidation    │       │
│  │              │  └──────────────────┘  └──────────────────┘       │
│  │ Modality     │                                                   │
│  │              │                                                   │
│  │ Abbreviation │                                                   │
│  └──────────────┘                                                   │
└──────────────────────────────────────────────────────────────────────┘
```
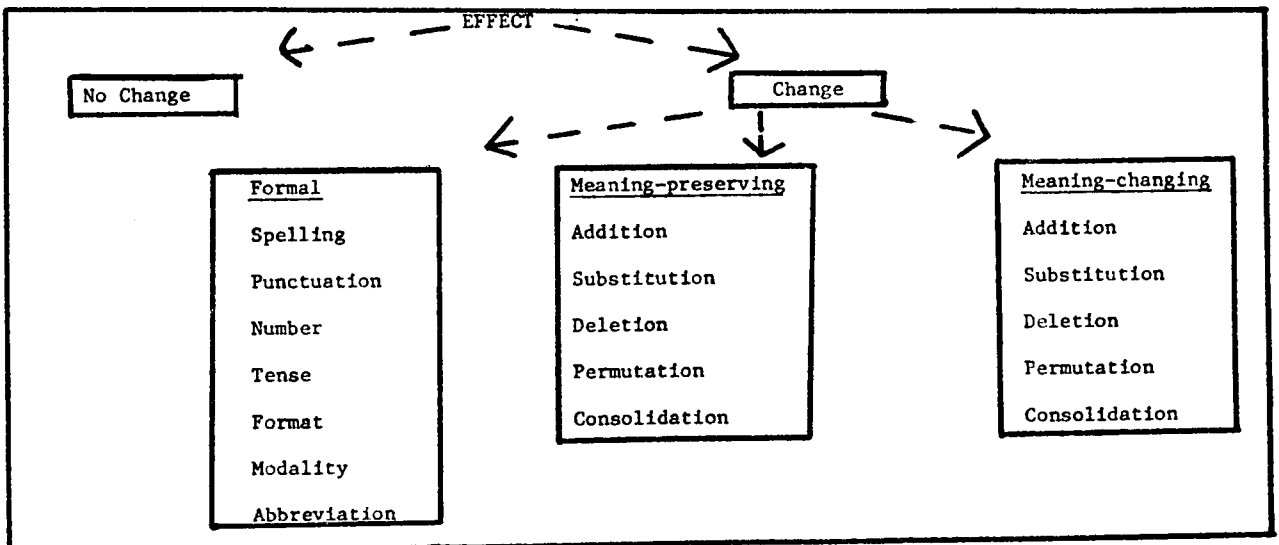
4. Decision to continue with draft or stop.

Figure 22.

Model Used to Describe the Decision Process for Reading in Composing.

of what to do after reading. The effect (or outcome) went from the no-change or change categories to a specific end.

Summary

The two primary differences found in the study were in the size of the corpus of the groups and the no/change-change decisions made. The size of the corpus was statistically significant at the $p<.01$, and the no-change/change effect was statistically significant at the $p<.001$ level. The corpus for skilled writers was twice as great as that of the unskilled writers and that difference in magnitude was apparent throughout analysis of the data. Even though the size of the corpus dealt with writing rather than reading, it made the difference in proportions. The only major difference due to reading was in the no-change/change decision. The majority of the skilled writers' decisions were to change something, but the unskilled writers chose to make no change.

The secondary differences which were statistically significant at $p<.05$ were in the levels of focus and in the change variables. Even though the focus variable was significant, it may not have been meaningfully different due to the structure of that part of the model. Paragraph and draft were separate levels of focus, necessary because they were different aspects for any writer who wrote

multi-paragraph compositions. However, all the unskilled writers who wrote only one paragraph as a complete draft had the reading of the paragraph counted as a draft. Therefore, the paragraph cell for that group had a zero, making the result of the chi-square somewhat questionable. With the exception of the difference in the paragraph cell for both groups, the levels of focus were similar in rank and proportion.

The other secondary difference was in the levels of change: formal, meaning-preserving, and meaning-changing at $p<.05$. This difference was both statistically and meaningfully significant because the unskilled writers made more formal surface changes and the skilled writers made more meaning-preserving surface changes. Table 22 provides a summary of these differences in the two groups.

The model which was developed from the literature and pilot study to analyze reading served to isolate specific variables to investigate the process. From that evolved the model used to describe the process of reading in composing. The analysis process and process model of reading provide a way to continue studies of this nature.

Chapter Five reiterates the findings and from them draws conclusions and implications.

Table 22

Summary of Statistically Significant Differences in the Use
of Reading by Skilled and Unskilled Writers

1. Size of Corpus: X^2 (1, $\underline{N}$ = 30) = 10.2, $\underline{p}$<.01 =
   6.63

2. Effect of No change/Change Decision: X^2 (1, $\underline{N}$ = 30)
   = 18.7, $\underline{p}$<.001 = 10.82

3. Focus of Reading: X^2 (7, $\underline{N}$ 30) = 16.6, $\underline{p}$<.05 =
   14.06

4. Categories of Change: X^2 (1, $\underline{N}$ = 30) = 7.4, $\underline{p}$<.05 =
   3.84

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

This study was designed to explore one aspect of the composing process: the role of reading. It tested the theories of Murray (1978, 1980, 1984) and Shanklin (1981) that writing and reading are complementary activities that co-occur in a constructive process. It continued the explorations of Stallard (1972), Atwell (1981), and Selfe (1983) that reading plays an important role in the composing process. The study used two tested methodologies: protocol analysis of Flower and Hayes (1977) and the revision classification analysis of Faigley and Witte (1981) which was adapted to describe the effects of reading. These methodologies had not previously been combined to explore and describe elements of composing. Using this background, a model to describe reading in composing was developed and then tested in the research.

The Findings

1. The model developed to describe reading was useful in identifying aspects of reading in composing: the amount, focus, purpose, and effect.

2. Twenty-nine of the 30 students were readers of their texts.

3. Reading occurred 391 times in the protocols. The

skilled writers wrote and read twice as much as the unskilled writers did, but the proportion in drafts one and two was the same for the groups.

4. Reading for both groups occurred within and between drafts.

5. The levels of focus of reading varied for the groups, but both groups read most often at the multi-word level.

6. Students in both groups read for all five purposes; when the categories of purpose were ranked by frequency, the order was the same for both groups.

7. The effect (outcome) of reading varied significantly for the groups in the no-change/ change categories.

8. The primary differences in the groups were in the amount of reading and the no-change/change outcome of reading.

The study confirmed information from previous studies, differed from the findings of several studies, and revealed some new information. The implications provide direction for further research and pedagogy.

Confirmation with the literature

The following statements drawn from the literature were confirmed in this study. Discussion follows the statements.

1. Writing is a recursive process with reading as a major component of the process.

2. Both skilled and unskilled writers are readers of their texts.

3. Both skilled and unskilled writers have stable, consistent composing processes.

The first statement is a major tenet in the theories of Murray (1978) and Shanklin (1981); in the models of Flower and Hayes (1977), Pianko (1979), Perl (1980a), and Bridwell (1979); and in the studies of Stallard (1971), Atwell (1981), and Selfe (1983). In this study, writers in both groups moved back and forth from writing to reading to writing as their texts progressed.

The fact that both types of writers are readers of their texts was established in Atwell (1981) and Selfe (1981) as well as in several of the revision studies. Stallard's study only addressed the "good" writers, but he found them to be readers of their texts also (1972). The 391 instances of reading by 29 of the 30 subjects in this study confirm that notion.

The third statement is the confirmation of Perl's finding that her basic writers had stable, consistent composing processes (1980a, p. 31). In this study, both groups displayed the characteristic from the first to second draft and in the entire process; in fact, from the researcher's observations, it appeared that individuals in both groups wrote with confidence and relative ease once they began to write.

Differences from the literature

Comparisons with other types of studies on composing are somewhat difficult to make with a study that described just the reading aspect of composing. For instance, this study did not explore what occurred due to mental planning or stops which involved contemplation without oral reading. The directions to the students were that "when you stop to read, try to read aloud and tell me why you are reading." These were the passages that were analyzed in the study.

Unlike the subjects in Bridwell's revision study (1979), the majority of unskilled writers (as well as skilled writers) did read their completed drafts. It is, however, difficult to determine whether they were "rethinking their pieces as whole texts" (Bridwell, p. 97) since neither group made macro-structure (gist or summary)

changes, and the fewest changes made by both groups were meaning changes.

Another difference surfaced when comparing this study with Pianko's concepts of rescanning during the draft and rereading between or after the draft (1979, p. 7). These two behaviors could not be differentiated because the variables she sorted out for each category occurred within and between drafts in this study. Further, reading resulted in both change and no change within and between drafts.

A third difference was found in the types of change made. Sommers (1980) found that the skilled writers made larger, more sweeping changes while the unskilled writers had word-level changes resulting in a "tidied-up first draft" (1980, p. 386). In this study, neither group made large, sweeping changes. Both groups read at the word level, but the multi-word level was the most frequent focus for both. Further, since both groups did make meaning changes, though not many, both groups would seem to fit somewhere between Sommers' groups, at least as a result of reading.

The differences exist and may give us suggestions for further studies.

Findings that Add to the Literature

1. The revision scheme of Faigley and Witte was well-suited as adapted for describing the effects of reading in composing. Adding the major category of no-change to his notion of change permitted an accounting of most instances of reading.

One of the major tasks before conducting this study was to find a method of analyzing the data. The Faigley and Witte scheme worked well, for it provided a very specific reporting system for the effects of reading.

2. Empirical data has been collected on the composing behaviors of unskilled writers.

The majority of literature on the behaviors of unskilled writers is speculative. On this speculation, instructional programs are designed and implemented. While this study involved only a small number of writers, the combination of protocol and analysis using the construct provide specific information about these writers' use of reading in composing.

3. The amount, focus, purpose, and effect of reading can be examined through thinking-aloud composing protocols.

The study provided a way to ask questions about the use of reading during writing such as how much, where, why, and with what result. Even though some instances (silent

reading) were not identified, enough were identified to describe the phenomenon. One important aspect of this was that the writers in both groups, either during or after the composing sessions, discussed their reasons for reading both easily and reasonably.

3. "Reading," perhaps more than "re-reading," is a major aspect of the composing process.

This third idea is not really new at all. It is just a change of emphasis--a new way to look at an old idea. Both the skilled and unskilled college writers were readers of their texts, both within and between drafts. Reading served as a guide to the continuation of writing for both groups in both drafts. The unskilled writers' activities closely paralleled the skilled writers in the writing activity, but their compositions were shorter and less complex in development than those of the skilled writers. But while composition literature refers to "rereading" and "rescanning," what actually occurred may not have needed the "re-" prefix. It appeared to be first time reading by each author of his text. Even the reading of the completed draft was a "reading." Students did not ask if they should "reread" their work; they asked if they should "read" it, or they said, "I'm going to read this to see if ...." The emphasis on rereading and rescanning has been our

confirmation in the literature that writers are readers of
their texts. The thinking-aloud protocols in this study
have simply pointed out the "reading" rather than the
"re-reading" aspect, which makes the reading a part of the
process rather than something which occurs after writing.

The first interview question leading into the purposes
for reading concerned the student's awareness of using
reading during composing. Approximately half of each group
said they had not been aware of their own reading prior to
the protocols. Many were surprised that they stopped to
read. In general comments at the end of the interviews or
after viewing their protocols, a number of students said
that reading had helped them and they planned to continue
reading the same way during classroom composition. One
might conjecture that the direction "when you stop to read a
portion, try to tell me why you are reading" is what caused
the writers to read.

Research considerations

The earlier studies in composing reported in the
literature review identified reading as one aspect of the
composing process. This study concentrated on describing
that aspect of the process. The study was, of course,
limited by the small number of subjects and the nature of
protocol analysis. It was not possible to catch every

instance of reading when the students forgot to read orally.
But it is a continuation of the new reading-in-composing
research and from it has developed a methodology for further
examining this component of composing.

It provides a direction for future research of more and
different types of writers as we seek to understand the
complexities and relationships of the reading and writing
activities which occur.

1. The model designed for this study needs to be tested
further with more students in the skilled/unskilled category
as well as with other age groups and different types of
writers. This could include differences in traditional age
and non-traditional students in the unskilled category, or
conducting a chronological study of change in reading in
composing over a semester.

2. A similar study could be conducted but adding an
examination of the quality of the writing following reading.
This study did not investigate the role that reading played
in increasing or decreasing the quality of the compositions
written during the protocols. Since the purpose of the
study was to describe the role of reading according to the
variables proposed in the model, the researcher decided not
to add another external device to the description. However,

such a study would have merit as a next step in the
research.

3. Studies linking Selfe's work (1983) with writing
apprehensives and this more specific look at the reading
aspect of writing may broaden our understanding of writing
apprehensives.

4. Case studies with professional writers as in
Berkenkotter's study of Murray (1983), but with emphasis on
their reading strategies during composing, would provide
models for comparison as we build the reading-in-composing
literature base.

Pedagogical considerations

Because of the positive interest in the project
displayed by both skilled and unskilled writers, the
research-gathering period also became a very rewarding
teaching experience. Some surprises for the
researcher/teacher surfaced during the research period which
involved student interest in the project.

1. Students were very willing to participate in the
study. More volunteered than were needed.

2. Students wanted to watch their peers composing to
find out how the others wrote papers. The unskilled
students in the Learning Center at the time students in both
groups did their protocols were eager to watch on the

monitor and to listen. They especially liked to see how the skilled writers wrote their compositions.

3. Students in both groups enjoyed watching their own protocols and made excellent comments about their own composing processes.

4. Students enjoyed looking at their transcripts and remembered their own comments made during composing. Some asked that they have an opportunity to do it again so they could understand what they did and use the information for self-improvement.

5. After they had participated in the study, a number of unskilled writers read their papers orally as they composed during the semester saying it helped them to hear whether or not what they said made sense.

Knowing that the writers in the study were readers of their writing confirms for reading and writing teachers the strategy of combining reading and writing activities in the classroom. As one skill develops, it can be used to aid development with the other skill. The more one reads, the more one comprehends. The more a student reads his own writing, the more he can become aware of his own reading/thinking/writing skill development.

The pedagogical movement from the major emphasis on correctness of the product to development of ideas,

experimentation in forms, and in idea generation among peers makes sense knowing that the unskilled writers already have the natural skill to read their own text as it emerges.

The recent studies of Bartholomae (1979) and Merkel (1983) which suggest that unskilled writers should be exposed to longer reading selections and thus opportunities for longer writing assignments would seem from this study to be on the right track. The unskilled writers wrote only one-third as much as the skilled writers because they either did not have as much to say or they wanted to avoid the web of complexity which can result in great numbers of red marks on the product. It appeared that the unskilled writers decided what they wanted to say and quickly completed the assigned task. It appeared that they stayed in what for them was a safe range without experimentation in content and form. The majority of the skilled writers, on the other hand, tackled the topic and accomplished a traditional freshman composition. This may partially explain the difference in the amount of words per essay and the amount of reading during composing.

Protocol analysis as a classroom activity has been suggested (Easton, 1982). But it is an involved, cumbersome activity and definitely not appropriate for some students. It has value in a learning center or video laboratory for

students who want to examine their own writing processes and develop from that point. Just as many writing instructors advocate tape-recorded messages for student composition feedback, so oral writing/reading protocols have value for students. The researcher is not a proponent of classroom protocols for general use. However, writing instructors may want to consider somewhat different tactics. Instead of saying in the basic skills' classroom "We've got to teach them to read their own papers before handing them in," we should be saying "Let's teach them some different ways to use the reading they are already doing during composing." Perhaps one of the ways this could be presented to classes would be the development of video-tapes of experienced writers at work composing various types of themes. These, then, could become models or examples which less skilled writers could use to help them learn to use their own reading more effectively.

After all, the methods of comprehension taught in the developmental reading classroom where students become detectives in unfolding meaning in another's text are the same ones the writer can use as reader in his own text. When unskilled writers realize the relationship between the two, they, too, may have a better opportunity to develop their writing/reading skills.

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Appendix

A

Model of Research Construct

Focus at which reading occurs   Number of Occurrences

    plan

    word

    multi-word

    sentence

    multi-sentence

    paragraph

    multi-paragraph

    draft

Purpose of reading   Number of Occurrences

    verify

    clarify

    provide direction

    edit

    refresh memory

Effect of reading

    no change

    change

        surface

            formal: spelling, tense, modality, abbreviation, punctuation, format

            meaning-preserving: addition, deletion, substitution, permutation,

                    distribution, consolidation

        text-base

            micro-structure: addition, deletion, substitution, permutation,

                    distribution, consolidation

            macro-structure: addition, deletion, substitution, permutation,

                    distribution, consolidation

B

Sample Analysis Sheet

TOTAL

EFFECT

PURPOSE

FOCUS

consolidation
distribution
permutation
substitution
de etion
ac ition
format
punct
abbrev.
tense
spelling
modality
number
NO CHANGE

refresh memory
edit
clarify
provide direction
verify

TOTAL

PLAN
WORD
MULTI-WORD
SENTENCE
MULTI-SENTENCE
PARAGRAPH
MULTI-PARAGRAPH
DRAFT

C

WRITER	TITLE	TYPE ESSAY
SKILLED		
1.	MY CHOSEN FIELD*	EXPOS
2.	COMPUTERS*	EXPOS
3.	AN INFLUENTIAL JOB EXPERIENCE	NARR
4.	WHY THIS FUTURE?*	NARR
5.	EXPLORING CHOICES	EXPOS
6.	ACCOUNTING*	EXPOS
7.	MOUNTAIN HOME, ARKANSAS	EXPOS
8.	CAREER CHOICE	EXPOS
9.	THE SPORTING LIFE	EXPOS
10.	TRY IT YOU WON'T LIKE IT	NARR
11.	CAREER CHOICE*	EXPOS
12.	SUMMER JOB EXPERIENCE	NARR
13.	THE FUTURE	EXPOS
14.	CAREER CHOICE*	EXPOS
15.	TEACHING MUSIC*	NARR
UNSKILLED		
1.	CAREER INTEREST	EXPOS
2.	FOLLOWING PAPER WORK	EXPOS
3.	CAREER CHOICE	EXPOS
4.	BEING A SUCCESSFUL ATTORNEY	EXPOS
5.	MY MAJOR	EXPOS
6.	A JOB EXPERIENCE*	NARR
7.	MY CAREER*	EXPOS
8.	CAREER	EXPOS
9.	AVIATION MECHANICS*	EXPOS
10.	ELECTRONICS*	EXPOS
11.	CAREER CHANGE	EXPOS
12.	TAKING TEST	EXPOS
13.	WRITING	EXPOS
14.	ELECTRONICS*	EXPOS
15.	MY JOB AT GENERAL DYNAMICS	EXPOS

* = no written title; word or phrase used in first sentence of essay

Definitions: exposition - statement on a subject; explanation

narration - a written account of past events

1st draft
    I'm gonna write about career change.

I will like to change my career and get started in something

I really enjoy. That is That is continue my career in basketball 1 V NC

this fall. this fall. I know that I can do it. Basketball is 2 V NC

something that I've(al)always loved to play. Basketball is something

that I've always loved to play. I will also change my major to 3 V NC

physical education. physical education because I someday would 4 V NC

like to coach my own team. my own team. own team. I enjoy 5V NC
    6 PD NC

help (ing) (corrects helping) people do different types of .

sport. types of sport(s) (says does not correct). That (is) 7 V NC

why (I) am changing my major. And maybe in a field that i enjoy

my grades will improve in Psychology.

    (reads draft -- no changes) 1605 8 V NC

        85 words

Copy of 1st Draft

Career Change

I will like to change my career and get started
in something I really enjoy. That is continue my career
in basketball this fall. I know that I can do it.
Basketball is something that I've a̶l̶ always loved to play.
I will also change my major to physical education, because I
someday would like to coach my own team. I enjoy help=ing
people do different types of sport. That why am changing
my major. And maybe in a field that i enjoy my grades
will improve in Psychology.

(Unskilled student paper.)

D - 3

2nd draft transcript.

(Do we have to read it over again? Does not. Copies as reads.)

Career Change

I will like to change my career. Yeh. I would like to   9 V NC
change my career   and get started in something I really enjoy
doing. That is continue c.o.n.y.i.n.u.e my career in playing
basketball this fall. this fall. I know that I can do it,   10 RM NC
Basketball is something that I've always loved to play. I
will also change my major to physical education, because
some day I will like to coach my own team. I enjoy helping
people in different d.i.f.f.e.r types of sports. That (is)
why I' am changing my major. And maybe in a field I enjoy
my And maybe in a field I enjoy my grades will improve in
Psychology.   11 V NC

81

Copy of 2nd draft.

Career Change

I will like to change my career and get started in
something I enjoy doing. That is continue my career in playing
basketball this fall. I know that I can do it. Basketball is
something that I've always loved to play. I will also change
my major to Physical education, because someday I will like
to coach my own team. I emjoy helping people in different
types of sports. That why I'am changing my major. And maybe
in a field I enjoy my grades will improve in Psychology.

(Unskilled student paper.)

(Transcript of skilled writer)

1st draft

(Makes an outline. I have to think of a thesis to write.)

Accounting is the career I have chosen for myself.

P. It is a challeging career full of figures and numbers. I will be able to work with the public and other accountants.

P (I'm just reading it.) Accounting is the career   1 V   NC
I have chosen for myself. It is a challenging career full
of figures and numbers. I will be able to work with the
public and other accountants. I enjoy working around people
and I have always felt I needed a career that kept me around
people. P This career is one that will let me work with
others and for other people.

Accounting has been a exciting major for me. It is
challeging and always something different to do. I need a
challege P I need a challege to keep me on the   2 PD   NC
subject and to keep myself from becoming bored with my job.

P Accounting has been a exciting major for me.   3 PD   NC
It is challeging and always something different to do. I
need a challege to keep me on the subject and to keep myself
from becoming bored with the job. UH Accounting is a

mathematical field and mathematics has always been my
favorite subject.

Rereads. Beginning ... people. (Changes around to
among. Para. 2 changes my to the.)   4 V Sub

I hope I have picked a career that will always be
exciting to me and I hope I have picked a career   5 PD NC
that will always be exciting to me and has enough room for
advancement. I hope I have picked a career that   6 V NC
will always be exciting to me and has enough room for
advancement. I eventually would like to take the test to
become a Certified Public Accountant then my brother and I
plan to open (I know) our own office so we can work together
as CPA's.

Reads draft (adds there is and changes me to my mind)
                                                      7 V add, sub

I'm all done. It's not long.

(Skilled student - 1st draft)

career - accounting

reasons I chose it -
    challeging
    mathematical
    always something different to do
    I'd be working with the public

<u>Thesis</u> - Accounting is the career I have chosen for myself. It is a

challeging career full of figures and numbers. I will be able to

work with the public and other accountants. I enjoy working around

poeple and I have always felt I needed a career that kep me around

(crosses out) among people. This career is one that will let me

work with others and for other people.

Accounting has been a exciting major for me. It is challeging

and there is always something different to do. I need a challege to

keep my mind on the subject and to keep myself from becoming bored with

my (the) job. Accounting is a mathematical field and mathematics has

always been my favorite subject.

I hope I have picked a career that will always be exciting

to me and has enough room for advancement. I eventually would like

to take the test to become a Certified Public Accountant then my

brother and I plan to open our own offices so we can work together

as CPA's.

(skilled student: transcript of

 2nd draft)

Reads 1st draft.   8 RM   NC

    Accounting is ... end.

    Accounting is the career I have chosen for myself. .It

is a challenging career full of figures and numbers. I will

be able to work with the public an(d) other accountants. I

enjoy working around people and I have always felt I needed

a career and I have always felt that I needed a 9 PD NC

career that would keep me would keep me among people. This

career is one that will let me work with other people and

for others.

    Accounting is an exciting major for me (repeat sentence

                                      10 V   NC

It is challenging and there is always something different to

do. I need a challenge to keep my mind on the subject and

to keep myself from becoming bored with the job. Accounting

is a mathematical field and mathematics has always been my

favorite subject.   P

Reads from 1st draft. I hope I have picked a career that

will always be exciting to me.   11 RM NC

I hope (I have) choosen (corrects) a career that will always be exciting for me and one that has room for advancement. I eventually would like to take the test to become a Certified Public Accountant, then my brother and I plan to open our own offices. I feel we will be compadible compadible business partners i n the accounting field.　　12 v　NC

　　　　(I need a dictionary.　compadible　P

　　　　It isn't in here.　How do you spell it?

c.o.m.p.a.t.i.b.l.e.　　　　　　　　　　13 ED　SP

OK　Thank you.　My last time to read it.

　　　　Accounting to people.　This career is one that will let me work with other people and for others.　　14　V　NC

This career is one that will let me work with others and for other people.　　　　　　　　　　15　CL add

　　(Para. 2)　Accounting...end.　　　16　V　NC

OK　I'm finished.　I have a few corrections that I wrote at the top.

(skilled student - 2nd draft)

Accounting is the career I have chosen for myself. It is a challenging career full of figures and numbers. I will be able to work with the public an other accountants. I enjoy working around other people and I have always felt I needed a career that would keep me among people. This career is one that will let me work with others people and for others people. (crosses out 1st people).

Accounting is an exciting major for me. It is challenging and there is always something different to do. I need a challenge to keep my mind on the subject and to keep myself from becoming bored with the job. Accounting is a mathematical field and mathematics has always been my favorite subject.

I hope choosen (crosses out) chosen a career that will always be exciting for me and one that has room for advancement. I eventually would like to take the test to become a Certified Public Accountant, then my brother and I plan to open our own offices. I feel we will be compastible business partners in the accounting field.

E – 5

Sample Analysis Sheet

Subj. SK #21

1st 1–7
2nd 8–16

FOCUS	EFFECT													NO CHANGE	PURPOSE					TOTAL
	consolidation	distribution	permutation	substitution	deletion	addition	format	punct	abbrev.	tense	spelling	modality	number		refresh memory	edit	clarify	provide direction	verify	
PLAN																				
WORD				9							13			12		13			12	
MULTI-WORD		9, 15												2, 5			15	2, 5, 9		
SENTENCE				11										6, 10	11				6, 10	
MULTI-SENTENCE				4										1,3, 14				3	1,4, 14	
PARAGRAPH														16					16	
MULTI-PARAGRAPH														8	8					
DRAFT				7															7	
TOTAL																				

F

PLEASE READ THESE CHANGES AND MARK THEM AS MP OR MC
USING THE SAME DEFINITIONS AS ON ROUND 1.

SUBJECT   READING DESCRIPTION   EFF.   MP   MC
1   I would like to take better Black and
white photos to interest me and my customers
as well. TO I would like to take better black
and white photos to interest me more in
my work.
2   They are not used to working for a
production from the government. TO They
are not used to working for production
for the government
9   If you pass the test you get a A & P
license. If you pass the test 80% or above
you get a ⁻A&P license.
       There is no way if a aircraft has trouble in
the air then it can land safely, that is you to
know everything you can. TO that is why you
have to know ..
15   I work until 3:30 then I get off. TO After
a full working day I am ready to leave at 3:30.
17   Computers have been around for quite a while.
TO Computers have been around for a number of years.
       Created somewhat of a problem for future whether
it was known or not. TO Created ...it was known at
the time or not.
18   I don't think I have ever been so sick in my
life as I was then. TO ... so filled with dread
in my life.
       I do not blindly accept things at surface
anymore. TO I ... at surface value anymore.
       At the time there were only three women in
the department. TO In 1970 there were ...
       At this time there were only three women
in the police and sheriff's department. TO
At ... in the police department.
       The dept. had to have female employees to
search female prisoners or at least females
present. TO   The ... prisoners. deletes from
"or"
       These female subjects had stashed the
money on their bodies. TO These....the
money and merchandise on their bodies.
       (This one is attached to the sentence
above)...on their bodies probably more
accurate to say in their bodies TO This
probably could be more accurately stated
as in their bodies.
20   I have not had the opportunity to take classes
in these fields. TO I ... in these fields at
this time.
22   My wife fell in love with the numerous
shopping centers and malls. TO My ...

INTERVIEW STRATEGY

#18   SK.

During the taping sessions, I asked you to tell me about
your use of reading during writing--why you were reading a
word or portion of your text. As we review your tape, I
would like to discuss this a bit more.

1. Had you ever thought much before this experience about
   using reading as you write an essay?   YES

2. Do you usually use reading during your own writing?
   a dozen times; a lot

3. How do you use reading? For what purpose?
   too wordy, way it sounds, grammar, change tense,
   commas, tenses-in bits and pieces, "I catch more errors
   that way - grammar, spelling"

4. Does reading words or parts of your essay cause you to
   make any changes? Make changes constantly--
   content changes?   Definitely.

5. What types of changes do you make? already given.

6. How is this experience with video-taping like the
    the writing you do in composition class? 2 drafts

7. How is it different? no pressure, no time limit

8. Has this experience affected in any way your view of

writing essays? Confirmed what I knew

ABOUT THE VIDEO-TAPE: Can you tell me what you were doing
here?

(These answers are recorded on the transcript.)

#

#

#

INTERVIEW STRATEGY

#1 UNSK.

During the taping sessions, I asked you to tell me about
your use of reading during writing--why you were reading a
word or portion of your text. As we review your tape, I
would like to discuss this a bit more.

1. Had you ever thought much before this experience about
   using reading as you write an essay?   NO

2. Do you usually use reading during your own writing?
   yes, soon as I finish

3. How do you use reading? For what purpose?
   errors -sp. punct., periods, capitals

4. Does reading words or parts of your essay cause you to
   make any changes? yes

5. What types of changes do you make? added too much to
   the sentence so use smaller words; change wording

6. How is this experience with video-taping like the
   writing you do in composition class? no answer

7. How is it different? saying it helped; when I read it I
   think about it as I go.

8. Has this experience affected in any way your view of
   writing essays? Helped me write better, understand what

I was writing about. Helped my other writing too -

grammar.

ABOUT THE VIDEO-TAPE: Can you tell me what you were doing

here?

#1 didn't sound proper- deal to work

#2 B to b didn't need capital

#5 Have to be capable before I get well known

#8 Have to be good at composition

The three page vita has been removed from the scanned document. Page 2 of 3

The three page vita has been removed from the scanned document. Page 3 of 3