KNOWING AND USING RESEARCH IN TEACHING COMPOSITION

Dissertation for the Degree of Ph. D.

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This is to certify that the

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ABSTRACT

KNOWING AND USING RESEARCH IN TEACHING COMPOSITION

By

Richard VanDeWeghe

In order to establish solid foundations for composition programs, teachers and directors of composition programs should know about the research done in the field of composition and understand how it can be integrated with relevant theory into a comprehensive rationale for the design of composition programs. Three central arguments are advanced in this dissertation. First, composition teachers and directors of composition programs should know how to read research reports and should know what research has been done in composition. Second, in designing and carrying out composition programs, teachers and directors should use the insights available to them from research. Third, teachers and directors should integrate relevant theory and research in order to build composition programs soundly informed by the most significant and relevant information available.

Chapter I serves as a guide to reading research reports. Three essential elements of research design are examined in it--design validity, test validity, and measurement reliability. These three elements of design are frequently mentioned in the literature on research in composition, but are never defined in it.

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Chapter II is a compilation of research done since 1963 in twenty-four areas of needed research proposed by Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer in Research in Written Composition (NCTE: 1963). Both published and unpublished research reports are examined, and recommendations for further research are made.

Chapter III is an examination of the arguments advanced against using research in composition as well as those advanced in favor of using it. A theoretical rationale for using the results of research in the design of composition programs is developed.

Chapter IV is an investigation of theory which bears directly on the teaching and learning of composition. Insights derived from learning theory, language theory, and composition theory are integrated with insights derived from research in composition to formulate a representative theory of instruction for composition.

Chapter V presents two major charges to the English profession. The first is that composition is an intellectually sophisticated field rich in knowledge and presenting numerous empirical, theoretical, and pedagogical challenges for researchers, teachers, and directors. Thus, composition should be recognized as an academic discipline in its own right. The second charge is that composition teachers and directors at all levels should receive specific training in research, theory, and pedagogy in composition and in related fields.

KNOWING AND USING RESEARCH IN TEACHING COMPOSITION

By

Richard VanDeWeghe

A DISSERTATION

Submitted to

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To Judy, for your interest, suggestions,
encouragement, and patience.

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I wish to thank Professor Clinton S. Burhans, Jr., for his guidance and suggestions throughout the preparation of this dissertation.

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INTRODUCTION

My title--Knowing and Using Research in Teaching Composition--governs the structure of this book and the central arguments advanced in it. Starting with the premise that research in composition offers many rich insights into the teaching and learning of composition at all levels, I propose that composition teachers and directors of composition programs should know how to read research reports and should know what research has been done in composition. Second, I suggest that teachers and directors should use the insights available to them from research in designing composition programs. Third, I argue that teachers and directors should integrate research findings with relevant theory in order to build composition programs which are soundly informed by the most significant and relevant information available.

Though much of what I discuss in these chapters may be of interest to research specialists, I am writing primarily for the benefit of research novices, composition teachers, and directors of composition programs, particularly those of the latter two groups who have ignored--for whatever reasons--research in composition. I want to help the reader who does not have the technical expertise of the research specialist to understand research reports and to make informed judgements about the contributions research can make to the design of composition programs.

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Other writers dealing with research in composition have sought similar goals. The most notable of these writers are Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer, whose Research in Written Composition,[1] published in 1963, provided both an examination of research design and a summary of research throughout this century and also a detailed examination of five research studies. Henry Meckel's chapter in the 1963 Handbook of Research in Teaching[2] also summarized research up to that time. In 1969, J. Stephen Sherwin published Four Problems in Teaching English: A Critique of Research,[3] which included a long chapter on investigations into the relationship between writing and traditional grammar, linguistics, and writing practice. Two other research reports appeared in the sixties and early seventies. Richard Braddock's chapter in the 1969 Encyclopedia of Educational Research[4] reviewed research throughout the sixties, and Nathan S. Blount's chapter in the 1973 Second Handbook of Research in Teaching[5] examined research in the late sixties and early seventies. Finally, Sara W. Lundsteen's Help for the Teacher of Written Composition,[6] published in 1976, reviewed research and offered directions for the classroom which derived from the research perspective of the mid-1970's.

I intend my book to be read as a companion to these other books and articles on research in composition. Mine differs, however, in four respects. First, in Chapter I, I give considerable attention to essential elements in research design. Of the books and articles I cited above, only Research in Written Composition attempts to guide the inexperienced reader by providing some commentary on how to read and evaluate research. I extend that book's guide to research design

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by closely examining three key elements frequently mentioned in it and in the other summaries but never defined--namely, design validity, test validity, and measurement reliability.

Second, in Chapter II, I examine research since 1963 in the twenty-four areas of needed research proposed in Research in Written Composition. To my knowledge, no one has yet compiled the research which specifically relates to these crucial proposals. In this regard, I examine both published and unpublished research reports, many of which have significant implications for the teaching and learning of composition. I also make recommendations for additional needed research.

Third, in Chapter III, I develop a theoretical rationale for using the results of research in the design of composition programs. I examine both the arguments advanced against using research as well as those in favor of it.

Finally, in my fourth chapter, I examine theory in fields which bear directly on the design of composition programs. Here, I integrate insights derived from learning theory, language theory, and composition theory with insights derived from research in composition to formulate a theory of instruction for the teaching and learning of composition. My intention here is to present a model of how theory and research can be integrated in order to build the soundest, most informed composition programs.

The reader will notice that I do not direct my remarks to any particular level of instruction--elementary, secondary, or college. I have maintained a comprehensive perspective because the insights I derive from both research and theory apply to many instructional

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levels. Furthermore, such a perspective will, I hope, promote greater interaction and exchange among all levels of instruction.

The reader will notice, in addition, two themes which form an undercurrent throughout this book. The first is that composition is a serious and intellectually sophisticated field, one that is rich in knowledge and one which presents numerous empirical, theoretical, and pedagogical challenges for researchers, teachers, and directors of composition programs. The second theme follows from the first--that the training of composition teachers at all levels must extend far beyond what it has been in the past and still is today. Given the current state of knowledge about composition, we can no longer ignore the valuable resources that are available to us in research and in theory. Teachers and directors must become familiar with both if they wish to achieve intellectually defensible and more successful programs.

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CHAPTER I

DESIGN VALIDITY, TEST VALIDITY, MEASUREMENT RELIABILITY

In 1961, the Executive Committee of the National Council of Teachers of English appointed a committee to investigate the state of knowledge about composition. Its stated purpose was "'to review what is known and what is not known about the teaching and learning of composition and the conditions under which it is taught, for the purpose of preparing for publication a special scientifically based report on what is known in this area.'"[1] Two years later, NCTE published Research in Written Composition, a monograph prepared by the committee and written by its directors, Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer.* This monograph was the first of a number of research reports published throughout the sixties and early seventies which provided summaries of research in composition. But the Braddock Report was unique in that, along with reporting on research studies, it also examined the critical tools necessary for careful scrutiny of such studies. The Braddock Report stands, then, as an important and valuable document for composition teachers and for researchers in written composition. I find, however, that it has certain

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*Hereafter referred to as the Braddock Report.

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shortcomings which I will address myself to in this chapter. In order to do so, I will briefly review the substance of the Braddock Report.

The Report begins with a brief description of its preparation. Chapter II surveys the methodology and some of the elements of design in composition research. The first section in this chapter examines variables which affect the rating of compositions--the writer variable, the assignment variable, the rater variable, and the inter-rater variable. The next section deals with the design of research studies based on frequency counts. In a final section, "General Considerations," the authors make suggestions for the critical interpretation and evaluation of research reports by discussing, among other things, the attitude of the investigator, planning of procedures, and reporting of results.

Chapter III summarizes a considerable amount of research in composition done in this century. Here the authors list research studies under five general headings: 1) environmental factors influencing composition; 2) instructional factors influencing composition; 3) rhetorical considerations; 4) objective tests versus actual writing as measures of writing performance; and 5) other considerations, such as size of English classes, writing vocabulary, spelling, and handwriting. At the end of this chapter appear twenty-four questions for further research in composition.*

In their fourth chapter, the authors select five of the "most soundly based" research studies and examine in considerable detail the design, execution, and results of each study.

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*I will discuss these questions, and the research that has been done in regard to them, in my next chapter.

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For teachers, for researchers, and for directors of composition programs, the Braddock Report is an important document. It is the first major summary of research to appear in over thirty years.[2] Second, it provides for the research novice a useful, though brief, examination of the basic tools for a critical scrutiny of research studies. Third, it heightens the professional and pedagogical awareness of composition teachers by demonstrating that empirical research in composition exists; by discussing elements of design and measurement in layman's terms; and by providing information on composition research that teachers and curriculum designers can implement when constructing writing programs. Fourth, it presents twenty-four recommendations for needed research in composition, many of which have been investigated in recent years. Finally, it has become a document highly regarded by subsequent research specialists. Nathan S. Blount, for example, in the Second Handbook of Research in Teaching (1973), calls the Braddock Report an "indispensable source of information,"[3] and a "classic monograph."[4]

While Blount's praise constitutes continuing recognition of this important document in composition research, it raises an essential question: for whom is the Braddock Report an indispensable source of information? In the preceding paragraph I suggest some possibilities. Part of the readership for the Braddock Report consists of researchers and teachers with research background and technical training, who no doubt benefit most from the summaries of research and the twenty-four recommendations in Chapter III. A second and probably much larger audience consists of research novices and teachers who lack research experience and technical expertise.

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In addition to the research summaries and recommendations, these readers need the survey of research methods and design in Chapter II and the close examination of the five studies in Chapter IV. In other words, I see the authors attempting to provide this second audience with the background material in research that will help them when examining research studies of the sort that appear in the book. However, while this background material does provide much necessary and useful information, I have found it limited in three ways.

The first limitation concerns research design. The purpose of the second chapter is to "survey some of the methods and elements of design in composition research" (p. 6) by pointing out the variables affecting composition rating, frequency counts, and other elements of design. The authors remark that this introduction to research design is a "cursory review," (p. 26), with which most readers would agree. I intend, therefore, to reformulate and elaborate on the variables which affect research design by presenting the concept of design validity, specifically, internal validity and external validity as developed by Donald T. Campbell and Julian C. Stanley in their monumental work, Experimental and Quasi-Experimental Designs for Research, which was first published the same year as the Braddock Report.[5]

The second limitation concerns testing, or more particularly, test validity. This concept appears often in the Braddock Report, but it is never defined. In Chapter II, for example, we find such references to test validity as the following:

> Too few investigators conduct pilot experiments and validate their instruments before undertaking an investigation. (p. 5)

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> The worth of such instruments becomes better known, of course, when other investigators attempt to validate the instruments. (p. 18)

The authors again cite the importance of test validity in their review of the Harris study: "The reader's attention is also directed to the manner in which Harris tried out his procedures in a three-month pilot experiment and validated his criteria of measurement before he undertook his regular experiment" (p. 70). For the reader who is unfamiliar with the meaning of test validity, such references to its essential role in research are vague and confusing. I will, therefore, examine test validity later in this chapter and detail its importance in assuring accurate measurement.

The third limitation I wish to consider in the Braddock Report is measurement reliability. Like test validity, measurement reliability is frequently brought up in the Report as an essential consideration, but it is never defined or clarified. In Chapter II, for example, the authors remark:

> Wiseman has frequently reported reliabilities in the lower .90's for raters using the general impression method for the English 11+ examination.
>
> Cast found the general impression and analytic methods more reliable than the other two and the analytic method slightly superior to the general impression method. (p. 13)

In spite of such references, however, no mention is made of what reliability means. Similarly, in the "Explanation of Statistical Terms," in Chapter IV, reliability is not explained, though in discussing the Buxton study, the authors give considerable attention to Buxton's method of obtaining reliability in rating the essays. Moreover, in analyzing the Harris study, they point out that Harris refined his measuring instrument so that "all criteria except a and g

reached a good or high level of reliability" (p. 75). I find this failure to define reliability a shortcoming in the Report, and so I intend to examine this concept, which for now may be defined as consistency in measurement.

I wish to stress that I am writing for the benefit of the research novice or the teacher who does not have the technical knowledge of the research specialist. I want to assist the inexperienced reader of research reports and summaries of research "to determine for himself whether or not to be convinced by the conclusions of the studies" (p. 55). By thus extending the Braddock Report, moreover, I wish to help the reader make critical sense of such statements in the Report as this: "if raters are not evaluating for the same qualities, they cannot be expected to rate with validity or reliability" (p. 12). Such comments appear throughout the Report, as well as in other published investigations of research.

With this projected audience in mind, then, I will examine first, design validity; second, test validity; and third, measurement reliability. In order to illustrate these three concepts, I will draw on the "most soundly based" research studies found in Chapter IV of the Braddock Report. I will rely on these extended summaries rather than on primary materials for three reasons. First, I intend this book to be read as a comparison to other books and articles which deal with research in composition: the Braddock Report; Henry C. Meckel's chapter in the 1963 Handbook of Research on Teaching[6]; J. Stephen Sherwin's Four Problems in Teaching English: A Critique of Research[7]; Richard Braddock's chapter in the 1969 Encyclopedia of Educational Research[8]; Nathan S. Blount's chapter in the 1973 Second

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Handbook of Research in Teaching[9]; Sara W. Lundsteen's Help for the Teacher of Written Composition[10]; and other sources of a less comprehensive scope. Second, I want to avoid extended description of entire research studies, such description being beyond my purposes here. Finally, I wish to provide examples from easily accessible materials, materials with which readers of this book may already be familiar.

Design Validity

Design validity has received its finest exposition in Donald T. Campbell's and Julian C. Stanley's Experimental and Quasi-Experimental Designs for Research, a book which has been highly regarded by research specialists as a "classic exposition of experimentation in education"[11] and a "monumental treatise on experimentation in educational research."[12] In discussing design validity, Campbell and Stanley make a fundamental distinction between internal validity, which asks, "Did in fact the experimental treatments make a difference in this specific experimental instance?"; and external validity, which asks, "To what populations, settings, treatment variables, and measurement variables can this effect be generalized?" (p. 5). Internal validity, in other words, concerns the control of extraneous variables (variables other than the treatment variable) in an experiment; and external validity concerns the generalizability of the results of the experiment to other situations. I find this an important and useful distinction because it focuses attention on the factors which jeopardize both kinds of validity. These factors, or threats, to the validity of research design are presented in the Campbell and Stanley book in a lucid schema, and I will draw heavily

from this material in my discussion here. In addition, I will also draw from Glenn H. Bracht's and Gene V. Glass' "The External Validity of Experiments,"[13] a 1968 article appearing in the American Educational Research Journal which elaborates on the threats to external validity originally identified by Campbell and Stanley. I believe that by understanding the threats to a valid design--the extraneous variables on the one hand, and the generalizability on the other--the reader of research reports will become better equipped to assess the results of research investigations and their applications.

Campbell and Stanley present eight classes of extraneous variables which, "if not controlled in the experimental design, might produce effects confounded with the effect of the experimental stimulus" (p. 5). These variables pose threats to the internal validity of a design by postulating a plausible rival hypothesis (or hypotheses, in the case of a number of uncontrolled variables) to account for the results of the experiment. "Where an experimental design 'controls' for one of these factors, it merely renders this rival hypothesis implausible," write Campbell and Stanley (p. 36). The eight factors which jeopardize the internal validity of a design are identified by the authors as follows:

1) History: This term refers to "the specific events occurring between the first and second measurement in addition to the experimental variable" (p. 5). The key word here is "events": what happened between measurements which was not intended (controlled), but which nonetheless affected the experimental outcome? That is, in general, what the Braddock Report means when the authors state

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that if "the investigation entails the comparison of one method of instruction to another, all variables other than the method should be controlled" (p. 25).

2) Maturation: This refers to "all of those biological or psychological processes which systematically vary with the passage of time, independent of specific external events" (pp. 7-8). For example, if an experiment tests for development of syntactic fluency, we might consider whether during the time lapse between measurements students have naturally grown more syntactically sophisticated, thus calling into question the full effect of the experimental variable intended to produce this result.

3) Testing: This threat pertains to "the effects of taking a test upon the scores of a second testing" (p. 5). For example, the occasion of the pretest may generate anxiety, which may in turn affect the student's performance on the test. On the second testing, however, the student may have become adjusted to the testing situation, thus reducing anxiety and improving performance. Hence the pretest-posttest gain may be partly accounted for by the reduction of anxiety which was generated by the pretest. As Campbell and Stanley point out, it is well known that students taking achievement and intelligence tests for the second time usually do better than those taking the test for the first time (p. 9).

4) Instrumentation: This refers to "autonomous changes in the measuring instrument" (p. 9) which might explain a change from the first measurement to the second. The section in the Braddock Report dealing with rater variables lists a number of instrumentation threats to

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internal validity, personal feelings and rater fatigue being among the most common. Thus, it is desirable in an experiment using pretest and posttest essays that compositions from both experimental and control groups be shuffled and sequenced indiscriminately throughout the rating period. Another source of instrumentation contamination brought out in the Braddock Report deals with statistical procedures: an investigator, state the authors, "should be reasonably consistent in his use of [statistical] procedures. He should not, for example, switch criterion measures in different parts of an experiment when there seems to be little basis for the change, as did the investigator who used the subordination index as a measure of language development from grade four to grade eight but then depended upon sentence length as his measure through grades nine to twelve" (p. 24).

5) Statistical Regression: This phenomenon occurs when "persons whose initial scores were toward either extreme (very low or very high scores) tend to score nearer to the mean on retest than they did on the original test."[14] That is, if students have been selected for experimentation on the basis of their extreme scores--say, students who score extremely low on achievement tests--careful consideration should be given to the possibility of a regression effect in the data.

6) Selection: This term refers to biases "resulting from differential selection of respondents for the comparison groups" (p. 5). Experimental and control groups should be equivalent to begin with. If they are not equivalent, if, for example, the experimental group is superior to the control group in some way, then a gain specific to the experimental group may be attributed to this initial

non-equivalence. Thus, the effects of the experimental treatment might be confounded with the selection difference. The control for this selection threat is brought up in the Braddock Report when the authors cite the need to control such essential selection variables as "the mental ages, writing proficiency, and socioeconomic and intellectual home backgrounds of the students" (p. 25). Randomization is the best assurance of group equality because it rules out the possibility that the groups would have differed anyway even without the experimental variable.

7) Experimental Mortality: This concerns "the selective dropping out of persons from one of the groups" (p. 12). Campbell and Stanley provide a good illustration of this threat:

> Typically, experiments on teaching methods are spread out over days, weeks, or months. If the pretests and posttests are given in the classrooms from which experimental and control groups are drawn, and if the experimental condition requires attendance at certain sessions, while the control condition does not, then the differential attendance on the three occasions (pretest, treatment, and posttest) produces "mortality" which can introduce subtle sample biases. If, of those initially designated as experimental group participants, one eliminates those who fail to show up for experimental sessions, then one selectively shrinks the experimental group in a way not comparably done in the control group, biasing the experimental group in the direction of the conscientious and healthy. (pp. 15-16).

Experimental mortality may be a particular threat where an experiment extends over a considerable length of time.

8) Selection-Maturation Interaction, etc.: This concerns the possibility that extraneous variables such as history, testing, and maturation interact with whatever specific selection differences distinguish the experimental and control groups to begin with. If, for example, persons in the experimental group are chosen because of low

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academic achievement while those in the control group are of higher academic achievement, a gain specific to the experimental group may be caused as much by the fact of increased attention to their achievement in the experiment itself as by the treatment variable. In this case, the selection difference (low achievement) could interact with the maturation variable (motivation) to produce a gain that might have occurred even without the treatment.

So far I have discussed only the variables which pose threats to the internal validity of a research design. In the next section I will consider threats to external validity. Though my focus will be on external validity, the reader should keep in mind that both internal validity and external validity can be endangered by the same variables.

In the closing paragraphs of Chapter II, the Braddock Report urges a number of imperatives in the reporting of results in a research study. One of these imperatives reads: "the nature of the students must be described in enough detail to permit the reader to determine for which kinds of students the results are applicable, and the investigator must be careful not to generalize his conclusions beyond the limitations of the type of population he sampled from" (p. 27). Here, the authors are referring to external validity. In their earlier comments on variable control, they were also dealing implicitly with questions of external validity; but I believe these scattered comments can be reformulated and elaborated on more precisely, as I have tried to do in my discussion of threats to internal validity. I will draw on an excellent extension of the Campbell and

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Stanley book--Bracht's and Glass' 1968 article, in which the authors treat external validity far more comprehensively than did Campbell and Stanley.

Bracht and Glass define external validity as "the extent and manner in which the result of an experiment can be generalized to different subjects, settings, experimenters, and, possibly, tests." The authors go on to divide the threats to external validity into two broad classes: 1) population validity, or "those dealing with generalizations to populations of persons (What population of subjects can be expected to behave in the same way as did the sample experimental subjects?); and 2) ecological validity, or "those dealing with the 'environment' of the experiment (Under what conditions, i.e., settings, treatments, experimenters, dependent variables, etc., can the same results be expected?)" (p. 438). External validity, then, concerns the applicability of the results of an experiment to a group of persons not included in the original experiment and most likely not treated under the controlled conditions of the experiment. When we apply the results of a research study to our classroom practice, we are basing that application on judgements of external validity.

Population validity draws attention to the relationship between those persons directly involved as subjects in an experiment and those persons to whom the experimental results are projected. As Bracht and Glass point out, "One of the purposes of a research study is to learn something about a large group of people by making observations on a relatively much smaller group of subjects" (p. 440). Population validity, then, calls for a close identification between these two

groups; threats to population validity are threats to this identification. Bracht and Glass present two kinds of threats to population validity:

1) Experimentally Accessible Population vs. Target Population: The experimentally accessible population is "the population of subjects that is available to the experimenter for his study. The target population is defined as the total group of subjects about whom the experimenter is empirically attempting to learn something" (p. 440). The accessible population should be similar to the target population, since that is the group to whom the experimenter ultimately wants to apply the conclusions of his study. And, because the experimenter draws a sample from the accessible population, that sample should be drawn randomly to further insure that similar characteristics mark both groups. The importance of controlling for this threat is emphasized in the Braddock Report in the quotation I cited above and now repeat: "the students should be chosen in such a way that they represent some meaningfully defined student population; otherwise, the results of the experiment cannot validly be generalized beyond those involved in the experiment" (p. 25).

2) Interaction of Personological Variables and Treatment Effects: This threat to population validity concerns the "ability to make general statements about the effect of some treatment" (p. 444). That is, when a treatment is being tested with a certain group of people, is it safe to assume (i.e., generalize) that this one treatment can be prescribed for other groups of people? The authors illustrate this threat by citing one experiment which found that "the

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discovery method has more value for some students than for others; some students will perform better with inductive teaching, and some will respond better to didactic teaching." Hence, the experimenter contended that "generalizations will have to be stated with several qualifications in the form: 'With subject matter of this nature, inductive experience of this type, in this amount, produces this pattern of responses, in pupils at this level of development'" (p. 447). Thus, we see that the threat to external validity from the interaction of personological variables and treatment effects can result in limited generalizability and a morass of qualifications. Yet the qualifications are a necessary guide to the experiment's applicability and should be carefully considered when assessing research conclusions.

Ecological validity is a much larger class of threats to external validity because there are more variables to control. Ecological validity is concerned with experimental conditions; that is, "the experimenter wants to say that the same effect will be obtained under other environmental conditions. Such a generalization assumes that the experimental effect is independent of the experimental environment (hence, the choice of the word, 'ecological')" (p. 452). The ideal experiment for ecological validity, then, would be one which is representative of all conditions to which the experimenter desires to generalize the results. Thus, as the authors stress, a natural setting, or "real" experimental situation, will provide a much closer approximation to situations in which "the human being normally interacts with his environment. Generalization to those situations which are not similar to the experimental setting is

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fraught with indeterminate risks" (p. 455). I now turn to the threats to ecological validity as developed by Bracht and Glass.

1) Describing the Independent Variable Explicitly: This refers to the necessity for a detailed and complete description of the experiment--for the subsequent experimenter who may wish to replicate the original experiment as well as for the reader who wishes to assess the generalizability of the results. Incomplete or unclear description may misrepresent the conclusions of the experiment and thus threaten external validity, as is pointed out in the Braddock Report when the authors remark that "Terms and criteria may mean nothing in the abstract. It should be clear what they represent. If a composition is being rated in part for 'fluency,' for example, the meaning of that term should be made clear. It could refer to the number of words a student writes, the speed with which he writes, writing without correcting or adding elements, or even writing so that the reader proceeds smoothly from one idea to the next. Terms and criteria should be defined carefully, preferably in an operational manner, permitting others to use the terms and criteria with the same results" (p. 23).

2) Multiple-Treatment Interference: This occurs in instances in which "two or more treatments are administered consecutively to the same persons" (p. 456). When only one treatment is used, the response to it can easily be measured. But when a number of treatments are used, responses to subsequent treatments often depend on the earlier treatments. For example, if an experimental writing group's essays are being thoroughly marked, graded, and revised, it may be difficult to

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determine which of these three treatments contribute to the improvement of writing performance (if such improvement should be the experimental result).

3) Hawthorne Effect: This concerns the possibility that a "subject's knowledge that he is participating in an experiment may alter his response to the treatment. In such cases the experimental results cannot be accounted for entirely by the treatment effect" (p. 457). The Braddock Report notes the effect of increased motivation generated by the Hawthorne Effect: "This experiment illustrates . . . the 'Hawthorne Effect,' the added stimulation received by an experimental group when a new method is being compared to an old method" (p. 26).

4) Novelty and Disruption Effects: This threat appears in instances in which the treatment, simply because it is new, creates a certain amount of enthusiasm, which may account for the treatment's effects. Similarly, if the experimenter is unfamiliar with the treatment in the initial application because of its newness to him, a disruption effect may occur which will produce effects that may not appear once the experimenter has become more familiar with the treatment. The Braddock Report notes this threat to external validity when the authors comment on the introduction of some irregular element in the experimental situation: "If a procedure or instrument is being used which would not be employed in a regular teaching situation (such as a kymograph, recording on a moving drum the starts and stops of a student's writing), steps should be taken to insure that the atypical element did not affect the outcome of the experiment" (p. 26). The subject's receptivity to newness is thus another element of design

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that the experimenter must consider, as Bracht and Glass point out: "The effect of some new program in a setting where change is common may be quite different from the effect in a setting where very few changes have been experienced" (p. 439).

5) Experimenter Effect: This threat has to do with unintentional influences on the behavior of the subjects generated by the experimenter's behavior, such as encouragement, annoying mannerisms, revealed expectations, etc. It also includes the experimenter's appearance--sex, age, and race--which may operate as another influence on the subject's behavior. These unintentional influences are among the variables to be controlled that the authors of the Braddock Report cite when they mention the possible bias produced by the personality, knowledge, experience, and attitudes of the teacher in classroom experiments (p. 25).

6) Pretest Sensitization: This refers to instances in which pretested subjects become sensitized to the experimental variable through the experience of the pretest. Campbell and Stanley also note this threat but call it the reactive or interaction effect of testing, "in which a pretest might increase or decrease the respondent's sensitivity or responsiveness to the experimental variable and thus make the results obtained for a pretested population unrepresentative of the effects of the experimental variable for the unpretested universe from which the experimental respondents were selected" (pp. 5-6). Thus, if there is evidence of a pretest effect, the generalizability of the results to occasions where a pretest will not be administered may be threatened.

7) Posttest Sensitization: This threat occurs when the experimental effect appears because of the posttest. That is, the occasion of the posttest itself may, like the occasion of the pretest, sensitize the subject to the expectations generated by the experimental variable. Campbell and Stanley stress that the "more obvious the connection between the experimental treatment and the posttest content, the more likely this effect becomes" (p. 21). Bracht and Glass point out, for example, that the wording of posttest questions or illustrations may "provide a crucial opportunity for the student to acquire the concept" (p. 436). Both Campbell and Stanley and Bracht and Glass suggest using natural settings to counteract the threat of pretest or posttest sensitization. According to Campbell and Stanley, "Through regular classroom examinations or through tests presented as regular examinations and similar in content, and through alternative teaching procedures presented without announcement or apology in the regular teaching process, these two sources of reactive arrangements can probably be avoided in most instances" (p. 22). Similarly, Bracht and Glass report that in experiments "where post-test sensitization may effect the measurement of the treatment effect, the experimenter should try to employ valid unobtrusive measures" (p. 464).

8) Interaction of History and Treatment Effects: This concerns local conditions at the time of the experiment which "may affect the results of the treatment in such a way that the effect would not be found on other occasions" (Bracht and Glass, p. 464). The threat occurring here is that the effect was indigenous to the historical conditions of the experiment, thus making generalizability to other

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conditions difficult. Hence, historical conditions may threaten both internal validity and external validity.

9) Measurement of the Dependent Variable: The dependent variable (experimental outcome) must be clearly defined if we are to know precisely what we are talking about when we generalize the experimental results to other settings. In addition, precise measurement of the dependent variable depends upon the "selection of a measuring instrument which is assumed to measure both reliably and validly the underlying construct" (Bracht and Glass, p. 465). I will discuss reliability and test validity later; but, for now, suffice it to say that an experimental design is threatened if it is not certain that the dependent variable is in fact being measured (validity) or that it is being measured consistently (reliability). The Braddock Report points out that "Statistical analyses in composition research are based upon criterion measures about which certain assumptions must be made. The nature of these assumptions should be made clear, and there should be fairly adequate evidence that the assumptions are valid and that the criterion measures can be applied reliably" (p. 24).

10) Interaction of Time of Measurement and Treatment Effects: It is possible that a treatment effect "which is observed immediately after the treatment period may not be maintained at some later time, e.g., a month or six months after the treatment period. Most experimenters fail to take the time element into account and thus risk invalid generalization effects to other points in time" (p. 466). This is a crucial consideration for research design because it points to the necessity for seeing how much, if any, of the treatment has any

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lasting hold on the experimental subject. If, months or years after the experiment, the subject shows little or no effects from the treatment, then the validity of the original experiment is threatened. The same point is made in the Braddock Report: "Often a follow-up measure should be taken, months or even a year after a new method has been tried, to see how learning stands up for experimental and control groups, when instruction and practice lie in the past" (p. 26). Too often such follow-up testing is not included in a research design.

In this section I have summarized the threats to the two classes of external validity in research design--population validity and ecological validity--as developed by Campbell and Stanley and by Bracht and Glass. My discussion of these threats as well as the threats to internal validity is intended to aid the reader in the interpretation of experimental results by careful scrutiny of a research design. I will now turn to an examination of three research designs presented by Campbell and Stanley in their book and briefly consider each in light of the threats to internal and external validity enumerated above. Altogether, Campbell and Stanley present sixteen designs along with some variations on them. I will focus on just three of these designs to illustrate how the threats to design validity operate on commonly used designs and how each design controls, or fails to control, for these threats. I will rely on Campbell's and Stanley's graphic notation to describe the features of each design. This simple notation is as follows:

> An X represents the exposure of a group to an experimental variable or event, the effects of which are to be measured.

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An O represents some process of observation or measurement.

An R represents random assignment to separate treatment groups.

A dashed line--_ _ _ _ _--represents comparison groups not equated by random assignment.

Each horizontal row indicates a group.

The left to right dimension indicates temporal order (p. 6).

The first design to examine is the "One-Group Pretest-Posttest Design," which the authors call a "pre-experimental" design because it illustrates a number of extraneous variables that can jeopardize internal validity. A scheme of the design is:

$$O_1 \quad X \quad O_2$$

Thus, we see that one group is used in the experiment; it is measured at the outset, subjected to one experimental treatment, and then measured as a follow-up. But a number of uncontrolled variables may threaten the hypothesis that X caused the O_1____O_2 difference. One is history. Since only one group is involved, events in addition to X may occur to students in the group which may cause the change. Another variable is maturation: between the two measurements, students may have grown older, more verbally sophisticated, more tired. A third variable is the effect of testing. That is, the initial measurement may make the experimental group more self-conscious, more alert to the experimental variable, more motivated to change. Another variable is statistical regression, which will threaten the design if the experimental group has been chosen because of its extreme score on O_1. Because of this design's lack of control

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over these (and even more) variables, Campbell and Stanley cite it as a "bad example" (p. 7) of a research design.

A second design is the "Pretest-Posttest Control Group Design," which Campbell and Stanley call a "true experimental design" by virtue of its randomization and the addition of a control group, both of which provide for control of many of the variables that threaten the "One Group Pretest-Posttest Design." The scheme of this second design is:

$$R\ O_1\ X\ O_2$$

$$R\ O_3\quad O_4$$

History is controlled "insofar as general historical events that might have produced an O_1____O_2 difference would also produce an O_3____O_4 difference" (p. 13). Similarly, if maturation and testing influence an O_1____O_2 change, this should also appear in the control group. Regression is controlled if both groups are randomly assigned from the same extreme pool. "In such a case," write the authors, "the control group regresses as much as does the experimental group" (p. 15). Similarly, selection is removed as a threat through randomization.

Of the factors which jeopardize external validity, threats to population validity can be controlled through random selection from an experimentally accessible population with characteristics shared by the target population. Multiple-Treatment Interference is ruled out because only one treatment is used. The Hawthorne Effect and the Novelty and Disruption Effect can threaten the generalizability, however, if the student is aware of his participation in the experiment

and if the experimental setting is too artificial; the best control for both of these factors would be to use a natural setting such as a classroom and embed Xs and Os in the normal classroom routine. Such control procedures would also limit any contamination resulting from pretest or posttest sensitization. I should note, however, that a pretest sensitization threat may still exist if one wishes to generalize from the pretested experimental group to the unpretested target population in any application of the experiment's results. Finally, the interaction of time of measurement and treatment effects may also pose a threat unless post-experimental measurement is carried out. This would alter the design scheme by adding additional Os beyond O_2 and O_4, but it would strengthen the ecological validity of the results.

A third design is the "Nonequivalent Control Group Design," which Campbell and Stanley call a "quasi-experimental design" because, while it lacks full experimental control, it is nonetheless advocated in "those settings where better experimental designs are not feasible.* The scheme of this design is:

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In contrast to the "One Group Pretest-Posttest Design," this design has a control group; but, unlike the "Pretest-Posttest Control Group Design," this one does not assign subjects randomly from a common

*In fact, one of the main themes of the Campbell and Stanley book is the usefulness of such designs, which in some instances are preferable to "true experimental designs." One such instance might be a classroom-situated experiment, as I explain above.

population. This design is most often used in settings where random assignment is not possible or feasible. Hence, it is a widely used design in educational research where intact groups such as classrooms, which are naturally assembled rather than randomly assigned, are used. Though the experimental and control groups do not have pre-experimental equivalence (which would be attained through randomization), there is some equivalence established through pretesting. If similarity between groups is confirmed by the pretest, then certain threats to internal validity can be controlled: "we can regard the design as controlling the main effects of history, maturation, testing, and instrumentation, in that the difference for the experimental group between pretest and posttest (if greater than that for the control group) cannot be explained by main effects of these variables such as would be found affecting both the experimental and the control group" (p. 48). The major threat to internal validity with this design is with selection-maturation interaction, etc., since the experimental and control groups are not equivalent to begin with. For example, there is the possibility that in spite of similarities derived from pretest data, one group may have a higher maturation rate than another. Such a selection-maturation interaction could thus be confounded with the effect of X. The threats to external validity are the same as those I enumerated in the "Pretest-Posttest Control Group Design."

The theoretical designs presented above are but three of the sixteen discussed by Campbell and Stanley. I have chosen these three as sufficient to illustrate the effects on research design of threats to internal and external validity. I will now consider selected design aspects of three of the research projects summarized in the

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Braddock Report as "most soundly based." Though the Report considers five studies in detail, three will be sufficient for my purpose here--to corroborate the Report's notations on design validity and to make a final illustrative application of the design validity elements I have presented above. One caution, however, is in order. I am well aware, as were the authors of the Braddock Report, that their five selected research studies were not "perfect in all respects" (p. 55). Hence, my intention is not to attack these studies but rather to help the reader in considering the validity of their designs.

I find, for example, that the external validity of the Buxton study is flawed by failure to control the multiple-treatment interference threat. The difference between the "Writing" and "Revision" groups' treatment in that experiment is that the "Revision" group's essays were thoroughly marked, graded, and revised while the "Writing" group's essays were commented on only briefly and not graded or revised. Thus, the experimenter claimed three treatment variables--intensive marking, grading, and revising. Failure to measure the effect of each of these variables is noted by the authors of the Braddock Report: "It is not clear, however, what the relative influence is of each of these three factors" (p. 70). Furthermore, a closer scrutiny of the events occurring to the "Revision" group during treatment reveals even more variables at work. I will quote from the Braddock summary of this group's treatment:

> The assignments and papers in the Revision group were treated with considerably more direction. Although the students could develop the assigned topic "in their own way," they were expected to write on the same topic and to include some critical thinking, a central idea, and material that was organized and developed. They were encouraged to organize preliminary ideas

> into an outline before beginning the theme itself, to choose their words and illustrations carefully, and to develop good unity within paragraphs and transitions between them. They were also warned against using unqualified and fallacious statements. These qualities--as well as errors in spelling, punctuation, and sentence structure--were marked on the papers, and a few sentences of general evaluation were written at the end, including mention of commendable qualities as well as suggestions for improvement. Each paper was given two grades, one for content and organization, another for general correctness and accuracy.
>
> The papers of the students in the Revision group were returned at the beginning of a class period. The general strengths and weaknesses of the essays were pointed out at that time, and excerpts exemplifying certain good features were read to the class to elicit comments on how the effectiveness was achieved. Then the students were required to correct the errors indicated on their papers while the reader went from student to student, giving assistance where it was needed. (p. 61)

A number of variables here may well have interacted with the three treatment variables to produce the experimental results. The first is motivation: the students were given more direction and encouragement to write well. The second is mild intimidation: the students were "warned against using unqualified and fallacious statements." The third variable is peer interaction, which is a powerful motivational and correctional strategy: excerpts from students' papers were read to the class and discussed. A fourth variable is individual attention: while the students revised their papers, the reader gave assistance to individual students. All of these uncontrolled variables can be subsumed under the multiple-treatment interference threat to external validity. That is to say, along with the three independent variables the experimenter claims in his conclusions--thorough marking, grading, and revising--we must also add motivation, intimidation, peer interaction, and individual attention. Since any one (or all) of these additional variables may also account

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for Buxton's results, the experimenter's third conclusion--that "College freshmen whose writing is graded and thoroughly marked and who revise their papers in light of these matters can improve their writing more than college freshmen whose writing receives a few general suggestions but no grades or intensive marking and who do not revise their papers"--would seem to misrepresent the actual number of variables in the experimental treatment.

Similarly, the Smith study reflects a threat to external validity or, more specifically, to population validity. This is the point that the Braddock Report makes in saying that "a question was raised about how representative the University High School ninth graders would be of school pupils in general" (p. 96). That the students in this experiment were of high intelligence and high socio-economic background limits the applicability of the experiment's result to a rather small proportion of the larger American school population, as the Report stresses in the beginning of the summary of this study.

The Kincaid study, on the other hand, is cited as being one with a "superior design." This praise derives from Kincaid's careful control of threats to both internal validity and external validity. Factors jeopardizing internal validity were controlled in many ways. For example, Kincaid tried to control the history threat by cautious spacing of the students' writing occasions. He did not wish to space the writing occasions "so far apart that new learning experiences would cause more differences in quality of writing than variations in efficiency would cause" (p. 86). Hence, he spaced the two days of writing one week apart. Clearly, his intention was to prevent the intrusion of unintended influences on the experimental outcome.

The fatigue factor in the maturation threat was controlled when "every other student wrote on the first topic during the first hour, took a ten-minute break, and then wrote on the second topic. The other students first wrote on the second topic and then, after a ten-minute break, on the first topic" (p. 85). Similarly, Kincaid sought to control the rater variable of the instrumentation threat by having all three graders judge all four papers from each student during the same rating period and by staggering the themes of individual students in their order of evaluation.

Kincaid was equally careful in his control for selection bias. To insure that his subjects were "representative of the freshman population at Michigan State, the investigator relied on the usual registration procedure for the course," thereby obtaining a random sample from the university population. Furthermore, as a check on the equivalence between the four groups in the experiment, Kincaid used the first theme written by the students to determine equality in their ability to write. He was thus confident that "each of the four groups was representative of the total group of 80 students" (p. 87).

Kincaid also instituted controls for external validity. As I noted earlier in my discussion of ecological validity, for example, a "natural" setting such as a classroom is desirable for the generalizability of an experiment because of its approximation to the conditions of everyday life. It is significant, then, that Kincaid conducted his experiment in regular writing classrooms with regular writing instructors. He also contributed to this natural setting by choosing topics that were "similar in nature to writing assignments used previously in the term" (p. 84).

In conclusion, I wish to add that of the five studies summarized in detail in the Braddock Report, I find the Kincaid study the soundest in design validity. I will have further comments to make on this and on the other studies in the Braddock Report in the sections that follow here on test validity and measurement reliability.

Test Validity

In the introductory part of this chapter I stated that in my examination of test validity I would point out its importance in assuring that an experimental test "measures what we want it to measure." This is a basic definition of test validity. (There are a number of variations on this definition, but most adhere to essentially this idea.) Put another way, the concept of test validity answers the question, "What does the test measure?" For example, if a test is supposed to measure students' skill in assessing grammatical correctness, then we must be sure that the test does in fact measure that skill. If it does not measure that skill adequately, then it may be said to have low validity as a test of skill in assessing grammatical correctness. Thus we see that this definition of test validity relates to 1) what is actually being measured by the test; and 2) the degree to which the test measures what it supposedly measures, which is another way of saying that test validity is a matter of degree, that tests are not just considered valid or invalid. A good example of degrees of validity appears in Clinton S. Chase's book, Measurement for Educational Evaluation, where the author writes: "an intelligence test is valid to the extent that it tells us the truth about an individual's capacity to perform intelligent acts . . .

suppose we have two intelligence tests--A and B. We discover that Test A has often provided scores that relate more closely to achievement in complex learning tasks than has Test B. Shall we say that Test A is valid and Test B is invalid? No, both have degrees of validity, but Test A is more valid than Test B."[15]

There are four types of test validity commonly used in research testing: content validity, construct validity, and two forms of criterion-related validity--predictive and concurrent. I will explain each here and provide examples wherever possible.

Content validity refers to the relationship between the actual content of the test and the subject-matter or performance the test is supposed to measure. Thus, content validity is defined in the literature on educational and psychological measurement as "the extent to which a test measures a representative sample of the subject-matter content and the behavioral changes under consideration."[16] Content validity is a central concern in achievement testing, because such tests are intended to represent instructional objectives as well as the content of instruction. As Richard H. Lindeman writes in Educational Measurement, "An achievement test has content validity if it represents faithfully the objectives of a given instructional sequence and reflects the emphasis accorded these objectives as the instruction was carried out." Thus, Lindeman continues, "A test in modern algebra would have low content validity for measuring achievement in American history. A test in long division would have low content validity if administered to second-grade pupils. When students criticize a test as not fairly representing the actual

content of the course, they are in reality remarking about the test's content validity."[17]

Construct validity refers to the interpretation of test scores in terms of some general psychological quality (e.g., some ability, trait, or attitude) known as a construct. In the educational and psychological literature, this kind of validity is defined as "the extent to which test performance can be interpreted in terms of certain psychological constructs."[18] Examples of constructs are anxiety, intelligence, reading readiness, critical thinking, mechanical interest, study skills, and verbal ability. The value of making inferences based on construct validity is well put by Gronlund: "There is an obvious advantage in being able to interpret test performance in terms of such psychological constructs. Each construct has an underlying theory which can be brought to bear in describing and predicting a person's behavior. If we say a person is highly intelligent, for example, we know what behaviors might be expected of him in various specific situations."[19] In addition, a test with high construct validity may provide information to help teachers understand students' academic performance. A diagnostic reading test, for example, may tell us a lot about a person's ability to conceptualize abstract features of language, such as inflections or other phonological properties.

Criterion-related validity is a comparison of a person's test scores with an actual performance (the criterion). The test is valid to the extent that the scores corroborate the actual performance. Of the two forms of criterion-related validities, predictive validity is involved when test scores are used to forecast future performance.

Concurrent validity, on the other hand, is involved when test scores are used to estimate an individual's present performance. The difference between these criterion-related validities is well illustrated by Gronlund:

> For example, reading readiness test scores might be used to predict pupils' future achievement in reading, or a test of dictionary skills might be used to estimate pupils' current skill in the actual use of the dictionary (as determined by observation). In the first example, we are interested in prediction and thus in the relationship between the two measures over an extended period of time. This type of validity is called predictive validity. In the second example, we are interested in estimating present status and thus in the relationship between the two measures obtained concurrently. A high relationship in this case would show that the test of dictionary skills is a good indicator of actual skill in use of the dictionary. This procedure for determining validity is called concurrent validity . . . The major difference between the two kinds of validity resides in the time between the two obtained measures.[20]

Criterion-related validities are usually reported statistically in the form of correlation coefficients. This statistical procedure expresses the degree of agreement between the original test score and the criterion measure being used as a basis for comparison. Gronlund's explanation of correlation coefficient is concise and lucid.

> Basically, a coefficient of correlation expresses the degree of relationship between two sets of scores by numbers ranging from +1.00 to -1.00. A perfect positive correlation is indicated by a coefficient of +1.00 and a perfect negative correlation by a coefficient of -1.00. A correlation coefficient of .00 lies midway between these extremes and indicates no relationship between the two sets of scores. Obviously, the larger the coefficient (positive or negative), the higher the degree of relationship expressed.[21]

We may use Gronlund's example of a reading readiness test (see above) to illustrate positive correlation and negative correlation. If a person scores very high on the reading readiness test and

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subsequently attains superior success in reading, then a positive correlation may be said to exist between the test scores and later achievement. But if a person scores extremely low on the reading readiness test yet still attains superior success in reading, then a negative correlation exists. Perfect positive correlations seldom occur.

What, then, is a satisfactory correlation coefficient for the test interpreter to rely on? Most correlation coefficients found in test reports run between .35 and .80; and, though most experts recommend coefficients in the neighborhood of .70 or better, they also agree that our evaluation depends on our purpose for using the test. That is, our ideal is a high correlation in a positive direction, but if we do not have any other information upon which to base judgements which must be made, then we may well be satisfied with a validity coefficient of, for example, .38. In doing so, however, we must realize that the .38 correspondence between test scores and criterion measure indicates a small amount of agreement and thus should be interpreted cautiously.

I have presented the four types of test validity independent of one another. It should be noted, however, that the four overlap considerably. This interdependence among the various test validities was stressed most recently in the American Psychological Association's Standards for Educational and Psychological Tests:

> These aspects of validity can be discussed independently, but only for convenience. They are interrelated operationally and logically: only rarely is one of them alone important in a particular situation.[22]

One example of such interdependence might occur in a diagnostic reading test which could have high construct validity as a test of a person's reading readiness as well as high predictive validity as a measure of future reading success. Another example appears in the Braddock Report's summary of the Harris study. I remarked earlier in this chapter that the authors of the Braddock Report direct their readers' attention to the manner in which Harris validated his criteria of measurement. I wish, therefore, to examine Harris' validation procedure as a way of applying the information I have provided here on test validity.

Harris' problem was finding a frequency count test that would validly measure "'the rate of growth of a child's maturing style'" (p. 74). Evidence that a test would in fact measure this construct would be the results indicating that a "satisfactory difference" exists between the test scores of two groups of differently aged children. Earlier measures tried by the investigator did not result in any significant difference between different age groups (i.e., did not demonstrate construct validity). But when the investigator analyzed compositions written by one group of ten year-olds and those written by another group of fifteen year-olds, he developed a set of eleven criteria "'which occurred sufficiently often to give a clear measurement.'" After computing the difference between the groups, Harris found that the test did indicate a significant difference on all eleven criteria, thus providing the experimenter with a valid test of maturing style. Consequently, Harris used this test in his formal experiment, but not until he determined the reliability of his measuring instrument.

Measurement Reliability

Reliability refers to the consistency with which a measuring instrument (e.g., essay, objective test, essay rater) measures from one occasion to another. If an instrument does not give consistent measurements, then it may be said to have low reliability for whatever it measures. Chase provides a simple and clear illustration by using the yardstick as the measuring instrument:

> For example, if I measure the length of a room with a yardstick, I should get about the same result today as I did yesterday. My measuring procedure is reliable. But suppose I have an elastic measuring tape a yard long. Some days I tend to pull it too taut and get more than three feet in each unit. On those days I underestimate the length of the room. Other days, I do not pull it taut enough, and I overestimate the length of the room. My measuring device is inconsistent, or unreliable.[23]

There are two main ways for determining the reliability of a measuring instrument. The first is through methods of calculating correlation coefficients and the second is through calculating the standard error of measurement.

Correlation coefficients for determining reliability are calculated and interpreted in the same way as the procedure I described in the section on determining validity coefficients. When determining reliability coefficients, however, agreement is based on the correlation between two sets of the same or very similar measurements. This difference becomes clear in considering the methods of calculating reliability coefficients.

One method is called "test-retest," in which the same test is given to the same group twice with a certain amount of time intervening between the two testing occasions. Scores from the two tests are correlated and the correlation coefficient indicates how

consistent the test results are over the time between tests. The advantage of the test-retest method is that it indicates how consistent are scores over a period of time. One caution, however, must be observed. As pointed out in Standards for Educational and Psychological Tests, "retesting is not ordinarily a desirable method of estimating reliability because the examinee may remember his or her responses to items from one testing to the next. Hence, memory becomes a systematic source of variance."[24]

A second method is through using "parallel forms" of the test. This involves making up two different but equivalent test forms (e.g., both sample from the same content, level of difficulty, etc.). One form of the test is administered; and, after some time, the other form is administered. The memory variable which threatened the test-retest method is controlled because the two forms of the test contain different items. Scores from both test administrations are correlated and this correlation coefficient tells us the degree to which the test is consistent between the two forms.

A third way of estimating reliability is by means of the "split-half" method. This involves a single administration of a single form of a test. After the test is given, it is divided into two equivalent parts (odd and even numbered items, for example) and the correlation coefficient between these two parts is calculated. Thus, the split-half method indicates the degree to which the two halves are consistent with one another in their measurements. This method is also known as a measure of internal consistency in that items on the test are correlated against one another.

I pointed out above that there are two main ways of determining the reliability of a measuring instrument. One way, as I have shown, is through calculating the correlation coefficients. The other way is through calculating the standard error of measurement. Standard error of measurement indicates how much we would expect a person's score to vary if he were to be measured a number of times with the same test. That is to say, since there will be minor fluctuations in test scores from one testing to another, any single test score should be seen as a range of scores rather than an absolute score. We should think of a person's test score as comprised of two components: a true score component, which is the score a person would obtain if there were no error in measurement; and a measurement error component. Errors in measurement operate randomly, sometimes increasing a score, and sometimes decreasing it. Standard error of measurement is thus a statistical procedure which estimates the amount of variation we can expect in test scores due to random errors in measurement. A useful illustration appears in Gronlund's book:

> For example, let us assume that we have just administered an intelligence test to a class and the results indicate that Mary Smith has an IQ of 97. We note in the test manual that the standard error of measurement is 5. What does this 5 mean with regard to Mary Smith's IQ? In general, it indicates the amount of error that must be taken into consideration in interpreting Mary Smith's IQ score. More specifically, it provides the limits within which we can reasonably expect to find Mary Smith's "true" IQ score. . . . Thus, a range of scores from 92 to 102 would typically be used to describe Mary Smith's performance. . . . The standard error of measurement makes it clear that a test score should be interpreted as a "band of scores" rather than as a specific score. With a large standard error the band of scores is large and we have less confidence in our obtained score. If the standard error is small the band of scores is small and we have greater confidence that our obtained score is a dependable measure of the characteristic.[25]

Standard error of measurement thus gives us a way of expressing a test's reliability in terms of score units: it tells us that a person's or group's obtained scores are not necessarily the "true" scores, but rather scores which fall within an estimated range. It is an estimation of the amount of variation to be expected in test scores due to unavoidable random errors in measurement. Thus, as Gronlund stresses, "The amount of variation in . . . test scores would be directly related to the reliability of the testing procedures. Low reliability would be indicated by large variations in the pupil's test scores. High reliability would be indicated by little variation from one testing to another."[26]

For anyone reading research reports, an understanding of measurement reliability is important in interpreting and assessing the merits of the research. This is pointed up in Standards for Educational and Psychological Tests, in which the following principle is deemed "Essential": "The test manual or research report should present evidence of reliability, including estimates of the standard error of measurement, that permits the reader to judge whether scores are sufficiently dependable for the intended uses of the test."[27] As a way of applying some of the information I have provided here on reliability, I will examine briefly some of the instances in the Braddock Report where evidence of reliability is presented.

In Chapter II of the Report, for example, the authors comment on a study by Stalnaker which emphasized practice rating sessions for composition raters (p. 14). After the first reading of the compositions by a number of raters, the correlation between raters ranged between .30 and .75; but, after training, the correlation ranged

between .73 and .98, with an average of .88, thus indicating greater measurement reliability with practice in rating.

Rater reliability coefficients are also reported in the Buxton study, where only two raters were used and the coefficient of correlation was calculated through the Pearson product-moment formula (a very common method for computing the coefficient of correlation). The authors report a reliability coefficient of .91 for the pretest themes, thus "indicating a high degree of consistency between the two raters" (p. 66).

Finally, reliability calculations were used in the Harris study to insure that his test--which measured "the rate of growth of a child's maturing style"--proved consistent in its measurement of the eleven criteria of maturing style. (See the above section where I discuss Harris' validation procedures used with this test, since insuring both the validity and the reliability of his instrument was one of the merits of the study). In his validation procedure, Harris demonstrated that by relying on his eleven criteria of maturing style, his test did measure differences between the ten year-olds and the fifteen year-olds. Thus, it proved to be valid instrument. To determine the reliability of the instrument, Harris gave the same test to a group of thirteen year-olds. If the test again indicated differences in this median age group, then he could feel confident that it measured the eleven criteria consistently. The results were that "all criteria except a and g reached a good or high level of reliability" (p. 75). Both the correlation coefficient and the standard error of measurement are reported in Table 4 of the summary. The correspondence between the low coefficient correlation figures and the high

standard error of measurement figures in the criteria with lowest reliabilities illustrate the point I made earlier--that the higher the standard error of measurement obtained, the lower the reliability.

In this chapter, then, I have tried to provide information which can assist readers in their understanding and assessment of research reports. I have defined and examined variables which threaten research projects by jeopardizing the internal and external validity of research design. I have also examined and illustrated two other essential facets of research studies--test validity and measurement reliability--by defining each concept and showing how each figures in the reporting of research experiments. In summary, then, a research design should provide control for extraneous variables and should have generalizable results; a research test should measure what it is intended to measure; and, finally, a research measure should measure consistently.

CHAPTER II

RESEARCH IN COMPOSITION*

In "The Crisis in Knowing about Learning to Write," an article which appeared in the September, 1975, ADE Bulletin, Robert E. Shafer stated that "It would seem that those of us who are in a position to do so should make every effort to infuse programs of student writing with the 'best that has been thought and said about writing, and that those of us who are not accustomed or experienced in evaluating experimental studies of writing should make every effort to familiarize ourselves with their results" [sic] (p. 56). Shafer is quite right in suggesting that the design of composition programs should take into account the experimental research which has been done in the field. But I believe that part of his statement--"those of us who are not accustomed or experienced in evaluating experimental studies should make every effort to familiarize ourselves with their results" --needs modification. If we consider only the results of research studies, we can easily be led to accept blindly the studies' conclusions. We must look beyond the results to questions of design and

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*In this chapter, I will not use the standard format of footnoting by numbers. Because I will cite so many research studies, I will use a more convenient system of simply dating the studies in my text. I will provide full reference information for the studies in my notes.

procedure. To make such information readily accessible was my purpose in the previous chapter--to help those who are not research specialists make critical sense of the results of research by careful scrutiny of some of its essential components: design, test validity, and measurement reliability. This is knowing research in one sense--knowing how to read research reports by understanding research fundamentals. But we must also know research in a second sense--we must know what specific research has been done in composition. In this chapter, then, I will try to help the reader know research in this second sense.

As I noted in the last chapter, there have been major overviews of research in composition in the past few years (Braddock, Lloyd-Jones, Schoer, 1963; Meckel, 1963; Braddock, 1969; Sherwin, 1969; Blount, 1973; and Lundsteen, 1976). Each overview summarizes research according to some frame of reference. The Braddock Report, for example, presents topics relating to composition (e.g., environmental factors influencing composition, instructional factors influencing composition, rhetorical considerations, et al.) and a number of studies which explore these topics. Similarly, Blount compiles research in the areas of curriculum, the interrelationships of grammar and writing, vocabulary, student characteristics, measurement, and teacher preparation.

In this chapter, I will present an overview of research studies in composition since 1963 by reference to the twenty-four suggestions for needed research which were posed in the Braddock Report. These suggestions, which appeared in the form of questions, were as follows:

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1. What kinds of situations and assignments at various levels of schooling stimulate a desire to write well?

2. What do different kinds of students prefer to write about when relieved of the expectations and requirements of teachers and others?

3. What are the sources of fear and resentment of writing?

4. How do the kinds of writing which adults compose vary with their occupations and other factors.

5. What is the effect on writing of having the student compose his paper for different kinds of readers?

6. At which levels of maturation does it seem appropriate to introduce the various modes of discourse--narration, poetry, drama, exposition, argument, and criticism?

7. What is the relative effectiveness of writing shorter and longer papers at various levels of maturity and proficiency?

8. At which levels of maturation does it seem appropriate to introduce the various rhetorical elements of writing?

9. What are the effects of various kinds and amounts of reading on the quality and kinds of writing a person does?

10. What are the direct and indirect effects of particular sensory experiences and guided observation upon writing?

11. At what stages of maturity do students spontaneously seek specific help in improving particular aspects of writing, such as specificity of details, transitions, parallel structure, and metaphor?

12. At which levels of maturation can particular aspects of writing most efficiently be learned?

13. Does the oral reading of rough drafts help the elementary school strengthen "sentence sense"? How does it?

14. What techniques of composition most effectively help build self-discipline and pride in clarity, originality, and good form?

15. What procedures of teaching and learning composition are most effective for pupils of low socioeconomic patterns?

16. What procedures of teaching and learning composition are most effective for pupils learning to write English as a second language?

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17. Can study of the newer types of linguistics help writers?

18. Can formal study of rhetorical theory or of logic help writers?

19. How is writing affected by extensive study and imitation or parody of models?

20. What forms of discourse have the greatest effect on other types of writing? For example, does writing poetry help a writer of reports?

21. What is involved in the act of writing?

22. How does a person go about starting a paper? What questions must he answer for himself?

23. How does a writer generate sentences?

24. Of what does skill in writing really consist?

As the authors of the Braddock Report noted, these questions "which seem fundamental in the teaching and learning of written composition apparently have gone almost untouched by careful research" (p. 52). I will report, therefore, on what research has been done since the Braddock Report, research which may or may not be in direct response to these questions, but which nonetheless provides information relating to these crucial areas. To my knowledge, no one has yet assembled the research studies which pertain to these questions.

At the outset, I should state three matters relating to the preparation of my overview. In the first place, some of the questions posed in the Braddock Report deal with psychological matters which are very difficult for researchers to gauge. Question Fourteen, for example--"What techniques of composition most effectively help build self-discipline and pride in clarity, originality, and good form?"--asks the researcher to establish a relationship between technique and two psychological constructs--self-discipline and pride. While many

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research studies do investigate the relationships between techniques and improvement in such writing skills as clarity, originality, and form, few investigate what impact, if any, a technique has on mental faculties (or, for that matter, what impact mental faculties has on a technique). I will report on both types of studies--those which relate only to skills or achievement, and those which relate to mental faculties (such as attitudes toward writing). The former studies base their conclusions on measures of achievement, which limits them to data derived strictly from demonstrable behavior. Still, they do suggest relationships between techniques and achievement which may generate further research into the psychological effects of these techniques.

A related matter pertains to the overlap of some questions. Question Twenty-One, for example--"What is involved in the act of writing?"--is closely related to question Twenty-Two--"How does a person go about starting a paper? What questions must he answer for himself?" In such instances, I will group overlapping questions together and report on research most closely related to both.

The third matter concerns the selective nature of this overview. It is selective in two senses. First, I have not included some studies simply because they do not relate to any of the questions posed in the Braddock Report. Thus, I have not reported such studies as that by McElwee (1974), who examined the effects of systematic instruction in proofreading on the spelling accuracy of fourth and sixth graders. Another example of a study which is interesting in itself but is not related to the Braddock Report's questions is the one by Norwood (1974), who conducted an experiment in teaching

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methodology to determine achievement as related to ethnic origin. In this overview, then, I have reported only on those studies which relate closely to the questions posed in the Braddock Report. Research dealing with such matters as spelling, ethnic origin, vocabulary, teacher preparation, and the like have not been included.

This overview is also selective in a second sense. While I have investigated both published and unpublished research studies, I have eliminated some studies because of major flaws in design or procedure. Such was the case with one study which investigated whether students enrolled in a freshman composition course using an experimental method improved their writing after fifteen weeks of treatment. The data on the posttests indicated that there was improvement in writing ability, but since no control group was used, the experimenter could not be sure if the improvement was a result of the experimental treatment or not. In another study, experimental and control groups were pre and posttested to determine the effects of teacher-corrected versus peer-corrected writing. But on the writing samples used as the posttest, rater reliability was so low that the writing samples had to be discarded. Scores on the objective posttest were not statistically significant, so the investigator "concluded" that there is no significant difference between the two methods of correcting student writing. Studies such as these are relatively insignificant or so egregiously flawed that they are hardly worth reporting.

In reporting on better designed and more significant studies, I will consider both procedures and results. Readers who wish to look further into these studies can easily obtain them either as published documents, or through University Microfilms, or ERIC Document

Reproduction Service. Finally, I will, wherever possible, point out areas related to the Braddock Report questions which need further research.

1. What kinds of situations and assignments at various levels of schooling stimulate a desire to write well?

14. What techniques of composition most effectively help build self-discipline and pride in clarity, originality, and good form?

These two questions deal both with attitudes toward writing and also with achievement. Because there is little distinction between "kinds of situations and assignments" and "techniques of composition" and because a "desire to write well" necessarily involves "pride in clarity, originality, and good form," I will consider these questions together.

Hall, Moretz, and Storm (1976) studied home environments of children who were early writers in school in an attempt to identify what builds positive attitudes toward writing. From information collected through interviews with parents, the researchers found that most parents of early writers were college graduates who served as models for the children because they wrote in the home themselves; writing materials were easily accessible to the children, as were books, magazines, and newspapers; and parents often engaged in reading and often read to their children. The researchers identified three patterns in this early interest in writing: 1) desire to communicate to others through letters; 2) introduction to the names of letters and often direct instruction in writing; and 3) help given at the children's requests.

Many studies have been done on the effect of teacher criticism of student writing. In an overview of this research, Groff (1975) concludes that, contrary to popular belief, either positive or negative criticism of children's writing gets the same results. That is, the quality of children's writing is not affected by either positive or negative criticism. However, the effect of such criticism on attitudes toward writing is another matter. Gee (1970), for example, worked with 139 eleventh grade students in an investigation of the effects of written comment on expository composition. Students were assigned to three treatment groups: one group received positive comments, one group received negative comments, and one group received no comments at all. All of the students wrote four compositions. Before each writing, the previous composition was returned, with appropriate comments, or no comments at all. Measurement comparisons between the first and fourth compositions were based on the number of T-units and on quality as determined by a rating scale. While Gee found no significant differences in the quality of student writing, he did find that comments of praise were more effective than negative comments or no comments at all in promoting positive attitudes toward writing.

Stevens (1973), working with ninety-one low-performing urban male high school students for ten weeks, investigated what effect positive or negative evaluation has on the quality of writing and on the students' attitudes toward composition. Positive and negative evaluation groups were set up and students wrote five compositions during the study. Stevens found no difference in the quality of the compositions due to the effect of positive or negative evaluation,

but he did find that positive evaluation creates positive attitudes while negative evaluation creates negative attitudes.

Two other studies deal with related kinds of feedback. Stiff (1967) investigated the effect of three correction methods on the writing of seventy-seven college freshman composition students. The three methods were: 1) marginal comments only; 2) terminal comments only; and 3) combined marginal and terminal comments. The results indicated improvement in all of the students' writing: there was no significant difference deriving from the method of correction. Stiff points out that this result would seem to indicate that the completely corrected paper and the amount of time invested in it may be no more productive than other procedures of correction which are less time consuming. However, Stiff also found that the students in the combined marginal/terminal correction group were more pleased with that method than the students in the other groups. The author thus suggests that, in the long run, this third method may have a positive effect on student morale and perhaps on performance.

Sweet (1966) examined other forms of teacher feedback in his six-week study involving 225 ninth graders. The three methods he employed were: 1) no comment, only a numerical score and letter grade; 2) free comment (whatever comment the teacher felt like making; and 3) specified comment (stock responses designated in advance for each letter grade, such as A = "Excellent! Keep it up," or C = "Perhaps try to do better"). The three feedback methods were applied to students' objective tests, rather than actual writing samples which are usually used in experiments of this sort. But since Sweet's concern was with measuring the effects of feedback on performance

generally, his results are nonetheless suggestive and applicable to actual writing. Students in all three groups demonstrated little short-term effects on test performance due to treatment. However, students in the free comment group did show a signficant effect on scholastic performance over a longer period of time. In addition, only the students in the free comment group showed a positive change in attitude toward English. The researcher called for replication of his study, but for a longer time interval to test the long-term effects of feedback on attitudes.

Two researchers comparing different approaches to composition included in their data information on attitudes toward writing. Adams (1971) compared the effectiveness of two methods used in an elective pre-college course. Method A was a highly structured approach which used professional essays as models, limited topics for writing, prescribed forms of discourse and length, mechanical and structural errors marked by a grader, brief comments directed at errors on themes, and required revisions. Method B was described as flexible: models derived from students' writings; no restrictions on topics, form, or length; small-group work where students read one another's writing before turning in revisions for the teacher to read; themes evaluated by responding to students' thoughts and ideas while mechanical and structural errors went unmarked; and long and affirmative comments on papers. The results derived from the STEP (Sequential Test of Educational Progress) test of writing skills, as well as from evaluation of writing samples showed that no significant differences in writing skills existed between students from either group. There were significant differences, however, in attitudes toward

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the methods: both teachers and students in method B were more enthusiastic toward the end of the semester. This study represents two extremes in methodologies; and, though many uncontrolled variables in each method weaken the design, the attitudinal results do suggest that certain elements in method B may increase motivation in students at this level.

In a similar experiment, Wahlberg (1970) explored a method of structuring the freshman composition classroom to affect student attitude and improve the learning climate. The control group followed a teacher-centered lecture format; the experimental group followed a peer-interaction format with a college counselor intervening to show students ways to help one another. While the results showed mixed improvement for both groups, the students in the intervention group felt that more learning took place and that the instructor "cared" for them.

A number of methodological experiments in pre-writing techniques have been done. While I intend to report the bulk of these experiments under Question Eighteen (below), one study must be reported here because along with testing the effectiveness of pre-writing techniques, it also gathered data on attitudes. Rohman and Wlecke (1964) worked with students in a college-level sophomore expository writing course for one semester. The procedure followed in the experimental group was a six-week unit with the focus on concept formation in the prewriting process (stress on the need for experience and thought before the actual writing). The control group followed a traditional basic composition course format: formal study of grammar, logic, and rhetoric; analysis of model essays; and weekly

essays with revisions. Post-treatment themes were rated significantly higher in favor of the experimental group. Equally important, however, was the data gathered in the area of attitudes. Where the control group by the end of the course saw writing as an extrinsic problem (concern with mechanics, spelling, rules of good writing behavior), the experimental group saw writing as an intrinsic problem (concern with the value of ideas, thinking, and conceptualization). The authors concluded that as a result of their experiences in this course, the experimental students saw writing as a more worthwhile, more desirable activity.

Other comparative methodological studies were concerned less with attitudes and more with achievement. Troyka (1973) investigated the effect of simulation-gaming (role-playing) on the expository prose competence of community college remedial composition students. Using the non-equivalent control group design (see pp. 28-29), the researcher set up an experimental group which was given simulation-based writing experiences focusing on basic rhetorical skills (development by facts, by reason, by incidents, and by comparison/contrast). The control group was given similar assignments but did not experience simulation-gaming. The experimental group achieved significantly higher scores than the control group on two measures of writing ability--the STEP section on English Expression, and a rating scale used to evaluate the themes. Troyka concludes that the experimental treatment not only improved expository writing competence but also proved to be an effective motivational strategy.

Some studies compared writing labs/workshops with more traditional approaches. Haas, Childers, Babbit, and Dylla (1972) used

142 freshman composition students for one semester to investigate the effectiveness of an experimental workshop method which made use of intensive in-class guidance of daily writing assignments, peer-group problem solving of writing tasks, and condensed descriptions of rhetorical techniques. The control groups followed a format based on lectures on rhetorical strategies and discussions of readings from an anthology. In their results, the researchers found that the experimental workshop groups showed superior achievement over the control groups on writing samples rated for rhetorical technique, structure, mechanics, and content.

In a similar experiment, Sutton and Arnold (1974) worked with 244 freshmen who scored on the lowest decile on the English scale of the ACT. The purpose of this study was to compare the long-term effects of a writing lab with those of a regular remedial English course upon the achievement and the attrition rate of the students. Students in the writing lab experienced much intensive tutoring while those in the regular course followed a lecture-discussion format. Both groups used programmed texts in spelling, diction, and writing. The researchers found that the writing lab students fared better in their other courses and that the individualized instruction of the writing lab methodology had a significant effect on the future writing grades of these students.

Two other experiments with writing labs arrived at less significant results. Turner (1970) worked with three sections of junior college English to determine whether or not the substitution of a writing lab for a regular class would improve student writing. Two control groups and one experimental group were set up with

evaluation based on judges' ranking of final compositions in the course. The results showed that the experimental writing lab group performed slightly better but not at a level of statistical significance. Dow (1973) had similar results with another group of college students. One hundred and forty-six students were divided into experimental and control groups. The experimental groups were assigned to a writing lab which was characterized by an informal atmosphere, attractive environment, non-compulsory assignments, non-mandatory attendance, ungraded writing, and extensive student-teacher conferences. The control groups followed a more structured procedure: a formal classroom setting, reading and writing assignments, graded writing, grammar study, research papers, and examinations. Evaluation of both groups consisted of a writing skills test, a test of exposition, and a writing sample evaluated by four raters using an evaluation sheet. Dow found that the students in both groups wrote equally as well.

Closely related to experiments with writing labs are those which examine the effects of class size and/or individualized instruction. Smith (1974) worked with high school juniors to investigate the hypothesis that the teaching of writing can be improved through individualized and small-group instruction. The researcher used twelve classes. Six were large-class control groups which received instruction directed to each group as a whole. Among the other six classes were groups which also received instruction directed to the entire group but with smaller class size, and groups which received individualized instruction. Smith found that the students in smaller classes made greater gains in knowledge of writing skills and in

writing performance than those in the larger classes and that students of low and average achievement improved more than did students of high achievement. She also found that students in the individualized instruction groups made even greater improvement than those in small classes. An important part of the Smith study was a check on retention of skills six weeks after the experiment: post-experimental testing showed no retention in knowledge of writing skills or in writing performance for students in large classes. Students in small classes showed retention in knowledge of writing skills but no retention in writing performance. Students in the individualized instruction groups showed retention both in knowledge of writing skills and also in writing performance six weeks after the experiment.

Lagana (1972) examined an instructional method which employed individualization (diagnostic tests and teacher-student conferences) and peer grouping (students in each peer group chose writing topics, set objectives, and evaluated their writing). The control group operated on a whole-class basis, with the objectives set by the teacher, who also evaluated all writing. The subjects were sixty tenth grade students. Evaluation was based on the STEP writing test and the STEP essay test. Lagana found that "peer evaluation of compositions was at least as effective as teacher corrections and greatly reduced the need for out-of-class teacher time expended in evaluation. Peer evaluation also enabled sutdents to complete more compositions while receiving more immediate feedback on each writing . . . students were able to progress at their own rate in acquiring certain composition skills without repetition of previous learning" (p. 4063A).

In a related study, Ford (1973) investigated the effects of peer-editing and grading of themes on the grammar-usage and theme-writing ability of freshman English students. He found that having students edit and grade each others' themes can cause significantly greater gains in their grammar-usage as well as in their theme-composition ability than having just the course instructor edit and grade the students' writing.

Similarly, in an experiment using sixth graders, Sager (1973) investigated whether children who were taught to use a rating scale (composed of four sections on vocabulary, elaboration, organization, and structure) to rate their own compositions and those of their peers would improve the quality of their writing more than students who studied the four criteria of the rating scale but did not use it in evaluating their work. The researcher found that the students using the scale to rate their own work as well as that of their peers did improve the quality of their writing more than did the students who did not use the scale.

Another kind of methodological experiment involved programmed instruction. Slay (1968) compared the effectiveness of programmed, formal, and informal approaches to the teaching of grammar in remedial college English. The programmed group used a programmed grammar text; the formal group used formal grammar instruction with a traditional handbook; and the informal group replaced formal grammar instruction with teacher-led discussions of students' writing, along with samples of student writing presented on an overhead projector. The researcher found no significant difference in writing skills among the three groups. Harris (1972) examined the learning

effectiveness and cost-time efficiency of programmed instruction for teaching expository writing to college freshmen and high school seniors. Programmed instruction included integrated instructional sequence, behavioral objectives and student knowledge of objectives, cybernetic feedback, and self-instruction. Harris found programmed instruction effective for teaching some high-level cognitive processes (analyzing informative discourse) and as effective as conventional methods for teaching the analysis and production of the kind of discourse which emphasizes logical proof. He also found programmed instruction efficient in terms of cost and time.

In an extension of the Rohman and Wlecke study (1964, see above), Burhans (1968) added to the focus on prewriting a stress on writing techniques and structural methods. Three approaches to a college level sophomore composition course were compared. The "prewriting" group emphasized prewriting and rewriting; the "comprehensive" group emphasized prewriting, writing techniques (e.g., abstract and concrete language, figurative language, analogy, and exemplification), and structural methods (development of paragraphs and essays), and rewriting; the "traditional" group emphasized logic, rhetoric, and mechanics. In addition, the "prewriting" and "comprehensive" groups were student-centered and developmental (i.e., from prewriting and writing stages to full essays) while the "traditional" group was material-centered and static (i.e., begin with full essays). Burhans found that students in the "prewriting" and "comprehensive" groups produced writing superior to that produced by students in the "traditional" group. While students in the "prewriting" and "comprehensive" groups showed measurable gains in the areas of wording, flavor, ideas,

and organization, none of the three groups proved superior in the improvement of mechanics.

Two experiments were concerned strictly with revision. Hansen (1971) investigated whether university students who do teacher-guided revision and rewriting of an essay achieve greater skill in composition performance than students who correct mechanical and grammatical errors with only the aid of a handbook and who do not revise or rewrite. For the self-guided students, then, revision was strictly a matter of proof-reading. In addition, students in the self-guided group wrote more themes without revision, while the students in the teacher-guided group wrote fewer themes but revised each into new themes. The results led Hansen to conclude that there is no assurance that "a student who writes four themes and revises and rewrites each into a new theme will improve his composition skills any more than one who writes eight themes on eight different topics and makes a correction sheet for each" (p. 1473A). The researcher also concluded that editing skills are evidently learned in some way other than through revising and rewriting. This study suggests that if students once understand just what needs to be revised, the actual physical act of revision may be unnecessary.

In another study of revision, Effros (1973) worked with ten college freshman composition sections. The experimental groups' procedure was designed to motivate students to revise and rewrite by delaying grades until revisions were completed. The control groups, on the other hand, used minor revision with immediate grades. Results based on the English Expression Test showed that the control group

was significantly better, though there was no significant difference between the two groups on the essay test.

In an experiment intended to examine creativity in the writing of tenth grade students, Jenks (1965) compared two methods. The first was the "Demopraxis Journal Method," which consisted of regular journal keeping that included five components: 1) an ideas list; 2) daily writing with three weekly essays focussed on a single topic, mood, or opinion; 3) a personal manual with corrections of errors noted by the writer or by members of a peer group; 4) a spelling list; and 5) extra-credit manuscripts. The second method was a regular course of study where students wrote one assigned theme per week and did not keep a journal. Experimental data derived from the Imaginative Stories Tasks of the Minnesota Tests of Creative Thinking showed that the "Demopraxis Journal Method" contributed significantly to creative development.

Since many of the studies I have reported here were conducted in rather short periods of time, evidence seldom indicates that any method being compared with another has any lasting effect. Many researchers report that significant differences might have become apparent had the treatment been carried out over a longer time. Smith's (1964, see above) six-week post-experimental check is thus an exception worthy of replication. To cite another example, Burrus (1970) conducted a three year experiment with primary childen comparing two methods of teaching the mechanics of writing. The "traditional" method placed emphasis on a language textbook and models of correctness while the "functional" method emphasized the child's own language (i.e., stress on mechanics as determined by voice

inflections) and emphasized writing as purposeful communication. Burrus found the functional approach statistically more significant in improving punctuation, capitalization, and spelling. Improvement in usage and sentence structure was slightly higher for the functional group, though not statistically significant. What is more important in this study, however, is the suggestion that attitudes formed in the functional group toward writing as a purposeful, real communication act directed toward peers may have had an impact on the improvement of certain writing skills. The Burrus study has too many uncontrolled variables for this causal relationship to be drawn with any real certainty; still, it does suggest a relationship between attitudes and achievement acquired in time which other experimental methodological studies need to investigate.

It is clear from many of the studies I have reported here that attitudes students form toward writing are not always considered in methodological comparisons. Indeed, investigations into the relationships between techniques of composition teaching and learning and attitudes which foster improvement in composition pose many questions of a psycholinguistic nature which call for much needed research. What, for example, is the long-term effect on student motivation and performance of teacher-sponsored versus self-sponsored writing? Or how does having a genuine purpose for writing influence the development of writing abilities? And what is the impact of feedback from <u>real</u> audiences as opposed to <u>teacher-only</u> audiences on student desire to communicate and communicate well. Finally, a research proposal made by Rohman and Wlecke in their study seems most appropriate here: researchers should seek "to refine the precise

relation of the journal--that is, the habit of private articulation--to the improvement of a student's attitude and performance as a writer" (Rohman and Wlecke, 1964, p. 108).

These kinds of questions view writing as a meaning-centered language process where motivation and attitudes enter into the writing process in as essential a role as do the writing "skills" most studies focus their attention on. The reciprocal nature of attitudes and performance is thus in need of more research which recognizes that the development of attitudes and abilities in writing takes time and that composition methods and approaches are truly "effective" only when their impact on achievement and attitudes is apparent long after treatment.

2. What do different kinds of students prefer to write about when relieved of the expectations and requirements of teachers and others?

Varon (1971) examined the content of unsolicited compositions written by fifth and sixth grade students in the years 1963-1968. She found that the major thematic category students preferred was abstract concepts such as love and hate. Other categories observed (in rank order) were: nature, activities, material goods, and humans. Varon also found the greatest use of human referrents in the children's writing was that of persons generally, followed by self, extra-familial, world, familial, fanciful, and no persons at all. Jobe (1974) found that when given freedom of choice in selecting topics, students chose fantasy, animals, and personality, in that order. Jobe also found that the major influence on choice of topic was

internal (students' own ideas), followed by topics derived from personal experiences, and lastly books.

Bell (1971) examined 1,502 compositions designed to encourage free expression of the writing interests of high school students. He found that the interests most frequently expressed by the students (in rank order) were: education, our society, life, sports, home, our world, people, experiences, and friendship. Bell also found that the students were more interested in writing about matters that they perceived as affecting their own lives and that they showed minimal interest in writing about such topics as animals, music, hobbies, travel, space, and literature.

Standish's (1970) informal investigation of high school student writing preferences was reported in the April, 1970, Arizona English Bulletin:

> Interested in discovering what kinds of composition assignments high school students preferred, Patricia Standish (Alhambra HS, Phoenix) asked 256 students to complete a brief questionnaire. The response to item 1, "If you were going to be assigned a composition, which instructions would you prefer to follow?" revealed a preference for an unstructured assignment (an assignment which left the student free in choice of topic, audience, approach, style, or length) by more than 40% of the students. About 29% preferred the loosely structured assignment, while less than 13% favored highly structured assignments. Item 2 asked students, "If you were going to be assigned a composition, which type of topic would you prefer?" and students indicated preference for topics based on current problems (50%), as opposed to topics based on literature (20%), experience (12%), or the composition book (2%). Item 3 asked students, "If you were going to be assigned a composition, what type of writing would you prefer?" Students responded to item 3 by indicating a preference for expository writing (36%) over narrative (22%) or descriptive (15%) writing. That these 256 students preferred unstructured assignments is a little surprising. Many texts on writing note that structured topics give the young writer a sense of purpose and direction. (p. 51)

Future researchers might direct their attention toward the writing preferences of college students; content analyses and questionnaire/inquiry techniques may provide interesting data for determining the nature of preferred writing assignments. It may well be, for example, that part of the problem facing beginning writers stems from the conflict between preferred writing topics and imposed topics. Furthermore, the wide spread of preference reported in such studies as Standish's suggests a need for research which investigates whether providing a variety of topics and modes on a writing assignment affects the writing performance of students.

3. What are the sources of fear and resentment of writing?

I have considered this question separately from Questions One and Fourteen because it pertains to identifying sources of attitudes toward writing generally, whereas those questions pertained more to identifying attitudes formed as a result of specific techniques. Two recent studies investigated language apprehension as a possible source of fear and resentment. In a case study which examined the development of linguistic security and written fluency, Koch (1975) sought to facilitate linguistic security in college students through small-group interaction. Pre and posttest comparisons revealed that students involved with small group interaction valued their competence with language more, increased their written fluency, demonstrated greater cohesion in their writing, and had greater confidence in their ability to speak and write effectively. Brazil (1975) found similar results; and, unlike the Koch study, he used a control group. Brazil hypothesized that the doctrine of linguistic correctness causes

linguistic insecurity. Working at the community college level, Brazil evaluated the overall effectiveness of two contrasting approaches to teaching freshman composition: 1) a dialect-acceptance, student-centered approach; and 2) a language-standardization, teacher-centered approach. Results favored the dialect-acceptance approach: students made greater gains in fluency and overall writing effectiveness.

A project by Daly and Miller (1975) came closer to identifying the sources of fear and resentment than did either the Koch or Brazil studies. Daly and Miller reported on the initial development of an instrument for identifying apprehensive student writers. The researchers developed a twenty-six item Lickert-type scale which was designed as an attitudes survey and was tested for validity and reliability. Students answering the survey are instructed to indicate degrees of agreement or disagreement to such statements as the following:

--I avoid writing.

--I am afraid of writing essays when I know they will be evaluated.

--My mind seems to go blank when I start to work on a composition.

--I expect to do poorly in composition classes even before I enter them.

--I have a terrible time organizing my ideas in a composition course.

Further research in student writing apprehensions might expand the pioneering work of Daly and Miller to a more precise identification of fears and resentments. Longitudinal and case-study procedures might provide information regarding the natural history of reluctant

writers. In addition, inquiries into previous school experiences with writing could provide much valuable insight. Related research issues were suggested by Rohman and Wlecke in their study (1964); they encouraged researchers to:

> Seek to throw more light on the relationship of a person's self-image to his behavior as a writer. What might the validity of a self-image be as a predictor of successful behavior as writer?
>
> Seek to uncover to what degree our national "neurosis" about "correctness" has inhibited or encouraged better performance among student writers. What kinds of attitudes, especially in the elementary grades, would provoke better writing among young people? (p. 107)

Finally, I would add that in recent years, an enormous amount of research in dialect variation has become available which can be of much value in attempts to discover the sources of fear and resentment of writing. Thus, research into the relationship of dialect variation and apprehension in writing shows much promise.

4. How do the kinds of writing which adults compose vary with their occupations and other factors?

Very little has been done in this area. One study by VanFleet (1969) sought to develop guidelines for the content of a college report-writing course by gathering data through the analysis of report-writing textbooks and by interviewing report writers and report readers at two companies. The investigator found that the potential report writer should be able to do the following: 1) write correctly, concisely, clearly, and precisely; 2) define and analyze report problems; 3) outline, organize, and write reports of various lengths and degrees of complexity and formality; 4) develop particular report sections, such as introduction and summaries; 5) present data

graphically and verbally, and distinguish between relevant and irrelevant details; and 6) follow instructions pertaining to report make-up, physical presentation, and graphic construction. Further research into other areas of specialized writing may be very useful to teachers and curriculum designers of specialized or technical writing programs.

5. What is the effect on writing of having the student compose his paper for different kinds of readers?

Most of the research relating to this question deals with peer-audience as one of the elements in a total methodological approach (see, for example, Lagana, 1972; and, Ford, 1973). A study by McClatchey and McClatchey (1970), however, seems to be in direct response to this question in that peer-audience was the variable in the project. After conducting a pilot study with twenty-nine students, the actual study was begun with fifty-nine freshman composition students at a university. Students in four classes each wrote four themes. Two of the themes were handed in to the teacher to be graded and commented on. The third theme was dittoed and distributed in class groups, taken home and commmented on by peers, discussed in class, and then returned to the writers. The fourth theme, exchanged between pairs of students rather than in groups, was commented on, discussed, and returned to the writers. Next, all of the themes were evaluated by a group of outside raters on the basis of interest, construction, and organization. A letter grade was assigned for each theme. The results indicated that average and above-average students did better when writing for the teacher. Below-average students, however, did better when writing for their peers. In their

conclusions, the investigators suggested that below-average writers make low grades in writing partly because of tension over grades and inability to "psych out" the teacher's wishes. "In any case," they write, "it is apparent from the results of this research that most below-average students, and some who are average or above-average, would profit from writing, at least occasionally, themes that are directed towards their fellow students" (McClatchey and McClatchey, 1970, p. 23).

McClatchey and McClatchey call for replication of their investigation into the impact of audience on student writing, and it would appear from the paucity of studies done in this area that there is still much need for such studies. In addition, researchers might consider investigating what effect audiences other than teachers and peers might have on student writing. For example, how is student writing affected when the audience is the school or the community at large or professional individuals and groups? While it is not uncommon for students at all levels to be engaged in writing for audiences of this sort, there has been virtually no research to estimate the effectiveness of such practice.

6. At which levels of maturation does it seem appropriate to introduce the various modes of discourse--narration, poetry, drama, exposition, argument, and criticism?

Problems inhere in a proper interpretation of this question. For example, are we to take "appropriate" to mean a value judgement, as in "Do children at a certain level need to be introduced to the elements of drama, or to methods of exposition?" Or are we to interpret it in a developmental sense, as in "Can children at a

certain level learn techniques of criticism?" Appropriateness, in either sense, has not been dealt with in the research. Another problem lies with the phrase "to introduce." Does this mean formal introduction to the modes of discourse? If so, then the reader can look to the methodological studies which involve introducing one of the modes of discourse that I summarized earlier in this chapter. But if "to introduce" means informal introduction, then the question is even more problematic, since children and adolescents of all ages are exposed to and use in their daily language encounters all of the modes of discourse--they narrate, dramatize, argue, criticize, and so forth. The question, then, is too ambiguous for any precise grouping of research studies under it. It calls for a kind of broad developmental research which has not been done. Researchers may be better off pursuing the kind of related issue posed by Sara W. Lundsteen in Help for the Teacher of Written Composition when she suggests that we "look to what children can do before we talk about what teachers should do" (Lundsteen, 1976, p. 17).

7. What is the relative effectiveness of writing shorter and longer papers at various levels of maturity and proficiency?

Researchers have not investigated the effectiveness of composition length either at levels of maturity or at levels of proficiency. A related matter, however--writing frequency--has been looked into. In "Recent Studies of Writing Frequency," which appeared in the first number of Research in the Teaching of English (Spring, 1967), Robert Hunting reviews five studies which consider whether increased writing practice improves writing. He concludes that mere frequency

of writing without accompanying instruction or motivation will not improve writing. Hunting calls for more research in this area, particularly investigations into the relationships between improvement and functional writing assignments (i.e., writing that is meaningful and challenging, as opposed to writing that is merely practice).

Sherwin (1969) has a more comprehensive summary of research into the benefits of writing practice. From his overview of this research, he concludes that "merely increasing the number of assignments will not improve the quality of writing" (p. 157). The implication drawn from research on writing frequency seems to suggest that increasing the length of compositions will not improve the quality, though at present we have no research to support or disprove this assertion.

8. At which levels of maturation does it seem appropriate to introduce the various rhetorical elements of writing?

This question poses the same problems as those I discussed under Question Six: what does "appropriate" mean? Does "to introduce" mean formal introduction; or, in this case of rhetorical elements, does it mean raising to consciousness that which people do naturally, such as coordination, subordination, transition, etc.? As I said in my discussion of Question Six, the question is too ambiguous for any precise grouping of research studies under it. However, the reader can look to some of the studies cited under other questions here which deal with the introduction of rhetorical elements to students, such as Troyka (1973) and Burhans (1968) under Question One, and Fichtenau (1968) and Gozemba (1975) under Question Eighteen.

9. What are the effects of various kinds and amounts of reading on the quality and kinds of writing a person does?

There have been many investigations into the relationships between reading and writing. Lacampagne (1969), in his examination of approaches and attitudes toward writing, surveyed over 1,000 twelfth graders who had been rated either superior or average in writing performance. Among his findings were some correlations between extensive reading background and superior writing performance. Similarly, Donelson (1967), in his investigation of 251 tenth graders, found that effective writers were widely read and owned more books than ineffective writers. Maloney (1967) tried to identify superior and poor ninth grade writers of expository prose and the qualities that were characteristic of the superior writers. The researcher found that superior writers came from homes where parents bought books regularly and that the students read often and scored high on reading tests. Barbig (1968), in a similar study with ninth and twelfth graders, found that the poor writer watched more television and read fewer books than did more successful writers. Nakamura (1970) investigated the relationship between the amount of reading and the quality of writing done by thirty tenth grade boys. As might be expected, he found that the writers who read more wrote better. Students considered good or fair writers owned more books, read a greater percentage of the books owned, and were assigned and completed more outside reading in school than did the poorer writers. In addition, Nakamura found a close relationship between availability of magazines and newspapers in the home, and the students' ability

to write well. Schneider's study (1970) was an attempt to locate specific correlations between reading and writing skills. She investigated whether emphasis on reading skills leads to improved writing in a college remedial writing course. Both experimental and control groups followed the same conventional classroom method, except that the experimental group was taught developmental reading in addition to the writing activities. Results were mixed, but in favor of the students in the experimental group: they gained on three posttest measures of writing and reading abilities, though only two measures were statistically significant. The author concluded that emphasis on reading skills can lead to improved writing.

It would appear from the research that a close connection between reading and writing does exist. None of the studies cited here, however, attempt to articulate the causes of this relationship. All we can be sure of at this point is that extensive reading contributes to success in writing. Why this is so is a rich area for further research.

10. What are the direct and indirect effects of particular sensory experiences and guided observation upon writing?

Ewing (1967) investigated the effect of various stimuli on the writing produced by third graders. Four sensory stimuli were used: 1) auditory (listening to a musical selection); 2) visual (viewing a film without words); 3) motor (drawing a picture); and 4) minimal stimulus (being asked to write a story). The students wrote a composition after each of the four stimuli. Five judges ranked the compositions according to overall quality. The

compositions judged highest in quality were those written with minimal stimulus, followed by those written under auditory, visual, and motor stimuli. King (1973) sought to determine whether increasing the number of types of sensory stimulation prior to a writing experience would help fourth, sixth, and eighth grade students to write more creatively and to write longer stories. The four stimuli were: 1) aural; 2) aural and visual; 3) aural, visual, and tactile; and 4) aural, visual, tactile, olfactory, and gustatory. The results were inconclusive.

Two related studies focussed on sensory stimuli. Golub and Fredrick (1970) compared the differences in the writing of 160 fourth and sixth graders when they were exposed to two variables: 1) contrasting visual stimuli (black and white versus colored pictures; and, abstract versus concrete pictures); and 2) varying instructions on how to write (specific versus general). The researchers found that black and white pictures seem to be slightly superior to colored pictures for generating more complex and more diverse linguistic structures. They also found that abstract pictures were more difficult to write about than concrete pictures, which produced more modifying clauses. However, there was no statistical significance for either of these findings; and the variation in instructions had no effect on the students' writing. Donlan (1976) worked with eleventh and twelfth graders to determine the effect of four types of music on the students' spontaneous writing. He found that unfamiliar vocal music interfered more with the quantity and quality of student writing than did familiar vocal music.

Finally, Kafka (1971) investigated the effectiveness of three sensory stimuli in helping intermediate students express themselves in writing narrative compositions. He found that students exposed to the three stimuli--visual, aural, and tactile--before writing, did not demonstrate better quality in their writing than a control group which wrote without being exposed to the stimuli. In fact, the control group wrote better compositions. Kafka's study, like the others cited here, point to the general inconclusiveness among studies done on sensory stimuli. Too much depends on other variables, such as topic, environment, mode of discourse, and, most importantly, individual student sensitivity to stimuli. Kafka's suggestion that perhaps children write more effectively from internal stimuli than from external stimuli supports the notion that sensitivity to stimuli of whatever sort is far too individualistic for researchers to come to any firm agreement about the relative effectiveness of one stimuli over another.

11. At what stages of maturity do students spontaneously seek specific help in improving particular aspects of writing, such as specificity of details, transitions, parallel structure, and metaphor?

This question presupposes that there is a stage or stages of maturity at which students develop such highly motivated self-direction that they spontaneously grapple with these problem-solving aspects of writing, when in fact students at all levels can acquire such self-direction. The essential question, then, has less to do with identifying some level of maturity and more to do with why and how a self-generated search for help develops. The research studies

I cited under Question One--those dealing with attitudes--are the closest we can come to answering this question through research. Hence, there is still need for research in response to this question, though I believe it would be more accurate to rephrase it as follows: "Under what circumstances, environments, approaches, motivational stimuli, etc., do students at different levels of maturity develop a self-directed problem-solving orientation toward writing?"

12. At which levels of maturity can particular aspects of writing most efficiently be learned?

This question is similar to Questions Six and Eight in that the many ways of interpreting "aspects" prevent any specific grouping of research studies here. Perhaps the best answer research could provide in response to this question would be that some students, at various levels of maturation and under various learning conditions, can learn some aspects of writing. That is to say, the question poses a broad developmental issue that so far has been approached only in studies of isolated aspects of writing; and the results of these studies do not lend themselves to the sweeping conclusions this question seeks. Nonetheless, valuable insight could derive from research which examines developmental aspects of children's and adolescents' writing. As Lundsteen (1976) points out, there has been some theoretical work concerning "characteristics of children's composition according to increases in age. For example, there appear to be progressions in plot construction, characterization, choice of revealing detail, sequencing, support of main ideas, ability to make choices in forming and arranging sentences, coordination,

subordination, and use of transitions (Burrows, 1960; Hunt, 1965). The compositional thought of children moves from memory of direct, sensory experience to pictured images of concrete objects held in inner speech thought (Vygotsky, 1962). The child's written thought moves from a few words to whole incidents and finally to the complex ordering of experience through various forms of literature, such as the folktale, fable, myth, and fantasy (Nebraska Curriculum Development Center, 1966)" (Lundsteen, 1976, p. 24). Experimental support for hypotheses such as these may provide some answers to <u>when</u> students can learn <u>what</u>.

13. Does the oral reading of rough drafts help the elementary child strengthen "sentence sense"? How does it?

Mills (1970) compared the effects of oral proofreading and silent proofreading of rough drafts of compositions by twenty-six sixth graders. Students wrote pairs of narratives; one was read orally for correcting errors in capitalization and terminal punctuation, and the other was read silently for the same corrections. Mills found a significant difference in correcting capitalization errors which favored the oral proofreading method, but found no significant difference between the two methods in the correcting of terminal punctuation. The researcher concluded that children of this age can benefit from both types of proofreading. Further research in this area should replicate the Mills study at other levels of schooling.

15. What procedures of teaching and learning composition are most effective for pupils of low socioeconomic patterns?

There has been little research in composition specifically directed towards students of low socioeconomic patterns. An exception is Fry (1971), who investigated the effects of two variables upon the writing of 160 ninth grade students of low socioeconomic backgrounds. The two variables were: 1) traditional versus transformational grammar; and 2) direct versus indirect methods of teaching. (The direct method was concerned with the correction of specific errors while the indirect method was concerned with generalizing the grammatical elements without emphasizing specific errors). Fry found that neither the proportion of well-formed sentences nor the average structural complexity of sentences was affected by either grammatical approach, or by either method of teaching. Unlike Fry, however, most researchers are more concerned with their subjects' achievement level than with their socioeconomic level. That being the case, useful research could be done first, on what causal relationships, if any, exist between socioeconomic background and achievement; and, second, on strategies for the teaching and learning of composition which are informed by such research in causal relationships.

16. What procedures of teaching and learning composition are most effective for pupils learning to write English as a second language?

Much of the research in ESL in recent years has been concerned with practices based on comparative learning theories, such as those described by John Carroll as the audiolingual habit theory, and the cognitive code-learning theory (Carroll, 1971). However, very little of this research consists of empirical studies. Morrisroe and Morrisroe (1972), in their survey of 239 articles published between

1961 and 1968 which deal with ESL generally, found only seventeen that could be described as empirical research. "Many articles" they note, "dealt with problems in second language teaching, but few dealt with proven ways to solve them" (p. 50). The situation is even worse for research in ESL directly concerned with the teaching and learning of composition. For example, Dykstra and Paulston (1967) reported on a programmed method of improving composition skills of foreign students which involved structured language manipulations of model passages. An experiment is included in the report, but it is not described in any detail, and no statistical results accompany it.

Much research could thus be done in the area of composition for students learning English as a second language. Studies such as the one conducted by Friend (1970) could be replicated. Friend examined relevant theories and research in linguistics, psychology, and composition theory as they relate to the construction of writing programs for students of English as a second language at the intermediate and advanced levels. She then presented a writing program based on such information. While Friend's is not an empirical study, it is a sound example of the kind of investigation that could be replicated on an empirical basis. Readers interested in this area of research in ESL should consult Friend's bibliography as well as the bibliographies appearing in Carroll (1966), Croft (1970), the 1968 Index to ERIC Documents in Linguistics and the Uncommonly Taught Languages and Selected Bibliographies of Related Titles (1969), A TESOL Bibliography (1971), and studies indexed in Language and Language Behavior Abstracts.

17. Can study of the newer types of linguistics help writers?

Research into the relationship of modern linguistics and writing have taken two directions. On the one hand, some studies examine whether instruction in linguistics improves writing. Such studies, thoroughly summarized in Sherwin (1969) and Blount (1973), do not, as Sherwin concludes "encourage the belief that a linguistic approach or linguistic knowledge is more effective than a grammatical approach or grammatical knowledge" (p. 156). Sherwin's statement echoes that made six years earlier in the Braddock Report on research in the teaching of traditional grammar: "the teaching of formal grammar has a negligible or, because it usually displaces some instruction and practice in actual composition, even a harmful effect on the improvement of writing" (1963, pp. 37-38). The need for any further research in this area is unlikely.

However, a second direction has emerged in investigations into the relationship of modern linguistics and writing improvement, namely, studies in sentence combining. The major documents here include the Bateman and Zidonis study (1964), which found that the study of generative grammar can improve the effective formation of sentences and increase the complexity of sentences written by ninth and tenth graders. Miller and Ney (1968) worked with fourth graders for an entire year, using oral and written drills in sentence combining, along with choral readings. Posttest results favored the experimental oral/written drill group. These students wrote more words per writing assignment, used the sentence structure practiced in the treatment more, and used a greater proportion of complex

sentences than did the control group. Mellon (1969) found that the syntactic fluency of ninth graders can be enhanced through the study of transformational-generative grammar along with the exercises in sentence combining, though it was not clear which affected student writing--the grammar instruction or the sentence combining exercises. O'Hare (1971) replicated the Mellon study but did not include any instruction in transformational-generative grammar. His work with 300 seventh graders for an entire school year focussed on intensive practice in sentence combining. At the end of the treatment he found that the students in the experimental groups were writing sentences more syntactically mature than the sentences produced by students in the control groups and that the overall quality of the experimental group's compositions was also superior to the control group's compositions.

Other studies which replicate the sentence combining experiments (Oberchain, 1971; Fisher, 1973; Ofsa, 1974; Bivens and Edwards, 1974; and Combs, 1975) come to similar conclusions--that sentence combining practice improves the syntactic maturity of students in the experiments. Some researchers do not agree with these conclusions (Green, 1972), while still others take the bulk of these findings with considerable skepticism (Marzano, 1976). Nonetheless, enough evidence has been gathered from enough research to lend much support for the effectiveness of sentence combining activities. Stotsky (1975), for example, in her comprehensive overview of experiments in sentence combining, concludes that these activities will promote syntactic maturity and will improve the overall quality of student writing.

18. Can formal study of rhetorical theory or of logic help writers?

Fichtenau (1968) examined the growth in written composition of academically above-average children in grades three through six who were taught the concepts of invention, arrangement, and style. The researcher found that the only significant difference in writing skills at posttest occurred at the third grade level. He concluded that there is little relationship between teaching these selected rhetorical concepts and the improvements of written composition at these grade levels. Gozemba (1975) asked whether rhetorical training through visual media (slide-tape programs, films, and photographs) would be more effective than rhetorical training through verbal means alone in improving four writing skills of college freshmen: 1) ability to clearly state a thesis; 2) ability to carefully state an argument; 3) ability to deliberately substantiate the argument with examples; and 4) ability to skillfully express ideas with varied sentence structure. The researcher found that training through visual media was extremely effective: the gains of the experimental group in all four writing skills were nearly double those of the control group.

Some researchers have focussed strictly on invention. Rohman and Wlecke (1964), as I reported under Questions One and Fourteen found that college sophomores in a treatment group which emphasized concept formation in the prewriting stage wrote significantly better themes than did students in the control group which did not focus on prewriting concept formation activities. Odell (1974) used freshman composition students for one semester in an experiment emphasizing

tagmemic discovery procedures developed by Kenneth Pike. No control group was used; rather, the researcher predicted the changes that would appear in students' writing from pretest to posttest and determined how likely it was that these changes could be attributed to chance. Because of the nature of this design, the results must be taken as tentative; posttest analysis of essays revealed that students were in fact using at least some of the operations that they were taught in the course. I should also note that Hoyer (1974) has compiled a useful annotated bibliography on the invention process in composition and on the act of creativity. She presents four sections on the following: 1) general works on invention; 2) taxonomic heuristics; 3) discovery through persona; and 4) multi-observational approaches. Each section is divided into subsections on theory, practice, and research.

Three studies considered the effectiveness of generative rhetoric in improving writing. Hardaway (1969) investigated whether generative rhetoric is more effective than traditional rhetoric in improving the writing skills of college freshmen. The experimental group received instruction in generative rhetoric of the sentence and paragraph, read from models, and did exercises. The control group analyzed sentences and paragraphs by focussing on loose, balanced, and periodic styles; types of sentences (simple, compound, etc.); and topic sentence, unity, coherence, and emphasis in the paragraph. Hardaway found no significant differences between the two groups, though mean scores for the experimental group were slightly higher in the areas of focus and structure, content, sentence construction, fluency, and general impression. Miller (1972),

in his experiment involving college students, investigated what effects the Christensen Rhetoric Program has upon student attitudes toward composition and upon the use of free modifiers in their writing after a lapse of time from instruction. He found that the program did not affect attitudes toward composition, but he did find the program superior to traditional methods in helping students to expand ideas in sentences and paragraphs and to continue to do so after leaving instruction. Similarly, Hazen (1972) compared the effectiveness of the Christensen Rhetoric Program with a traditional write-revise approach at the community college level. Ten writing skills were the criteria for improvement: organization, ideas, development, tone, style, reasoning, sentence structure, usage, punctuation, and spelling. Hazen found positive results and concluded that the Christensen Rhetoric Program will promote writing skills at this level superior to the skills of students taught by the write-revise approach.

In a related study, Sanders (1973), working with junior college freshman composition students, compared James Kinneavy's "aims" approach (which stresses expressive, literary, persuasive, exploratory, scientific, and informative aims which govern the choices writers make in the process of writing) with a traditional "modes" approach (which stresses techniques relevant to the various modes of exposition). Though both groups improved their writing, Sanders found no significant differences between them resulting from either approach.

Finally, Klein and Grover (1970) investigated whether instruction in symbolic logic would effect improvement in composition and

logical sentence analysis for students in grades nine through twelve. The researcher found that instruction in logic has a significant effect on sentence logic analysis but does not contribute to improvement in students' essay writing skills.

A valuable suggestion for further research in this area was proposed by Braddock when he stated that "It would be interesting for someone to do a critical synthesis, 'What Research in Reading Suggests to Writers,' which may get at the effect of rhetorical considerations on various types of readers, not merely on composition teachers or raters--the usual yardstick for this kind of research" (Braddock, 1969, p. 451).

19. How is writing affected by extensive study and imitation or parody of models?

Pinkham (1968) emphasized the characteristics of "good writing" in an experiment involving 180 fifth grade students from urban and suburban areas for a fourteen week period. Students in the experimental group followed procedures based on stressing the characteristics of "good writing" found in selections from children's literature, along with actual writing and revision. The control group also wrote and revised, but did not receive emphasis on the model characteristics. Pinkham's results indicated a significant difference in favor of the experimental group on the STEP writing test. On the STEP essay test, however, Pinkham found no significant difference between the groups, though there was a positive gain for students in the urban area. Calhoun (1971) investigated the effect of analysis of essays on reading and writing abilities of college

composition students. Sixty-four students in the experimental groups analyzed essays through a series of ten lessons geared toward articulating the rhetorical techniques used in the readings. Fifty-eight students in the control groups had no such systematic instruction in analysis, though all other elements of instruction were the same for both groups. The researcher found that systematic analysis of rhetorical techniques contributes to an increased awareness of those techniques when they are encountered in reading. But no evidence was found to indicate any transfer of this awareness to writing; that is, there were no significant gains for either group on the compositions rated as posttests.

An interesting study related to essay analysis was conducted by Stewart (1966). From a group of 77 anthologies used in freshman composition courses across the country, he analyzed the underlying rationales of the anthologies and the rationales of directors of freshman composition programs who use these readers. He then catalogued the rationales and compiled the following list of those most frequently underlying the texts and their uses:

--texts offer advice for the beginning writer;

--texts offer the study of language as the proper content of a composition course.

--texts stimulate interest in topics for writing;

--texts offer prose models;

--texts offer critical reading and thinking which lead to better writing.

Of the five rationales, the last two were the most popular. Stewart challenged the imitation of models rationale by citing the

difference between analysis (the picking-apart of a reading selection) and synthesis (the putting-together act of writing) and then asked what goes on in the student's head that allows him to make the transference from analysis to synthesis. He saw, finally, three functions the texts serve: 1) they add to a liberal education; 2) they expose students to good writing; and 3) they are a useful introduction to methods of literary criticism.

Since the use of models in the teaching of writing is such a widespread practice, it is surprising that more basic research has not been done in this area. Stewart's challenge to the imitation of models rationale raises fundamental issues which researchers ought to look into: 1) what is the process whereby the analysis of reading selections influences the production of writing?; and 2) to what extent is the imitation theory compatible with research into language processing?

20. What forms of discourse have the greatest effect on other types of writing? For example, does writing poetry help a writer of reports?

Only one study examined the transfer potential between forms of discourse. Shapiro and Shapiro (1971) investigated the suggestion that student improvement in writing poetry would result in improvement in writing prose and in improvement in student attitude toward literature generally. The researchers used 82 fourth graders in metropolitan schools for six weeks. Procedures followed in the experimental group consisted of activities related to the study of poetry through studying poems, listening to poems, and writing poems. Students in the control group used the Roberts Series along with the

same number of writing opportunities as the students in the experimental group. Evaluation of post-treatment writing samples was based on a rating scale which assessed: 1) unity of thought; 2) organization and fluency; 3) opening and closing sentences; 4) originality and imagination; and 5) emotional appeal. Results favored the experimental group on poetry writing, prose writing, and attitudes toward literature. Among their conclusions, the researchers felt that the results favored the experimental students because of the freedom and scope poetry provides for linguistic expression and because of the provision of an alternative mode for self-expression through language.

The Shapiros' conclusion echoes one of the implications Burhans drew from his experiment on the college level: "Interestingly enough, students who do well even in the conventional composition program have quite often had high school courses in 'creative' writing. Our study indicates that they do well not because training and experiences in writing fiction and poetry help them specifically with the problems of exposition but because in 'creative' writing courses they have become personally and subjectively involved in and committed to the processes of writing itself, and this involvement carries over into every other kind of writing they do" (Burhans, 1968, p. 37). Burhans' statement suggests at least two possibilities for further research in this regard: 1) how does personal involvement affect the written product?; and 2) what elements of the process of writing in one form of discourse transfer to writing in another form?

21. What is involved in the act of writing?

22. How does a person go about starting a paper? What questions must he answer for himself?

A number of researchers have attempted to characterize elements in the composing process. Emig (1971) used a case study method to examine the composing processes of eight twelfth graders. Students composed themes aloud and provided autobiographies of their writing experiences. From her observations and from the data collected from the writers, Emig constructed an outline of the composing process along with a narrative account of the steps in that process. She found that the students engaged in two modes of composing: first, the reflexive, characterized by 1) focus on the writer's thoughts and feelings; 2) sense of a self-directed audience; 3) affective exploration; and 4) a personal approach. Second, the extensive, marked by 1) focus on an other-directed communicable message; 2) cognitive exploration; and 3) an impersonal, reportorial approach. Emig found that the composing process for these two modes is further characterized by

> processes of different lengths with different clustering of components. For the twelfth graders in this sample extensive writing occurs chiefly as a school-sponsored activity. Reflexive writing is a longer process with more elements and components than writing in the extensive mode.
>
> Reflexive writing has a far longer prewriting period; starting, stopping, and contemplating the product are more discernible moments; and reformulation occurs more frequently. Reflexive writing occurs often as poetry; the engagement with the field of discourse is at once committed and exploratory. The self is the chief audience--or, occasionally, a trusted peer.
>
> Extensive writing occurs chiefly as prose; the attitude toward the field of discourse is often detached and reportorial. Adult others, notably teachers, are the chief audience for extensive writing. (p. 91)

In his profile of the composing process of a twelfth grader, Mischel (1974) also collected data through observations of the student composing and through interviews with the student about his writing and about the composing process. The writing was essentially narrative and was done in forty-five minute sessions, though no specific time limit was set. Mischel found that the student started by thinking out what he wanted to say before saying it. Then he just began writing and proceeded in a linear manner. There was very little prewriting activity, nor was there any planning on paper--all was mental. During the physical act of composing, the observer noticed little more than the student verbalizing his thought, then writing it down, while occasionally hesitating over a word or phrase. The student paid little attention to correcting mechanical errors; his focus was on meaning and plain expression, though he did do some rereading and revising later.

Graves (1975) examined the writing processes of seven year-old children. He too used a case study method based on analysis of children's writing, interviews with the children on their views of their own writing, as well as interviews with other children on their concepts of a good writer. Other sources of information included testing, interviews with parents, and observations of the children in several environments. Graves' findings in regard to learning environments present significant implications for classroom practice:

> 1) Informal environments give greater choice to children. When children are given choice as to whether they write or not as to what to write [sic], they write more and in greater length than when specific writing assignments are given.

2) Results of writing done in the informal environments demonstrate that children do not need motivation or supervision in order to write.

3) The formal environments seem to be more favorable to girls in that they write more, and to greater length, than do boys whether the writing is assigned or unassigned.

4) The informal environments seem to favor boys in that they write more than girls in assigned or unassigned work.

5) In either environment, formal or informal, unassigned writing is longer than assigned writing.

6) An environment that requires large amounts of assigned writing inhibits the range, content, and amount of writing done by children.

7) The writing developmental level of the child is the best predictor of writing process behaviors and therefore transcends the importance of environment, materials and methodologies in influence on children's writing (p. 235).

Sawkins (1971) investigated the procedures 60 fifth graders used when writing narrative themes. The students were interviewed after writing two compositions. Among her conclusions, Sawkins found that better writers are more concerned with the content of their writing (ideas, organization) than poorer writers, who are more concerned with the mechanics of writing (spelling, punctuation, capitalization).

In related research into the composing process, Ney (1974) developed a model of the sentence combining operation in an effort to explain its effectiveness. Basically, Ney sees the mental operations of the sentence combining activity as one of raising to a self-conscious level of control "linguistic resources which are innate to the students" (p. 168). Once these resources are on a conscious level, the student can use them in his written performance.

Finally, Cooper and Odell (1976) investigated whether professional writers attend to the sound of their writing during the composing process. Eight subjects were used in this study--two university teachers and scholars, two columnists, two news writers, and two technical writers. The researchers found that the sound of these subjects' writing does not play a very significant role in their composing processes. Their main concerns (in rank order) were: 1) enabling their readers to understand with ease; 2) clear expression of their ideas; 3) appropriate style; and 4) the sound effect they imagined their writing would have on their audience. Conventional matters of correctness mattered little.

Examination of the composing processes of writers at all levels is a rich area for further research. Graves (1975) remarks that "future research in writing should continue to explore the feasibility of the case study method." He notes, in addition, that "Further studies are needed to investigate the developmental histories of different types of children in relation to writing and the writing process" (p. 241). Researchers might also use a model of the writing process such as Emig's (1971), which locates specific components in the process, in order to measure how variations in those components (e.g., assigned versus unassigned topics) affect the written product.

23. How does a writer generate sentences?

The vast amount of work done by linguists over the past two decades precludes any attempt on my part to identify the multitude of studies relating to this question. The interested reader need only consult the enormous body of research by

transformational-generative linguists on the concepts of competence and performance, surface and deep structure, and child language acquisition, to find a wealth of theoretical and empirical responses to this question.

24. Of what does skill in writing really consist?

The studies of the composing process which I presented above are attempts to make the kind of discoveries needed to provide some answers to this question. In addition to these studies are two by researchers who have attempted to identify specific "skills" employed by successful writers in the act of composing. Stallard (1972) examined the writing behavior of good student writers from a high school senior class. His data were based on observations made on students writing an expository essay under laboratory conditions. He found that good writers write slowly, take time to read segments of their work at intervals during the writing process--and read the final paper and revise it. They do not consider identifying a particular audience for their writing, nor do they demonstrate concern for planning the structure of paragraphs or the structure of the entire essay. We must keep in mind that Stallard's experiment was under laboratory conditions; hence the processes demonstrated may not be characteristic of less artificial situations. In a related study, Hooks (1972) sought to identify what elements of writing are considered most essential by professional writers. She collected data from written documents of Hemingway, Faulkner, Fitzgerald, and Thomas Wolfe and from criteria professional book reviewers use in their evaluation procedures. She found that the elements of effective

writing include: 1) the view of composition is that of a total process; 2) the origin of ideas lies in the writer's background and personal experience; 3) the purpose of writing is to communicate an idea to an audience; 4) the notion of audience determines language and style; 5) reading others' works and constant writing will develop style; and 6) revision is necessary for succinct presentation of ideas.

Further research into the "skills" or elements involved in writing might consider the question proposed by Lundsteen: "Would a child who has insight into the writing process do better in the long run? Would a longitudinal study show that ability to discuss the writing process is reflected in the quality of the writing, after all? Would the kind of writing involved make a difference in the relationship between quality of product and ability to discuss the process?" (Lundsteen, 1976, p. 57).

It should be clear by now that a wealth of research in composition is available to composition teachers, to directors of composition programs, as well as to other researchers. It should also be clear that there is much to be examined in the teaching and learning of composition at all levels, that opportunities for much needed research are plentiful. In this chapter, I have tried to point out a number of areas where research has been done, as well as areas where much valuable research can be done. In the next two chapters, I will consider using research by focussing on how the findings of research in composition can be implemented in the design of composition programs.

CHAPTER III

USING RESEARCH IN COMPOSITION: RATIONALE

In the Arizona English Bulletin of April, 1970, Kenneth L. Donelson precisely located an area of professional ignorance among English teachers at all levels when he asked, "why is it that an English teacher will modestly brag about his willingness to spend time on a study of literary criticism (whether it be Frye or Brooks and Warren or Krieger or Booth or others) or rhetoric (whether that of Aristotle or Campbell or Christensen or what have you) and see no value in learning anything about educational research (and usually demean it in the process of any discussion)" [sic].[1] While Donelson's remark pertains to English teachers in general, I find it particularly applicable to composition teachers and directors of composition programs who, in spite of nearly a century of research in composition, are too often unaware of this research or ignore it even when they know it exists. In a 1973 study, for example, Lucille Shandloff surveyed twenty-seven junior college curriculum designs in composition to see whether the findings of research in written composition were being used. She found little indication that designers implemented, or even knew about the findings of empirical research. Among her conclusions, Shandloff cited 1) a need for research findings to be disseminated widely among composition curriculum designers; 2) a need

to narrow the gap between discovery of knowledge and its implementation into curricula; and 3) a need to reeducate both planners of curricula and classroom teachers.[2] Shandloff's findings support those of Willard D. Memering who, in his 1971 study of teaching practices at the secondary and college levels, found little evidence of theoretical or research support for approaches used in the teaching of composition.[3]

Since the teaching of composition, along with the teaching of literature, form the core of English curricula, it is puzzling that so many curriculum designers and teachers are unfamilar with relevant research. Donelson suggests one reason when he notes that teachers' "reluctance to read research (and the consequent lack of application of research supported findings to the classroom) stems from fear or lack of understanding or lack of training. That word, 'research,' often brings stultifying memories of jargon (we do not use jargon in English teaching, after all), mathematics (and aren't English teachers supposed to be afraid of numbers?), tests (which do not fit into the humanistic tradition), and Greek letters (why can't they say what they mean without all that mumbo-jumbo), all apparently pointless and impenetrable to English teachers" (p. 1).

There is much truth in Donelson's suggestion that this reluctance comes from a basic unfamiliarity with research. Numbers and jargon <u>can</u> dissuade even the most dedicated English professional from discovering and applying relevant research. Yet, as Donelson further points out, this reason smacks of a weak rationalization for ignorance: "Any attempt at communicating ideas or information or research is based on some sort of language, and of course the reader

trying to get the idea or information or research must know the language. But reading Moliere in the original demands ability to read French, reading Frye's ANATOMY OF CRITICISM assumes a background in literary criticism and some awareness of other critics, reading Shakespeare with any intelligence demands awareness of Elizabethan English, and reading anything in modern rhetoric assumes some background in ancient and renaissance rhetoric. And English teachers seem able and willing to pick up some other language, if the results seem to be worth the time and effort" (p. 4).

I contend that the time and effort are worth it. Research in composition has provided far too much information for curriculum designers and teachers to ignore. As Donelson points out, "Perhaps one reason the professions of law and medicine are respected is that the good lawyer or doctor keeps informed on what is going on in research. Teachers who do not know what is being done and who is doing it in research simply have lost touch with basic information they must know" (p. 4).

Curriculum designers and composition teachers, then, must overcome their ignorance of relevant research--ignorance of the existence of research and ignorance of an understanding of research--if they are to benefit at all from the insights it can provide into the teaching and learning of composition. Since, as Dwight L. Burton pointed out in 1973, "Research activity in the field has represented a virtual explosion,"[4] it is sad that so few English educators are aware of what research has been done in composition; and it is even sadder that those who are aware of it can be described as they were by Roland Harris in 1968: "I do not suppose it is entirely unfair

to guess that when the average interested teacher of English is presented with an account of a piece of research he turns to the general description of the problem, then to the summary and conclusions, brushing with slight horror enroute against a few clotted tables of correlations."[5]

Thus far in this book, I have tried to remedy this state of affairs by providing readers with background for reading research intelligently. In Chapter I, I attempted to provide insight into some of the essentials of research methodology; in Chapter II, I sought to compile significant research in crucial areas to inform the reader of what research has been done and what more needs to be done. In this chapter, I will discuss how research in composition can be used in educational settings. First I will consider some of the key arguments advanced against using research in composition, and then I will consider a number of arguments which support its value.

A frequent criticism of research in composition concerns expectations. That is, for all the time, energy, and money invested in research, we should expect it to provide more conclusive answers to the issues and problems it examines. Instead, however, we find statements such as the following being made by research reviewers themselves:

> Today's research in composition, taken as a whole, may be compared to chemical research as it emerged from the period of alchemy: some terms are being defined usefully, a number of procedures are being refined, but the field as a whole is laced with dreams, prejudices, and makeshift operations.[6]

> Anyone who has read a considerable portion of the research in the teaching and learning of English composition knows how much it leaves to be desired.[7]

> Most reviewers of research shake their heads over the quality of much of what they review, and listings of common faults that make research inconclusive or invalid are strikingly similar over the past twenty-five years. (Burton, p. 161)

Statements such as these could easily lead us to simply shrug off all research as inconclusive and trivial; yet, given a multi-faceted process like composition, it seems no small wonder that research projects are laced with difficulties, errors, and questionable conclusions. In any event, research is not the panacea for writing problems; rather, it is the probe which examines important aspects of such problems. It does not provide the magic solutions we so often seek; rather, it provides directions which point toward those solutions. In short, we must not hold inflated expectations for research in composition. As Burton remarks, "Perhaps we have expected too much of an effort that is relatively young and we may have underestimated the difficulty of probing, for our particular reasons, the mysteries of human behavior, its development and change" (p. 161). A century of educational research has shown that to look for simple solutions to complex problems is to look simplistically, and in vain.

A second argument leveled against the value of research in composition is that it is frequently incompatible with traditional practices. "I don't need research to tell me how to teach," says the angry teacher, "I've been teaching this way for a long time and I get results; experience tells me I'm right." And, indeed, the teacher often may well be right. Campbell and Stanley remark in Experimental and Quasi-Experimental Designs for Research that when "across the centuries many different approaches have been tried, if some approaches have worked better than others, and if those which

worked better have therefore, to some extent, been more persistently practiced by their originators, or imitated by others, or taught to apprentices, then the customs which have emerged may represent a valuable and tested subset of all possible practices."[8] Seeking insight and direction from both traditional practice and experimental research, the alert educator must see the values and limitations of each.

The relationship between traditional practices and research can be considered from three perspectives: 1) the two may be incompatible because traditional practices are right and research wrong; 2) they may be incompatible because traditional practices are wrong and research right; and 3) they may be compatible because both are right.

From the first perspective, for example, traditional practices and years of classroom experience tell us that practice in revision improves writing skills. Yet this belief clashes with the results of a study conducted by Barbara L. Hansen, who found that the act of revising alone may not lead to improvement in writing performance.[9] Hansen's findings conflict not only with traditional practices and experience but also with other research investigations into the efficacy of revision (see, for instance, the studies cited in the Braddock Report, pp. 35-36). Until researchers replicate the Hansen study and come to conclusions similar to hers, the results must be taken as tenuous.

An example of the second perspective--that traditional practices are wrong and research right--can be seen in the long-held belief that formal instruction in grammar leads to improvement in

writing. A half-century of reserach involving all kinds of students at all levels has consistently concluded that, as the Braddock Report unequivocally states, "the teaching of formal grammar has a negligible or, because it usually displaces some instruction and practice in actual composition, even a harmful effect on the improvement of writing" (pp. 37-38). Yet many writing teachers and composition program directors continue to accept unquestionably the principle and practice of improving writing through formal instruction in abstract grammar.

From the third perspective, both traditional practices and research often agree, as in the relationship between reading and writing. Educators have long held that linguistic production (i.e., writing and speaking) is facilitated by linguistic reception (i.e., reading and listening). As I pointed out in the previous chapter, much research supports this integrative position: that is, that all the language functions reinforce one another; and, while we may not as yet know precisely why, we are sure that linguistic production is affected by linguistic reception.

From this overview of the compatibility of traditional practice and research, it should be apparent that the relationship between the two is one of reciprocity. Since the goals of both are the same--that is, better understanding of learning and better ways of teaching--both are vital to the educative process. We need traditional practice insights based on the cumulative experience of years of classroom teaching as much as we need the refining insights of research. Campbell and Stanley, in their discussion of "traditional wisdom," express this dual need succinctly when they state

that "Experimentation thus is not in itself viewed as a source of ideas necessarily contradictory to traditional wisdom. It is rather a refining process superimposed upon the probably valuable cumulations of wise practice. Advocacy of an experimental science of education thus does not imply adopting a position incompatible with traditional wisdom" (p. 4).

A third criticism of research concerns its truth value. "What," critics argue "does research 'prove'?" If we look to research to "prove" a theory or hypothesis, however, we operate under a fundamental misconception of the nature of experimentation. That is, experimental hypotheses are never "proved," but rather exposed to disconfirmation and either disconfirmed or not disconfirmed. Once again, Campbell and Stanley sum the matter: "experimental results never 'confirm' or 'prove' a theory--rather, the successful theory is tested and escapes being disconfirmed. . . . The results of an experiment 'probe' but do not 'prove' a theory. An adequate hypothesis is one that has repeatedly survived such probing--but it may always be displaced by a new probe" (p. 35). Thus, the truth value of research is not that of definitive "proof" or confirmation of hypotheses but rather that of disconfirmation of rival hypotheses. This is why control of variables (rival hypotheses) is so important in experimental research. "Varying degrees of 'confirmation' are conferred upon a theory through the number of plausible rival hypotheses available to account for the data. The fewer such plausible rival hypotheses remaining, the greater the degree of 'confirmation'" (Campbell and Stanley, p. 36). In other words, the more one experiment controls for rival hypotheses, the greater its

truth value. Because of the persistent problem of control of variables in research, therefore, we must recognize the crucial role of multiple experimentation and the need for replication--that most often research studies reveal only partial "truths" and that the balance of "truth" is found in multiple examinations of the same or similar hypotheses.

Closely related to the truth value argument is a fourth argument which focusses on flaws in research. As I tried to point out earlier in this chapter in my discussion of expectations, educational research and research in composition in particular (with its many variables) is not without its flaws. Burton remarks that "Control of variables is, of course, the eternal ghost haunting experimental studies" (p. 166). Flaws in research are most crucial, however, if we consult only isolated studies. Here again, the value of experimental research lies in repeated experimentation. Flaws in separate studies tend to cancel one another out when the combined experimental outcomes are the same. James R. Squire, in his recent article entitled "Research Can Make a Difference," remarks that "No one of these studies, by itself, may seem overly impressive; not infrequently their controls and manipulation of data seem suspect. Yet taken together they tend to yield similar findings . . . the most apparent influence results over the long run from the continued impact of a large number of related studies that seem to point in the same direction."[10]

If we seek "conclusiveness," therefore, we must consider the long-range results of research. For example, the flaws that mar many of the investigations into the relationship between the formal

teaching of grammar and writing improvement matter little when the bulk of these studies point to the conclusion that writing is not improved through formal grammar study. Similarly, though many investigations in the last decade into the effects of teaching modern linguistics on improving writing may be suspect in one way or another, most conclude that the teaching of modern linguistics may improve one's knowledge of abstract grammar but not one's writing. Other examples which are less "conclusive" but still bear the weight of replicated findings are those studies which support the efficacy of small peer-groups and/or writing labs and those studies which find a relationship between audience-awareness and writing improvement. While these studies are more recent and thus do not have the influence of numbers that the grammar studies have, they nonetheless cancel out each others' flaws in their common findings. It is in multiple studies such as these that we find, as Squire states, the "long-range effects that shape and influence the direction of change in curriculum and instruction."[11]

Of the arguments in favor of using research in composition, the first is that research findings often challenge our assumptions about how composition is learned. It is a healthy challenge because it forces us to critically examine our beliefs and, at times, to modify them. Consider, for example, a traditional assumption about the composing process. The traditional composition-handbook view of the composing process (which still informs much contemporary teaching practice) is that of a simplified, mechanical think-outline-write-revise procedure. But recent research into the nature of the

composing process shows that it is a complex, multi-faceted phenomenon. Janet Emig's study of the composing process of twelfth graders identifies many components of this process, along with many factors which affect it (and, ultimately, the written product).[12] In addition, Donald H. Graves' study of seventh graders makes paramount the impact of the learning environment on the composing processes of students.[13] In research indirectly related to the composing process, we see the key functions of prewriting activities in the improvement of composition skills. Studies such as those by Taylor[14] and by Rohman and Wlecke[15] suggest that far more emphasis be placed on the prewriting stage in the process of composing. Finally, studies which investigate the causes of linguistic insecurity, such as those by Brazil[16] and Koch[17] suggest that much of what teachers view as "writing problems" are actually matters of general language apprehension.

Research also challenges our assumptions about how composition is taught. Consider, for example, two common practices which are part of almost every composition classroom. The first is the role of audience in the writing situation. While few people would disagree that in any human communicative act an audience is a sine qua non, how often is it that the writing which goes on in a composition class is directed toward a real audience? Moreover, how often do teachers consider the impact audiences other than themselves have upon their students' writing? Hooks' study[18] clearly shows that audience-awareness is crucial to the professional writer; while at the same time, studies by McClatchey and McClatchey,[19] Ford,[20] and Lagana[21] indicate that the presence of peer audience improves the quality of student writing. The crucial pedagogical matter at issue

here is whether or not provision is made in the classroom for other than teacher-directed writing audiences. To assume that audience does not matter is to ignore the persuasive findings of a number of studies.

A related pedagogical matter concerns the nature of evaluation of student writing. As I pointed out in the previous chapter, research indicates that either positive or negative criticism will produce the same results in short term achievement.[22] Many studies, however, conclude that positive and negative criticism have definite and opposite impact on attitudes toward composition; and, as I further remarked in the last chapter, these studies suggest that in the long run, it is through the reciprocal, integrative nature of positive attitudes and achievement that genuinely self-directed learning and improvement in composition occurs. Thus, teachers must examine their traditional evaluation procedures in light of both short-term and long-term goals in achievement and attitude-formation.

On a larger scale, research challenges our assumptions about curriculum design. If we assume, for example, that students learn primarily by being told about something, then the classroom model that commonly evolves is the lecture or the lecture/discussion model. If, on the other hand, we assume that students learn not only by being told about something but also by doing and by observing, then the model that emerges is likely to be the workshop. Thus, traditional writing classroom models are seriously challenged by comparative methodological studies such as those by Haas, Childers, Babbit, and Dylla,[23] Sutton and Arnold,[24] and Smith,[25] all of which find the

workshop/lab model more effective than the lecture/discussion model in improving composition performance.

Another aspect of curriculum design that research challenges is its time structure. Most curricula are set up along the lines of certain time constraints: students take "courses" during "terms"; and they study "units" which are organized into "blocks," all of which make for order and supposed efficiency. We can articulate precise objectives for these time units; and, after a specified lapse of time, determine whether or not the objectives have been fulfilled. But, when our objectives are to develop competencies in composition, the time constraints of traditional curriculum design are not consistent with the findings of much research which concludes that the development of language competencies takes much more time than is provided in a six-week "unit" or a ten-week "term." As Burton observes, "studies which have featured experimental treatment over a period of only a few weeks or months have been predestined to conclusions of 'no significant differences,' since one thing that is known, at least, is that improvement in general aspects of writing ability is a slow, gradual process." This is not to say that certain writing "skills" cannot develop in short periods of time, for as Burton goes on to point out, "it may be possible to identify those aspects of writing ability that can be expected to show growth in short periods. Sentence embedding may be one example" (pp. 177-178). If, however, we expect general writing improvement in a ten-week "term" or a six-week "unit," then it may well be that our expectations are too high. In fact, a frequent theme which emerges in many studies in composition is that if more time were available, the researchers could come to

more conclusive results. It would appear that some researchers, like some teachers, expect more than is possible in a given length of time. The development of composition competencies, as with all forms of language competence, takes time. That being the case, we are better off asking "What can be learned?" rather than "What should be learned?" within the time constraints of curriculum design. Furthermore, serious consideration should be given to extending the time constraints of curriculum design so that it is more in accordance with the actual exigencies of developing competence in composition.

One of the most important functions research serves is that of an informed vehicle to implement educational change. There is cause for regret, as Sara W. Lundsteen points out in Help for the Teacher of Written Composition, over the "lag of twenty-five to thirty-five years between the discovery of new knowledge and putting that knowledge into action."[26] Were teachers and administrators to give greater consideration to the findings of research, much evidence could be marshalled to support the changes both groups so often seek to bring about. Again, Lundsteen remarks that "Often changes in school practice are stalled because sufficient evidence to support change is not available or because diverse opinions or confusion over contradicting theories exist."[27] In the field of composition, much evidence is, in fact, available; but, through professional ignorance or lack of training, it is seldom brought to bear on the decision-making process. Where methodological disputes exist, for example, research findings can, if not settle such disputes, at least serve to refine methodologies. Furthermore, where educational

problems hamper educational progress, research can provide much valuable insight into solutions to these problems. This is not to say that research can solve all the ills in the teaching of English, but only that it can provide a wealth of information vital to the search for solutions to these ills. Nathan S. Blount supports this conviction in stating a few years ago that "In 1970 it seems clearly possible to solve significant educational problems in the teaching of English by research."[28]

Along with implementing and supporting change, research serves to educate (or re-educate) teachers and administrators. As I pointed out earlier, research forces us to re-examine our assumptions about learning, about teaching, and about curriculum design. In addition, it forces us to supply rationales for our practices which are based on more solid ground than our feelings, our experience, or our subjective evaluations. Our approaches to teaching and learning ought to be based, as Donelson emphatically states, "on something better than 'Students do seem to learn from it,' or 'I'm excited about it and the kids seem to be,' or 'It seems to work better than (or as well as) what we have used,' or 'Kids will thank me someday for all I'm doing for them,' or 'We've always done it this way,' or 'It's good for students,' or 'You can't get into college without it,' or 'This is part of our cultural heritage,' or 'You can't get a job without it.' All these answers are invalid and intellectually indefensible without some sort of supporting evidence, yet each like the voice of the turtle is heard in our land" (p. 3).

Thus, research serves both as the vehicle for educating those who institute change as well as the vehicle for informing the kinds

of changes that are made. In this regard, I quote once more from Donelson, who synthesizes both of these functions of research when he concludes that

> [teachers] had better have demonstrable evidence to support their inevitable contentions that the new should (or should not) replace the old. When the implementation of the new calls for no funds, then it is simply academically and intellectually indefensible not to have some proof, and that is the teacher's problem, no one else's. But when implementation of materials or techniques costs money, then the already budget-pressed school administrator has every right to ask, "What makes you think it will work?" or "How will you know it does anything better than the way you're teaching now?" (p. 7)

I would amend Donelson's remark to add that administrators as well as teachers are responsible for marshalling evidence for whatever curriculum changes they promote.

In conjunction with implementing and supporting change in curriculum practice, research should support whatever theoretical frameworks inform curriculum design. This is particularly true in the field of composition, where in the last two decades an explosion of knowledge has occurred in relevant theoretical areas. With new insights and research into the nature and functions of language and into the psychological, sociological, economic, environmental, and physiological influences on learning, the demand for broader foundations for curricula becomes much greater. We must know and apply what what is being done in such fields as learning theory, modern linguistics, psycholinguistics, sociolinguistics, language acquisition, reading theory, and composition theory.

For too long, teachers and administrators (particularly those in English) have ignored (for whatever reasons) the findings of both theory and research. Memering's investigation of theories underlying

practices in composition on the secondary and college levels, which found that no true theory underlies any of the current practices,[29] is sadly echoed by Burton when he notes that "The composition teacher, as everybody knows, can show no respectable theory; his discipline boasts no scholarship but is planned by dolts, manned by drudges, and avoided if possible by everyone" (p. 174). Memering's and Burton's observations, coupled with Shandloff's findings that there is little indication that composition program designers implemented, or even knew about research in composition,[30] clearly indicate just how weak are the designs of most composition programs. We can no longer afford to ignore the wealth of information that is available to us both in theory and in research. As Mina P. Shaughnessy points out in her article "Basic Writing," "The teacher must know more about language and learning than English teachers have had to know in the past--more about how people acquire languages, how language functions in different social settings, what writing is as a product and a process, and what theories of learning might inform his pedagogy. The teacher faces, in short, the formidable task of extrapolating from a number of complex, even turbulent, fields whatever insights and information will serve him in his work with his students."[31] Where composition programs and practices are informed by theoretical frameworks deriving from such fields, research enters as the cutting edge, the means of supplying solid support for the rationales and conditions under which composition can be taught and learned.

In this chapter I have tried to present a comprehensive discussion of the value and use of research in composition. I have

considered arguments both opposed to and in favor of using research. Toward the end of this chapter, I have argued for the design of composition programs which are based on relevant theory and supported by the findings of research. In the next chapter I will demonstrate how research in composition can be used in conjunction with relevant theoretical frameworks to arrive at a theory of instruction for the teaching and learning of composition.

CHAPTER IV

A THEORY OF INSTRUCTION FOR COMPOSITION: THEORY AND RESEARCH INTEGRATED

So far I have argued that composition teachers and directors of composition programs should know research--know how to read research reports, and know what research has been done in composition. I have also argued that teachers and directors should use research in the design of composition programs. My third argument is that teachers and directors should also know about and use relevant theory in designing composition programs. If we seek composition programs informed by significant theoretical and research findings, then theory and research must be integrated. In this chapter, therefore, I will examine theory pertinent to the development of a rationale for the teaching and learning of composition. I will then present a number of directions from research which contribute to a theory-based instructional rationale. Finally, I will integrate both theory and research in order to formulate a theory of instruction for the teaching and learning of composition.

In "Beyond Literacy," an essay which appeared in the March, 1973, ADE Bulletin, Alan M. Hollingsworth argues that English must become an interdisciplinary field: "I believe that many of us in English must learn about, much more about, other fields of study,

other subjects, other arts, other sets of learning activities. I believe that English must become interdisciplinary, but with caution and no illusions. In the 1970's English must become interdisciplinary, multi-disciplinary, crossdisciplinary."[1] Hollingsworth puts forth four reasons for his argument. The first is to insure our self-preservation--that is, we must know far more about our field than we ever have before in order to answer our critics. "We must," Hollingsworth writes, "be tough, sophisticated, knowledgeable."[2] The second reason is to avoid the curriculum waste which derives from uninformed thinking and lack of historical awareness. The third reason is to reaffirm the dynamic nature of literary criticism in the curriculum by recognizing its expanding frontiers. Finally, English must become interdisciplinary in order to support and extend curriculum reform.

Hollingsworth's thesis is even more pertinent today than it was in 1973. As we move closer to the 1980's, it becomes more and more apparent that a virtual explosion of knowledge has occurred in numerous fields, many of which, just a few years ago, were generally considered to be remote from the concerns of "English" as we knew it. And, in the field of composition, in particular, we now know that these fields bear directly on our work. Robert E. Shafer puts the case very well in his 1975 ADE Bulletin article entitled "The Crisis in Knowing about Learning to Write" when he says:

> If we look only briefly at some of the ongoing research on writing and learning to write, we will see that we perhaps do not have a "crisis" at all, but rather an explosion in understanding how learning to write and to read actually take place. Although some of the research is being done in English education programs and in departments of linguistics, as well as occasionally in departments of English, the explosion in knowledge about human communication processes is derived from such seemingly diverse fields as linguistics,

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> symbolic logic, cognitive psychology, information theory, educational theory, and rhetorical theory and research. Although, as Shakespeare put it, "misery makes strange bedfellows," it may well be that a new look at this interdisciplinary research will be more valuable at this time than increasing the number of our "speculations," particularly when these are ill-grounded and based upon no research at all.[3]

Clearly, Shafer is using the term "research" in its broadest sense to include both theoretical and empirical findings. We can understand how comprehensive this interdisciplinary research is by considering the following quotation from Carl Klaus' recent College Composition and Communication article, "Public Opinion and Professional Belief," in which he discusses writing as a process rather than merely as a product:

> When writing is understood as a process, the study of it necessarily demands an interdisciplinary approach. For example, a writer in the act of using language is drawing on a unique set of verbal possibilities (idiolect) which is the product of the writer's interaction with shared sets of verbal possibilities (dialects). Understanding these phenomena and their impact on the process of writing requires the expertise of such disciplines as psycholinguistics, sociolinguistics, and linguistic anthropology. Likewise, a writer in the act of using language is inescapably discovering and forming experience, for the words which a writer uses to define experience not only communicate but also shape that writer's perception of experience. Understanding the interaction of language, cognition, and perception requires the expertise of such disciplines as cognitive psychology, semiotics, and transformational linguistics. Furthermore, a writer in the act of using language is communicating experience for one kind of purpose or another to one kind of audience or another. Understanding the interaction between a writer's social intention and language requires the expertise of such disciplines as rhetorical theory and communication research. Finally, of course, a writer uses language to produce a piece of writing which embodies in its particular selection and arrangement of words the interaction of all the phenomena I've described thus far, and countless others, such as a writer's aesthetic intentions, or mental and emotional associations that transpire during the process of writing, or distractions that interrupt the process, or the technical demands of a particular subject matter--too many in fact to be listed here. Understanding the relationship of that

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> selection and arrangement of words to the phenomena that brought it into being requires at last the expertise of stylistic analysis, which in turn depends upon a variety of disciplines, such as literary criticism, rhetorical analysis, psychoanalysis, and statistics. Clearly, enough, one discipline or another can provide only one perspective on only one element or stage in the process of writing. If the process is to be wholly understood, if we are to know as much about writing as we possibly can, then we must bring to the study of it as many disciplines as are possible and appropriate.[4]

The number of interdisciplinary fields in which Klaus demands expertise is overwhelming in its scope and depth, as he points out: "By this point, no doubt, many of you are wondering how you could ever become familiar with research in all those disciplines and what difference it would make to your teaching even if you did."[5] It is unlikely that many of us can conceivably gain the ideal expertise Klaus calls for. But certainly we can become far more familiar than we are now with many of these fields. Since our work is in composition, I believe we must know as much as we can about learning, about language, and about people learning language, particularly composition. Mina P. Shaughnessy is quite right when she states recently that the "teacher must know more about language and learning than English teachers have had to know in the past--more about how people acquire languages, how language functions in different social settings, what writing is as a product and a process, and what theories of learning might inform his pedagogy. The teacher faces, in short, the formidable task of extrapolating from a number of complex, even turbulent, fields whatever insights and information will serve him in his work with his students."[6]

In the sections which follow, then, I will examine theoretical principles and implications of learning theory, language theory, and

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composition theory. My intention is to develop a rationale for a theory of instruction in composition. Thus, I will not directly consider every related interdisciplinary field; aside from the sheer magnitude of such an enterprise, I am not qualified to do so and I know of no one who is. Rather, I hope to demonstrate how theory in composition and related fields can be used to develop a rationale; how this rationale can be supported by the findings of research; and how, together, they can produce a sound and practical theory of instruction for the teaching and learning of composition.

An appropriate view of "learning" must derive from a theory of what learning is. It must account for the complexity of a person as a thinking creature, and it must account for the diversity of tasks faced by a person when he learns. Today two learning theories prevail in education. The behaviorist theory views learning as habit formation: a response to a stimulus becomes habitual through reinforcement. Accordingly, the learner is viewed as a creature of habit; and his learning tasks are accounted for by observing the demonstrable behavior during which the habits are formed. While some aspects of human behavior may be accounted for by habits (e.g., some actions and reactions), this view of learning seems inappropriate when we consider the powerful non-observable dimension of learning, namely, thinking.

A second learning theory and one increasingly prevalent today--the cognitive--is centrally concerned with the way people make sense of their world--that is, with the way they interpret events in their world and organize these events in order to make sense of their

world. It is a more powerful theory of learning because it views the learner as a thinking creature, and because it accounts for far more learning tasks than the purely demonstrable.

We may contrast these two learning theories pedagogically. Typical of the behaviorist pedagogy is some form of rote learning, or, what Carl R. Rogers calls the "mug and jug" approach: "Most traditionally-taught courses attempt to 'elicit' responses from students by stimulating them, coaxing them, lecturing to them, etc. Courses structured along these lines are analogous to the 'mug and jug' pedagogical procedure 'where the teacher represents the fount of knowledge (the Jug) and the student represents the yawning receptacle.'"[7]

In contrast, learning typical of the cognitivist pedagogy is what Rogers calls "significant learning": "By significant learning I mean learning which is more than an accumulation of facts. It is learning which makes a difference--in the individual's behavior, in the course of action he chooses in the future, in his attitudes and in his personality."[8] While it is true that rote learning would also make a difference in the individual's behavior and course of action he chooses in the future, what is most crucial here is that "significant learning" does not depend on an external stimulus to initiate or sustain it. Rather, this kind of learning is self-motivated--the learner perceives a problem which is important to him and which he really wants or needs to solve. It is thus far more intricately tied to his attitudes and personality than is any form of rote learning.

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Frank Smith makes a similar distinction in Comprehension and Learning when he distinguishes "meaningful learning" from "rote learning": "The aspect of learning that I regard as by far the most important is that which can and often must be self-initiated by the learner. I shall call such learning 'meaningful' because it involves a cognitive change that makes sense, because it is intimately integrated with everything else the learner knows about the world." If, as Smith points out, "what matters is meaningfulness,"[9] then we must examine "meaningful learning" in light of its theoretical orientation in cognitive learning theory.

Psychologist Ulric Neisser, in Cognition and Reality, writes that "Cognition is the activity of knowing: the acquisition, organization, and use of knowledge."[10] This activity of knowing is predicated upon the learner's cognitive structure, a concept which goes by various, but similar, definitions. I will rely on two here which I find most lucid. The first is what George A. Kelly calls a "construct": "we consider a construct to be a representation of the universe, a representation erected by a living creature and then tested against the reality of that universe. Since the universe is essentially a course of events, the testing of a construct is a testing against subsequent events. In other words, a construct is tested in terms of its predictive efficiency."[11]

Kelly's definition presents the key components of cognitive structure: it is a representation, with predictive value, which is tested against the world. Frank Smith elaborates on these key components in his discussion of the elements of cognitive structure, or what he calls a "theory of the world": "The theory is a summary

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of experience; it is memory. It is the evidence upon which children will try to interpret new events--the only basis for any sense or meaning that they can impose upon the world. And finally the theory constitutes their expectations for the future; it is the foundation for learning." Smith's metaphor for the learner is that of the scientist, which is the most-used metaphor in the cognitive view of learning: "Scientists construct hypotheses, which become the basis of an 'experiment,' and they confirm or modify their theories in the light of the experimental results" (p. 12).

Seen in this way, our cognitive structures form the basis for our interactions with our world. We operate according to our theories of the world, theories which are made in light of past experience. When we test our theories of the world (i.e., form hypotheses), we either confirm them or encounter something which challenges them. It is in the challenge that the opportunity for learning arises, because "learning is the process of elaborating and modifying cognitive structure when it fails to make sense of the world. . . . A learning situation arises whenever our cognitive structure proves inadequate for making sense of the world . . . And we learn--that is, we modify cognitive structure--so that our experience will become more predictable, so that in the future we will have a better match between our theory of the world in the head and our experience" (Smith, pp. 118-119).

Thus, "learning," from the cognitive perspective, is hypothesis-testing. As such, it involves the four steps outlined by Smith:

> (a) the generation of a hypothesis, or a tentative modification or elaboration of any of the . . . components of cognitive structure; (b) a test of the hypothesis involving some direct interaction with the environment in order to obtain feedback; (c) feedback, which provides new information against which the predicted consequence of the original hypothesis can be compared; (d) acceptance or rejection of the hypothesis. If the feedback is positive--if the consequence of the tested hypothesis is compatible with the predicted consequence--the hypothesized change in cognitive structure is confirmed. If the feedback is negative--if the result of the test is contrary to the prediction--the hypothesis is rejected or modified. (p. 228)

From this model of the learning process, many principles derive which have significant implications for learning in general and language learning (including composition) in particular. The first principle concerns the problem-solving nature of the hypothesis-testing model. Meaningful learning is problem-solving, as Smith emphasizes: "Learning, in other words, is a process of problem-solving. We learn because we do not understand, cannot relate, cannot predict. Everything we know, then--the current state of our cognitive structure--is a consequence of all our previous attempts to make sense of the world" (p. 119).

If, therefore, we seek to create meaningful learning situations in composition, we must focus attention on the problem-solving nature of learning. Carl R. Rogers suggests that we "permit the student, at any level, to be in real contact with the relevant problems of his existence, so that he perceives problems and issues which he wishes to resolve."[12] This suggests that composition students be given the opportunity to grapple with real, personally meaningful issues and problems in the content of their writing. This is not to argue for an exclusive focus on experience-based writing but simply to urge teachers to consider the real problems students

face in their lives and build on them in the composition classroom, problems which are frequently as intellectual as those which teachers so often impose on students.

Problem-solving also applies to the "skills" of writing. Since the most prevalent rationale for developing writing skills is to improve competence in written communication, the trial-error-feedback methodology of hypothesis-testing is directly applicable. Smith, for example, points out the problem-solving inherent in the development of writing skills: "This skill involves predicting the uncertainty of a listener (or reader), and organizing the surface structure so that just that uncertainty is reduced. . . . Estimating how much prior knowledge on the part of a listener or reader can be taken for granted constitutes a major part of a speaker or writer's skill" (p. 112). Reduction of the reader's uncertainty, then, becomes the writer's goal; the success or frustration of this goal comprises the learning situation. In Teaching the Universe of Discourse, James Moffett succinctly sums up the potential of trial-error-feedback learning in the composition classroom:

> If, as I believe, writing is learned in the same basic way other activities are learned--by doing and by heeding what happens--then it is possible to describe ideal teaching practices in this way and compare them with some current practices. Ideally, a student would write because he was intent on saying something for real reasons of his own and because he wanted to get certain effects on a definite audience. He would write only authentic kinds of discourse such as exist outside of school. A maximum amount of feedback would be provided him in the form of audience response. That is, his writing would be read and discussed by this audience, who would also be the coaches. This response would be candid and specific. Adjustments in language, form, and content would come as the writer's response to his audience's response. Thus instruction would always be individual, relevant, and timely. These are precisely the virtues of feedback learning that account for its great success.[13]

The second principle to consider is inherently part of the trial-error-feedback methodology. I refer to the risk-taking which must go on in any hypothesis-testing situation. That is, whenever meaningful learning occurs, the learner takes certain chances when he puts his cognitive structure to the test. He literally experiments, saying, in effect, "This is what I believe," or "This is what I think should happen." The amount of uncertainty present in his experiment determines the degree of risk involved. George A. Kelly notes that "there are times when a person hesitates to experiment because he dreads the outcome. He may fear that the conclusion of the experiment will place him in an ambiguous position where he will no longer be able to predict and control. He does not want to be caught with his constructs down. He may even keep his constructs strictly to himself lest he be trapped into testing them prematurely."[14]

All learning, then, involves risks and the possibility of error. Learners who are reluctant to take risks trade an enormous learning potential for a degree of safety. Yet, as Smith points out, "Low risk takers are unlikely to learn very efficiently because of their reluctance to take the chance of being wrong" (p. 197). Because the possibility of error always exists in risk-taking, effective learning frequently exacts a price. Smith remarks that there are economic issues that the learner considers when taking risks:

> the initial investment of time, interest and effort, the ultimate value of the learning achievement; the probability of being successful; the rewards or disadvantages of alternative outcomes. A child might be regarded as making a

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> cost-benefit analysis before he enters into any learning transaction, with his present and predicted emotional states as variables that are taken into account. If the costs of a particular learning task outweigh the estimated benefits, a child is unlikely to accept such a pointless bargain. (p. 226)

Thus, mistakes are an essential part of learning. We learn by being wrong as much as we learn by being right, provided, of course, we have the freedom to learn by being wrong (i.e., if the price exacted is not too great). This is particularly true in the composition classroom, where the necessity for risk-taking is paramount. For example, seldom are students encouraged to explore half-formed ideas, or conceptual ambiguities in their writing, even though such exploration often leads to greater originality and improved clarity in writing. Smith remarks that "One of the tragedies of our educational system is that it seems to result in reluctance to bring ideas to the surface and expose them to criticism" (p. 114). The reason for such reluctance may be that the demands for intellectual precision weigh too heavily against conceptual risk-taking.

In another sense, reluctance to take risks with the rhetorical/stylistic/mechanical aspects of composition* affects the entire process of composing, as Mina P. Shaughnessy illustrates in her recent book, Errors and Expectations:

> If a writer is not worried about being wrong, if he sees a chance for repairing and perfecting his copy at a later point before anyone sees it, he will be free to think about what he means and not worry so much about the way he is saying things, a worry that almost inevitably cuts him off from his best grammatical intuitions. Furthermore, by withholding closure on his sentences, he is more likely to work on them

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*For the sake of brevity, I will hereafter use "stylistic" to encompass matters of style as well as of the rhetorical and mechanical (e.g., punctuation) dimensions of composing.

> and, in the process, begin to be aware of his power to make choices (semantic and organizational) that brings him closer and closer to his intended meaning.[15]

Thus we see that if learners are to exploit the risk-taking dimension of learning, a healthy attitude toward error is essential. Error must be considered an avenue toward meaningful learning, not something to be avoided at all costs. In the trial-error-feedback methodology, errors are of the utmost significance.

A third principle from cognitive learning theory--decentralization--corresponds to the way Piaget used this term in his work on the developmental stages of children's thought. Piaget examined the talk of children as a reflection of their thought processes. He found two classes of talk: the ego-centric and the socialized. In the first, the child "does not bother to know to whom he is speaking nor whether he is being listened to. He talks either for himself or for the pleasure of associating anyone who happens to be there with the activity of the moment. This talk is ego-centric, partly because the child speaks only about himself, but chiefly because he does not attempt to place himself at the point of view of his hearer."[16] The communicative use of language in the ego-centric stage is subjective and private. Piaget writes that the child speaks "in a language which disregards the precise shade of meaning in things and ignores the particular angle from which they are viewed, and which above all is always making assertions, even in argument, instead of justifying them. . . . In a word, the child hardly ever asks himself whether he has been understood. . . . he does not think about others when he talks" (p. 40).

In socialized talk, on the other hand, the child does place himself at the point of view of his hearer; he realizes that others do not always see things as he does, and adjusts his talk accordingly. The communicative use of language is more public in that the child is more concerned with making himself understood by others.

The transition from ego-centric thought to socialized thought is a process of decentralization--of seeing things from another's point of view. But this process is not confined to the child's development. It is an inherent part of the functioning of everyone's thought and language, as Piaget points out:

> We shall quickly realize the full importance of ego-centrism if we consider a certain familiar experience of daily life. We are looking, say, for the solution of some problem, when suddenly everything seems quite clear; we have understood, and we experience that sui generis feeling of intellectual satisfaction. But as soon as we try to explain to others what it is we have understood, difficulties come thick and fast. These difficulties do not arise merely because of the effort of attention needed to hold in a single grasp the links in the chain of argument; they are attributable also to our judging faculty itself. Conclusions which we deemed positive no longer seem so; between certain propositions whole series of intermediate links are now seen to be lacking in order to fill the gaps of which we were previously not even conscious; arguments which seemed convincing because they were connected with some schema of visual imagery or based on some sort of analogy, lose all their potency from the moment we feel the need to appeal to these schemas, and find that they are incommunicable; doubt is cast on propositions connected with judgements of value, as soon as we realize the personal nature of such judgements. (pp. 45-46).

An interesting parallel to Piaget's investigation of intellectual development in childhood is William G. Perry, Jr.'s examination of thought processes in late adolescence. In conducting research for Forms of Intellectual and Ethical Development in the College Years, Perry observed the talk of college-level students; and, from his

data, he devised a schema which chronicles the evolutionary stages of cognitive development. Basically, Perry's schema begins with relatively simple dualistic thinking (absolute right-wrong, good-bad, etc.); moves through a number of transitional stages marked by increasing modification of outlook; and develops to final, more mature, stages of relativistic thinking and affirmation of the self in a pluralistic world. It is a movement, in Perry's words, "away from a naive egocentrism to a differentiated awareness of the environment."[17]

Both Piaget's and Perry's investigations of decentralization are vital to our understanding of the learning process. If meaningful learning amounts to the modification of cognitive structure, then decentralization (i.e., the ability to broaden one's perspective) is at the heart of learning. In this regard, James Moffett is right when he says that "Learning is a matter of 'decentering,' of breaking through our egocentricity to new points of view not determined solely by our physical vantage point in time and space or by our emotional preferences. We achieve decentering by adapting ourselves to things and people outside ourselves and by adopting points of view initially foreign to us. . . . This amounts to expanding one's perspective" (p. 148).

The implications of decentralization encompass both the conceptual and the stylistic dimensions of composition. In the conceptual domain, it suggests that barriers to effective communication of one's ideas are ultimately bound up in the process of decentralized thinking. As Moffett points out, "Probably the majority of communication problems are caused by egocentricity, the writer's assumption

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that the reader thinks and feels as he does, has had the same experience, and hears in his head, when he is reading, the same voice the writer does when he is writing. It is not so much knowledge as awareness that he needs" (p. 195). Moffett argues further that problems diagnosed as stylistic are also problems of decentralization:

> The fact is, I believe, that writing mistakes are not made in ignorance of common-sense requirements; they are made for other reasons that advice cannot prevent. Usually, the student thinks he has made a logical transition or a narrative point, which means, again, he is deceived by his egocentricity. What he needs is not rules but awareness. Or if he omits stylistic variation, metaphor, and detail, he does so for a variety of reasons the teacher has to understand before he can be of use. . . . Particular instances of failing to do what one thinks one is doing, and of failing to use the full resources of language, should be brought to light, the consequences revealed, the reasons explored, the need for remedies felt, and the possibilities of solution discovered. (pp. 202-203)

The three principles that I have discussed so far--hypothesis-testing, risk-taking, and decentralization--all lead to a view of the learner as an active participant in the learning process. This is the fourth principle that must be established--the active nature of the learning process. In the modification of cognitive structure, the learner engages in a thinking process in which new information is either assimilated with stored information, or rejected. In other words, decisions are made as to the perception, selection, and integration of "what's out there." Ulric Neisser calls this a "constructive process," in which "The perceiver is active. To a considerable extent he chooses what he will see, selecting some objects for attention and perceiving some of their properties rather than others. . . . By constructing an anticipatory schema [i.e., cognitive structure], the perceiver engages in an act that involves

information from the environment as well as his own cognitive mechanisms. He is changed by the information he picks up."[18]

A mistaken view of the learner, then, is one that sees him as passive, for it does not consider the deliberate and intentional aspects of the learning process. As Smith emphasizes, "The process of generating and testing hypotheses about the world is all that any child has or needs in order to make sense of progressively more and more of the world around him. But in order to learn in this way, the child must interact with the world. Such learning is active; it involves deliberately seeking information that will facilitate the process of constructing a theory of the world" (p. 127).

A view of the learner as active, then, focuses our attention on his own participation in cognitive development. To "educate" students is, as Neil Postman and Charles Weingartner state in Teaching as a Subversive Activity, "to elicit from students the meanings that they have already stored up so that they may subject those meanings to a testing and verifying, reordering and reclassifying, modifying and extending process. In this process, the student is not a passive 'recipient'; he becomes an active producer of knowledge."[19]

The final principle to consider is the process-orientation of cognitive learning theory--that is, how people learn. There are basically three modes of learning: 1) by doing; 2) by observing; and 3) by being told about something. David R. Olson, in his 1973 School Review article entitled "What Is Worth Knowing and What Can Be Taught," provides a useful illustration of each: "One may learn that a stove is hot by (1) touching it, that is, through direct contingent experience . . .; or (2) by seeing someone recoil from touching it,

that is, through modeling or observational learning; or (3) by hearing the sentence 'The stove is hot.'"[20]

These modes of learning complement one another. No one alone constitutes the mode of learning; they all contribute to the process. As Smith points out, "A teacher's responsibility must be to understand the advantages and limitations of the various modes of learning, and to relate these factors to the objectives of their instruction and the prior knowledge of the children involved" (p. 222). And, in the composition classroom, where the objectives of instruction center around improving written competence, the advantages and limitations of the three modes are clear. What students "learn" when they are "taught" writing is the "skill" of effective expression and communication through writing.

How, then, does one learn this skill vis à vis the three modes of learning? Olson contends that while "demonstrations and descriptions have some effect on the acquisition of skills," they "affect action indirectly by indicating the features of the effects or consequences of a performance against which the actual performatory attempts can be evaluated" (p. 41). He argues, in addition, that "Skills are acquired, not through being told, but primarily through practice, through performatory action coupled with feedback," and that writing skills in particular "must be taught largely on a practice-and-correction or tutorial basis" (pp. 39-40).

Olson's arguments about the limitations of learning through observation and description are echoed by Smith's attitude toward the acquisition of skills: "A skill cannot be summed up in words, though we may be able to provide a learner with helpful hints about what to

concentrate on, or about how to perform a particular sequence of operations. . . . skill is the way in which you use what you know or believe, and cannot be directly communicated either through language or through demonstration" (p. 218).

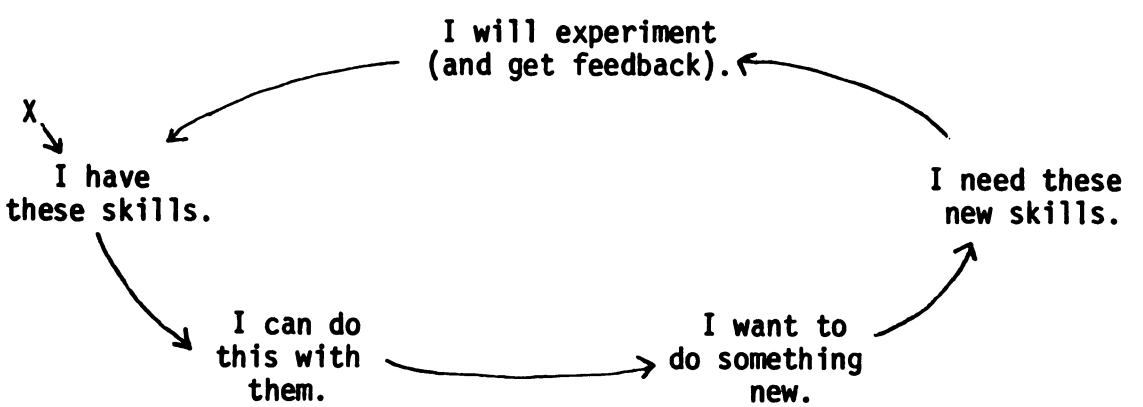
Students learn to develop writing skills primarily by using them, though they may also learn through observation and description as supplementary strategies. Given the fact that writing is not just a skill, but many skills, it becomes even more essential that the most effective means of achievement competence in these skills is to attend to them while they are in the process of developing--because students do not develop one skill at one time, but many skills simultaneously.

This emphasis on doing strongly supports process-orientation in the classroom, so that writing is treated in process--while it is actually being done, or during the working through of completed drafts. And, process-orientation complements all that I have said so far in regard to the principles of learning theory. First, it reaffirms the natural model of the learning process--the problem-solving nature of hypothesis-testing. The central pedagogical implication here is the utilization of the classroom workshop, where, with its trial-error-feedback methodology, writing is treated in process. Second, process-orientation provides opportunities for the risk-taking which is necessary for meaningful learning: conceptual and stylistic errors are thus essential learning devices to be handled as they occur in the writing process. Third, process-orientation promotes decentralization in that it focuses on both conceptual and stylistic conflicts which arise during the process of saying what one

wants to say. Fourth, it actively engages the learner in the learning process through constant and guided attention to what he is doing while he is doing it.

Process-orientation in the composition classroom attends directly to both the conceptual and stylistic aspects of writing. Piaget's remark that "It may well be through quarreling that children first come to feel the need for making themselves understood" (p. 65) clearly points to the conceptual refinement that occurs in the trial-error-feedback methodology. Such refinement can come through feedback offered by peers, as Moffett contends--"Group reactions establish a consensus about some objective aspects of the writing and identify, through disagreement, those aspects that involve individual value judgments" (p. 194). Or, conceptual refinement can result from feedback offered by teachers, as Perry suggests--"The good teacher becomes one who supports in his students a more sustained groping, exploration, and synthesis."[21]

Acquisition of writing skills is also greatly facilitated by process-orientation, as we see in the model of skill learning which appears in Stephen N. Judy's book, Explorations in the Teaching of Secondary English:



> The cycle helps to show how language skills--from basics to rather complex thinking skills--grow and develop. The speaker or writer, whatever his age, has an intuitive knowledge of his bank of skills--that is, what he can do with language. "I have these skills," he says to himself, "therefore I can do these kinds of things." But no member of the community of language is static; each person is growing, so the speaker or writer comes to feel, "I want to do new things to express and share my growing experiences." Thus he concludes, "I will need new skills to accomplish this task." As he attacks a new task, he reinforces his present bank of skills while adding to it.[22]

It should be clear by now that the principle of process-orientation is the central tenet of cognitive learning theory and that the other principles I have cited here are corollary dimensions of this tenet. The implications for the composition classroom that I have drawn from all of these principles will become more familiar as I consider other relevant theoretical fields.

A second essential theoretical area is language theory. I believe that the teaching and learning of language processes--speaking, listening, reading, and writing--should be based on an adequate understanding of the nature of language. Accordingly, I will, in this section, discuss three key aspects of contemporary language theory--grammar, language variation, and language acquisition. My discussion of each will be brief because my concern is with central principles and their implications for composition, rather than with any kind of detailed, comprehensive exposition of the particulars of language theory.

The teaching and learning of composition is invariably informed by a theory of grammar. For example, if we subscribe to a prescriptive grammar, such as the traditional grammar derived largely from Latin, then our view of grammar is that it is bound by rules of

correctness--rules which determine whether language forms are "right" or "wrong." Yet such a view of grammar is inadequate in that 1) it is static--it is not concerned with the way language changes or with the way language is actually spoken; and 2) it does not address itself to meaning but instead focuses on the surface features of language. A more powerful grammar, therefore, would be one which is both descriptive and also concerned with meaning.

Structural grammars, while more adequate because they are descriptive rather than prescriptive, are also limited in that their focus is on the purely formal properties of language--that is, on the observable surface of language. Hence, meaning plays a small part in a structural grammar.

Transformational-generative grammar, on the other hand, is the most powerful theory of grammar we have today because it not only describes the surface features of language but it also attends to the underlying meaning components and focuses on the way language is generated. Three main principles of transformational-generative grammar are: 1) the distinction between surface and deep structure; 2) the distinction between competence and performance; and 3) the generative nature of grammar.

The first principle distinguishes between two levels of language. Surface structure refers to sensory data, the observable linguistic utterance (speech sounds, or marks on paper), while deep structure refers to meaning--the underlying thought structure. By "underlying thought structure" I mean the syntactic and semantic structure which is not necessarily apparent in surface features.

While much controversy exists among linguists today over the nature of deep structure, there is, nonetheless, agreement that the principle meaning components of language do not reside in surface structure. Most crucial here, then, is the location of meaning in deep structure, and not in the surface features of language.

The second principle is the distinction between linguistic competence and linguistic performance. Competence refers to the unlimited potential every native user of a language has gained from experience in his linguistic environment--an internalized set of rules about language which provide the user with an unconscious sense of what is "grammatical" in his language and what is not. Performance refers to what a user does with language--the sentences he actually produces. What is crucial here is the distinction between what a language user can do and what a user actually does; for we know from linguistic research that linguistic competence far exceeds linguistic performance. Because every native speaker has a built-in, unconscious sense of what is grammatical in his language and what is not, we cannot judge his knowledge of grammar purely on the basis of his linguistic performance. He knows more about his grammar than his performance may indicate.

The third principle concerns the generative nature of language. Transformational-generative grammar is a process grammar. It posits that each linguistic utterance has a deep structure which, through a series of transformations, forms a surface structure. Surface structure is governed by the application of transformational "rules" which indicate whether an utterance is grammatical or ungrammatical. It is thus generative in that by following these

rules, we could produce all of the possible sentences in the language. In other words, transformational-generative grammar starts with the parts of an utterance in deep structure and moves to the whole utterance in surface structure.

The major implication to be drawn from these three principles of language theory is the process-orientation of transformational-generative grammar. Since meaning is located in deep structure and only to a small degree in surface structure (e.g., a passive transformation may slightly alter the deep structure), then the writing process, like the speaking process, is one of transforming deep structure into an adequate surface structure. Thus, in the composition classroom, the most important operations in the writing process occur at the deep structure level, where meaning is located. Secondary operations on surface structure, then, take the form of stylistic revisions--adjustments in clarity and precision which are necessary to approximate intended meaning in deep structure. Failure to recognize this essential distinction too often results in a distorted view of the process of composing--that is, the confusion of the writing process with the written product. When Frank Smith comments that many people hold a "perverse idea that good writing should spring fully formed out of a writer's head" (p. 192), he is reaffirming the view that the primary operation is the generation of meaning and that the secondary operation is a matter of revising, or editing, which comes at the end of the writing process, not during it. What this amounts to finally is a distinction between "writing" and "editing." Students who confuse the two erect unnecessary blocks in their own writing process (e.g., hypercorrection or fear of language); they fail to

realize that there is nothing wrong with saying something unclear or "incorrect" (according to the conventions of edited English) while engaged in the process of saying it, and that clarity and "correctness" come at a much later point.

Another dimension of grammar as process-orientation lies in the competence-performance principle. If teachers recognize that all students have a basic competence in their native language, then the teacher's job becomes one of helping students have better access to their competence grammar--that is, of activating competence to the level of performance through constant use of language. This is the theoretical rationale behind sentence-combining exercises--that the activity of sentence-combining is one in which students' unconscious knowledge of the abstract rules of grammar is made conscious through the process of manipulating actual sentence parts. Thus, students are made aware of what they already "know" at the level of competence.

In summary, then, the value of increased familiarity with transformational-generative grammar is that it provides insight into the nature of language and how it is produced and, by implication, how language is produced in the generation of written discourse. The separation of the meaning dimension of language production--deep structure--from the communicative dimension--surface structure--facilitates a more informed view of language processing, particularly the writing process.

Another important aspect of language theory is language variation. We live in a linguistically pluralistic culture, one which is marked by inter-dialectal varieties of language use--regional, ethnic, and social dialects--as well as by intra-dialectal

varieties--social language "styles" such as spoken and written, formal and informal, and "consultative" and "intimate."[23]

Given, then, this wide variety of language uses, we would be mistaken to assume, as so many prescriptive grammar texts do, that there is only one "correct" level of usage, only one "standard" way of speaking or writing. And, just as there are many dialects, each more or less appropriate depending on the context in which it is used, so there are many language "styles," each also appropriate, depending on its contexts. As Jenefer M. Giannasi says in her recent essay, "Dialects and Composition," the "teacher of written composition must be aware of the scope, influence, and uses of the various dialects (more accurately, varieties) of the language. Questions about dialect status, code switching, mutual intelligibility, and social attitudes may be answered only if the researcher, teacher, and composer can differentiate varieties by their situational and contextual categories."[24]

Another implication of language variation concerns the cultural and personal dimensions. That is, a person's dialect is closely tied to his values; it is an intimate part of his cultural and personal identity and must be so respected. Failure to recognize this simple fact often results in imposed language standards in the schools and in the problems which go along with this. Mina P. Shaughnessy, in Errors and Expectations, makes clear the problems which can arise when the cultural aspects of a person's language are ignored:

> When we remember the ways in which the majority society has impinged upon the lives of most [basic writing] students and when we recall the student's distrust of teachers and their language, engendered over years of schooling, it is difficult

> to see how the desire to identify with the majority culture, and therefore its public language, could possibly have survived into young adulthood. At best we might expect deeply ambivalent feelings about "making it" in a course that teaches what is perceived as an alien dialect. Even the instrumental motive [i.e., a practical use for the language] is likely to be weak among students who are not yet in the habit of seeing themselves in careers.[25]

Nor can the personal aspects of language use be ignored when language standards are imposed. As Lou Kelly points out in a 1974 College Composition and Communication essay, "Teachers who reject a person's language reject the person. Teachers who cling to their obsession with grammar are not serving the student or the educational system; they are preserving the notion that, though all men are created equal, the language you learn in the home and community where you are created stamps you inferior if it is not 'correct.'"[26]

Teachers can build on the competence students possess in their own dialects by providing opportunities for students to express themselves in their own dialects or idiolects without undermining confidence in their ability to write. This is the essence of the writing section of the 1974 Conference on College Composition and Communication resolution on "Students' Right to Their Own Language":

> If we name the essential functions of writing as expressing oneself, communicating information and attitudes, and discovering meaning through both logic and metaphor, then we view variety of dialect as an advantage. In self-expression, not only one's dialect but one's idiolect is basic. In communication one may choose roles which imply certain dialects, but the decision is a social one, for the dialect itself does not limit the information which can be carried, and the attitudes may be most clearly conveyed in the dialect the writer finds most congenial. Dialects are all equally serviceable in logic and metaphor.
>
> Perhaps the most serious difficulty facing "non-standard" dialect speakers in developing writing ability derives from their exaggerated concern for the least serious aspects of writing. If we can convince our students that spelling,

> punctuation, and usage are less important than content, we have removed a major obstacle in their developing the ability to write.[27]

This is not to say that "anything goes" at all times, but that in the process of writing, there is as much place for the features of a divergent dialect as there is for the features of Edited American English dialect. When people write, they rely on the language forms which most facilitate the expression of their ideas and attitudes; and, when what they have written is intended to be communicated to others, then the accepted conventions of written language can be implemented to bring about the most effective communication. Clearly, I am distinguishing here between writing and revising/editing. As Lou Kelly remarks in her College Composition and Communication article, "We must let them speak their own language on paper, with their own voices, without worrying about the social conventions. Then, to help them get the responses they hope for from the people they want to reach with their ideas, we must help them learn to become competent copyreaders."[28]

An expanded awareness of language variation can help composition teachers deal more effectively with the divergent dialects students bring to the classroom. Teachers can build on the strength of divergent dialects by defining for themselves and for their students the place of these and "standard" dialects in the writing process. That there is such a place is unmistakable; that most students are aware of it is less certain and perhaps the cause of many writing problems.

The third aspect of language theory to consider is language acquisition--the process by which children learn their native

language. This is an essential part of a theoretical framework for a language learning situation such as composition because many valuable insights derive from an awareness of the powerful intellectual achievement of children in learning their first language. In this section, therefore, I will attend to the process of language acquisition by examining some of the principles involved in it and their implications for later language learning.

All languages operate according to systems of rules which underlie the phonological, syntactic, and semantic components of language. The central principle in the process of language acquisition, then, is the child's unconscious construction of the rules that govern his understanding of the structure of language. The method employed by the child in acquiring these rules is the second principle to consider: he tests hypotheses--conducts linguistic experiments to discover what regularities occur in the language he is surrounded by. The psychological processing involved in the hypothesis-testing is outlined by Jerry A. Fodor in Smith's and Miller's The Genesis of Language:

> In the first place, there is a body of observations that the child must be assumed to make, a body of data about his language provided by the child's exposure to the verbalizations of adults, siblings, and so on. Second, there are whatever learning principles the child employs to organize and extrapolate these observations. Third, there is the application of the principles to the data, the body of knowledge about the structure of his language that the child-cum-fluent-speaker will employ in speaking and understanding the language.[29]

Another principle of language acquisition is the central role of environment. While most psycholinguists contend that such environmental factors as imitation, practice, and reinforcement play

little, if any, role in language development at early stages, there is some agreement that verbal interchanges between child and adult such as expanding, prompting, and echoing facilitate language development.* What is most important is that the adult facilitates the child's use of language by manipulating and encouraging it.

Furthermore, since, in the course of language development, the child is constantly experimenting, he is unavoidably taking linguistic risks. An environment which encourages linguistic risks (e.g., an adult who does not constantly correct the grammaticality of utterances) is one in which fluency develops more readily.

The fourth principle of language acquisition to consider concerns motivation. From a psycholinguistic point of view, the child is primarily motivated to acquire language in order to make sense of his world by controlling it through language (e.g., the past can only be

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*In expanding, an adult modifies a child's syntactically immature utterance to one of greater maturity, as in:

Child: "Give Mommy."
Parent: "Give it to Mommy?"
Child: "Give it Mommy."

In prompting, an adult reformulates a statement which the child may not have understood because of its syntactic structure, as in:

Parent: "Where is your cup?"
Child: (Silence).
Parent: "Your cup is where?"
Child: "My cup on table."

In echoing, an adult imitates a child's partially unintelligible sentence, but substitutes for the unintelligible part something which hopefully corresponds to the child's intended meaning, as in:

Child: "I want oom."
Parent: "You want your spoon?"
Child: "I want spoon."

summoned and communicated through language). Whatever other purposes the child may have in using language--practical, emotional, imaginative--the primary motive arises from a personal need to use language to regulate and control his world. That the child achieves active mastery over most of the structure of language in just a few short years is testimony to his highly motivated self-direction.

Since, as Frank Smith notes, "the way language is learned tells us a good deal about learning in general" (pp. 3-4), the process of language acquisition provides a model of natural language learning which can inform the teaching and learning of reading and writing. While most writers focus on the relationship between the principles of language acquisition and the development of reading ability, few concentrate on what insights language acquisition holds for the development of writing ability. But since one's native language is learned without any formal instruction (hence, "natural"), the language acquisition model provides implications for the composition classroom.

The first implication concerns linguistic competence and the teaching of grammar. The distinction between linguistic competence and linguistic performance is central here: since the linguistic competence of school-aged children enables them to understand and produce grammatically correct sentences, it is questionable whether teaching grammatical principles is necessary--certainly not in the early or middle grades and probably not in later grades either, with the exception of classes where the nature of language is the subject of study. This is not to say that children and adolescents have reached adult levels of sophistication in vocabulary and syntax,

but only to suggest that they will reach these levels eventually as their language development proceeds at its natural pace. Furthermore, as I pointed out in Chapter II, research has repeatedly demonstrated that there is no correlation between the teaching of formal grammar and improvement in writing ability.

We should, instead, assimilate the natural language learning strategies that the child employs regularly without the help of instruction; he learns his grammar through exposure to language and through hypothesis-testing (trial-error-feedback). There should, therefore, be plenty of exposure in the composition classroom to new language features (sentence structure, vocabulary) and plenty of opportunity to experiment with them.

One essential way of facilitating exposure is through reading. In Teaching English to Speakers of English, Bradford Arthur writes that "an almost entirely passive exposure to formal, literary English can lead to the ability to produce this style in 'composed' prose." The child will not merely imitate what has been read; rather, as in the case of Arthur's third grader, "her passive assimilation of literary prose enabled her to produce an approximation of literary prose herself, with little difficulty and no special training or encouragement."[30]

James Britton also notes the value of reading for learning writing when he says that the effect of reading upon writing is that "As in their speech, children 'absorb' a knowledge of the grammatical system of the English language without ever having made that language explicit, so they take in the same kind of awareness of the way the written language works."[31] Along with reading,

exposure can be increased through talking, a language activity which may introduce new language features, help initiate latent features (in student competence), and thereby facilitate linguistic performance. Clearly, then, the development of writing ability can be fostered naturally through a close integration of all the other language functions--reading, talking (and, by extension, listening)--in a holistic framework. As James Britton remarks, "I believe that the continuous use of language by speaking or writing or listening or reading, the use of continuous language, is the really productive factor in all language work" (p. 71).

A second implication concerns the role of meaning in language acquisition. Since children learn language through hypothesis-testing in a meaningful context, our emphasis in the composition classroom should fall primarily on the meaning of utterances and only secondarily, if at all (depending on the purpose for the writing), on correctness. Furthermore, in keeping with the idea of hypothesis-testing, it is only natural and necessary that mistakes will be made, in the areas of both grammar and semantics. Mistakes are particularly useful in the composition classroom, as James Moffett points out: "The learner simply plunges into the assignment, uses all his resources, makes errors where he must, and heeds the feedback. In this action-response learning, errors are valuable; they are the essential learning instrument" (p. 199).

Another implication which follows from the previous one is the view of the child as an active agent in language development. The child is not a mere passive mechanism while learning language, as imitation theories hold; rather, he is constantly engaged in

linguistic experimentation. This role of the child as active agent should be maintained in the composition classroom. Teaching the grammatical and rhetorical rules of language use puts the student in a passive role, encourages what Moffett calls "error-avoidance," and takes valuable time away from actually using language. Frank Smith notes that "the skills of saying something efficiently, and of having something to say in the first place, are best developed by being put to use" (p. 191). Accordingly, students should be encouraged to write a lot (free writings, journals, compositions), in many forms (expository prose, fiction, poetry, etc.) and for real audiences (classmates, teachers, others).

A fourth implication of language acquisition for teaching writing is the role of environment. The child takes many linguistic risks when learning language, makes many "mistakes," and learns by these "mistakes," all of which go on in an environment encouraging linguistic experimentation. If we want students to take the risks which are necessary for meaningful learning, then we must encourage an environment which is free from fear of making mistakes. As Frank Smith points out, "effective learning has little chance of taking place without the possibility of error on the part of the learner' and error frequently demands a price" (p. 226).

This view of an environment which encourages risks has two applications. First, we must ask ourselves if language development is being encouraged when too much attention is given to surface features at the expense of the content of utterances. Second, we must examine what we see as the intellectual functions of writing. On the one hand, the intellectual function of writing is the effective

communication of ideas; here, the focus in on intellectual clarity in the written product. On the other hand, the intellectual function of writing is also to serve as a means toward achieving clarity--that is, the writing process itself functions as a way of promoting intellectual development. Here, the focus is on intellectual clarifying in the writing process through risk-taking. As James Britton says, in "the essential process of sorting experience which goes on in the writing . . . we give [the student] the opportunity to write above all because this encourages him to cope with something that is an immediate concern, an immediate problem to him; he is dealing with a part of the now for himself and we put the stress upon that, at the same time admitting that he will learn to write by writing" (pp. 28-29).

If we encourage students to take intellectual (as well as linguistic) risks, then we must shift our focus from the written product to the writing process. And, if our students are to see the process of writing both as a means of shaping experience and as a means of learning from it, then it follows that we should stress the process of writing as a way of facilitating intellectual development. That is particularly true on the secondary and college levels where demands for intellectual sophistication are greatest. As I pointed out in my earlier discussion of William G. Perry, Jr.'s research on the intellectual and ethical development of college-age students (see pp. 129-130), an environment which supports intellectual exploration greatly facilitates the growth and refinement of intellect. Finally, by encouraging intellectual risk-taking in the process of writing, we may well generate in our students the kind of vigorous,

genuine writing that usually accompanies strongly motivated, personally meaningful utterances.

The final implication to be drawn from language acquisition again concerns motivation. The efficacy of strong, personally motivated self-direction gives us a target for the composition classroom. Frank Whitehead, in The Disappearing Dais, points such direction for writing teachers:

> In writing as in speaking, what matters more than anything else is that one should have something to say that one really cares about saying. It is this powerful impetus from within that is essential in order to carry the prentice writer past the obstacles and difficulties of his task; yet all too often this is entirely missing from the attitude with which the secondary school child approaches his weekly composition homework. The first aim of the teacher must be to manoeuvre the child into a position where he feels this impetus within himself; somehow he has to engender in his pupils an urgently felt impulse towards communication, moreover, which demands for its fulfillment the permanence of the written form of language.[32]

In this section, I have focused on the process of natural language learning because I feel that an awareness of this process provides useful insights for the teaching and learning of writing. The principles and implications I have drawn from the principles of language acquisition are operationally real: I have seen them applied on the elementary, secondary, and college levels. When students have the opportunity to use their natural language learning strategies, they learn, and learn well.

Composition theory is a profoundly ill-defined field which encompasses a number of disciplines ranging from traditional fields such as philosophy, history, and rhetoric to more recent and relatively unexplored ones such as speech act theory, tagmemics, and psycholinguistics. While I haven't the space here to consider how

all such areas contribute to composition theory, I will attend to three key aspects of composition theory which relate to formulating a theory of instruction for composition. These are: 1) structure of composition; 2) sequence in composition; and 3) the composing process.

In Tradition and Reform in the Teaching of English: A History, Arthur N. Applebee argues that the specification of goals for instruction in English must derive from an answer to what he calls the "perennial question"--"'What is English?'":

> To answer it is to specify implicitly which goals are central and which of lesser importance. If, for example, English is defined as a set of mechanical skills in language use, a goal such as "good spelling" may emerge near the top of the hierarchy. It becomes important in itself and instruction can be focussed directly upon it. This has in fact sometimes happened because spelling has been defined as a mark of a good education; students have been tested and drilled in spelling for its own sake. If, however, English is defined as a way to order and understand the world through language, then spelling becomes a secondary goal. The focus of instruction will be on using language in a significant exploration of the world, with spelling simply a skill which is useful but not central in that process. Though spelling may still be taught directly, such teaching will have to be assessed in terms of its effect on the larger goal rather than simply in terms of improvement in spelling ability.[33]

Once we can define "English," then, we can determine its structure. John Dixon suggests some possible definitions in Growth Through English, his report on the Dartmouth Seminar, the 1966 Anglo-American Conference on the teaching of English. Dixon rejects overreliance on either writing skills or knowledge of literary and cultural heritage as the ultimate definition of English because each isolates the other. He then proposes that English is to be defined not as some thing, but "by process, a description of the activities we engage in through language."[34] For Dixon, then, English is neither exclusively skills nor knowledge, but rather the process of

acquiring both. And, by extension, composition is not a product like a skill or a packet of knowledge but a process, as Dixon remarks: "The question 'What is English?' invites a different form of answer from, say, 'What at our best are we doing in English classes?' If we wish to describe a process, composition for example, the first question will tend to suggest the finished product (the marks on the page even) rather than the activity of bringing together and composing the disorder of our experience. 'What . . . doing' will suggest nominal forms of verbs (bringing, composing) and thus help to keep activities in mind."[35]

In a similar fashion, James Moffett, in Teaching the Universe of Discourse, argues that a definition of English as either skills or content creates an inadequate dualism which fails to recognize the integrative nature of the two. Instead, Moffett reintegrates skills and content in what he considers to be the definition of English--"all discourse in our native language" (p. 9) regardless of its content (e.g., literature, history, biology, etc.). Furthermore, all discourse consists of three interdependent elements which comprise its structure:

> The elements of discourse are a first person, a second person, and a third person; a speaker, listener, and subject; informer, informed, and information; narrator, auditor, and story; transmitter, receiver, and message. The structure of discourse, and therefore the super-structure of English, is this set of relations among the three persons. But in order to exploit this venerable trinity, we must get beyond its innocent look.
>
> Within the relation of the speaker to his listener lie all the issues by which we have recently enlarged the meaning of "rhetoric"--what A wishes to do by speaking of such and such a subject to B. Within the relation of the speaker to his subject lie all the issues of the abstractive process--how the speaker has symbolically processed certain raw

> phenomena. But of course these two relations are in turn related: what and what for are factors of each other. As with all trinities, the relations of persons is a unity--somebody-talking-to-somebody-about-something. And, lastly, within the relation of the listener to the subject lie all the issues which we call comprehension and interpretation.
>
> In proposing this structure, I am thinking that the student would learn the skills of operating our symbol system by role-playing first and second persons in all the possible relations that might exist between the student and a subject, and between him and a speaker or listener. (p. 10)

For Moffett, then, English is all discourse; and, a student learns English through the process of shifting roles among the elements of discourse. Like Dixon, Moffett defines English by process, or activity, where language is used in real, authentic discourse (somebody-talking-to-somebody-else-about-something). I see Moffett's definition of English as a more precise articulation of what Dixon means when he defines English as a process. For both writers, the focus is on language in operation, language used for real purposes and directed toward real audiences. Shifts among the three "persons" are the very stuff of composition, for such shifts inform every aspect of composing--style, point of view, structure, order, and so on.

The structure of composition, then, is the nature of discourse --the shifts among the three persons. I find Wayne Booth's definition of the "rhetorical stance" most appropriate in this regard because it succinctly places the three elements of the nature of discourse squarely within the field of composition:

> The common ingredient that I find in all of the writing I admire . . . is something that I shall reluctantly call the rhetorical stance, a stance which depends on discovering and maintaining in any writing situation a proper balance among the three elements that are at work in any communicative effort: the available arguments about the subject itself, the interests and peculiarities of the audience,

> and the voice, the implied character, of the speaker. I should like to suggest that it is this balance, this rhetorical stance, difficult as it is to describe, that is our main goal as teachers of rhetoric. Our ideal graduate will strike this balance automatically in any writing that he considers finished. Though he may never come to the point of finding the balance easily, he will know that it is what makes the difference between effective communication and mere wasted effort.[36]

This passage also points to the structure of composition as a process--"discovering and maintaining"--where the success of the written product depends exclusively on attention to the interaction of the three elements of discourse in the writing process.

To summarize this view of the structure of composition, then, English is defined as process and includes all discourse; and the structure of composition is the nature of discourse--the interaction of the three elements of discourse in the writing process.

The second aspect of composition theory concerns sequence. Is there any sequence in the development of composition abilities indigenous to the structure of composition and applicable to a theory of instruction? In order to answer this question, I must extract three principles from the structure of composition as I have defined it. These three principles are:

1. That language be used, not studied as an object in itself.
2. That language be used as it really exists--in a speaker-audience-subject context.
3. That language be used as it occurs naturally--in a variety of contexts and for a variety of purposes.

Many composition theorists and teachers advocate a sequence marked by such variety of authentic discourses, in which at one end we have completely personalized, private discourse (e.g., the

self-directed monologue), while at the other end we have impersonalized, public discourse (e.g., the legal document). Such a sequence would cover the range of discourse situations and purposes within the rhetorical stance.

A brief examination of the versions of this sequence proposed by composition theorists will help to make it more concrete. James Britton, for example, proposes a sequence of modes of writing which begin with expressive writing and develop into either referential or poetic writing. In expressive writing, the writer's audience is, for the most part, himself; there is little concern with the amenities of public written discourse; and the modes usually include diaries, journals, and other forms of self-directed writing. Referential writing, on the other hand, is directed toward an audience other than the self; there is much concern with the communicative conventions of public written discourse; and the modes include expository prose and other forms of informative discourse. Poetic writing is literary; concern with conventions takes the form of a verbal construction--a verbal performance; and the modes include fiction, drama, and poetry.

The interesting part of Britton's model is his location of expressive writing as the starting point for either referential or poetic writing:

Referential——————Expressive——————Poetic

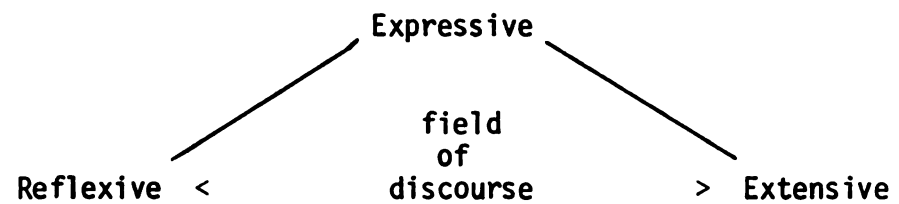
"Expressive writing" writes Britton, "is for us, then, the center point--still a kind of matrix, tending to be on the move, either to referential writing on the left, or to formal, poetic writing on the right" (p. 43). Britton believes that a sequence of writing

instruction should begin with the expressive and proceed developmentally toward either end. This is particularly true, notes Britton, in the composition classroom, where the central concern is usually with referential writing:

> You cannot, I believe, teach the referential, the expository, as such: it has to be arrived at, it seems to me, by the shedding of certain aspects of the expressive. The shedding process is highly intricate: it is as though there existed a delicately adjusted threshold which allows the integrity and individuality of the writer to move through into the writing yet leaves the finished product objective, referential. By short circuiting the process, I believe we produce the form of expository writing without the vigour, the personality, of a writer--a linguistic tool which will have very limited uses indeed. (p. 48)

Britton's sequence, therefore, begins with expressive modes of writing and moves to public modes in order to sustain the personal sense of the writer in the written piece. His is essentially a humanistic rationale which is aimed at developing the kind of personal "voice" which gives a distinctly personal flair to public discourse.

Janet Emig proposes a similar sequence in The Composing Processes of Twelfth Graders. She recasts the Britton model as follows:



For Emig, all writing is primarily expressive--that is, it "expresses the thoughts and feelings of the writer in relation to some field of discourse."[37] Expressive writing can evolve toward the reflexive, which is "the mode that focuses upon the writer's thoughts and

feelings concerning his experiences; the chief audience is the writer himself; the domain explored is often the affective; the style is tentative, personal, and exploratory." Or, expressive writing can evolve toward the extensive, which is "the mode that focuses upon the writer's conveying a message or a communication to another; the domain is usually the cognitive; the style is assured, impersonal and often reportorial" (p. 4).

Emig argues that American secondary schools give too much attention to extensive writing and too little attention to reflexive writing, which results in a "limited, and limiting, experience" (p. 97). She proposes, therefore, a range of writing experiences which includes both modes of writing. Emig's proposal for a breadth of writing experiences suggests the kind of sequence I am proposing here, one which includes a range of modes as it moves from the personal to the public.

James Moffett presents a finely articulated sequence which is based on a human development model: "Ideally this sequence would correspond both to [the student's] own intellectual and emotional growth and to some significant progression in 'symbolic transformation,' as Suzanne Langer has called the human processing of the world" (p. 13). Moffett's sequence is founded on different kinds of discourse, where the student moves "in his writing and reading from one kind of actual discourse to the next in a sequence which permits him to learn style, logic, semantics, rhetoric, and literary form

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continuously through practice as first or second persons"* (p. 13).

Moffett's sequential model becomes a series of movements:

1. From the implicit, embodied idea to the explicitly formulated idea.

2. From addressing the small, known audience like oneself to addressing a distant, unknown, and different audience.

3. From talking about present objects and actions to talking about things past and potential.

4. From projecting emotion into the there-then to focusing it on the here-now.

5. From stereotyping to originality, from groupism to individuality . . . (p. 57).

At the heart of Moffett's sequential model is the process of abstraction which goes on constantly in the "somebody-talking-to-somebody-else-about-something" interaction in the nature of discourse. Moffett also refers to this as the "I-it-you" relation:

> The referential relation of I-it must be crossed with the rhetorical relation of I-you, in order to produce a whole, authentic discourse. Rhetoric, or the art of acting on someone through words, is an abstractive act. That is, one performs the same activities in pitching a subject to an audience as one does in extracting that subject from raw phenomena: one selects and reorganizes traits of things, digests, codes preferentially. A course in rhetoric teaches how to present material successfully, how to find subjects; how to choose words and sentence structures, how to enchain items in sequence and patterns. Both abstracting from and abstracting for concern the same kinds of choice. The difference is whether the speaker-subject relation or the speaker-listener relation is determining the choice--the extracting from the source or the anticipation of audience response. Representing reality to oneself and presenting it to others are merely two aspects of the same process, which is abstraction. Once coding is verbal, we are hard put to conceive of it as solely abstracting from.

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*"Persons," here refer to the elements of discourse. See quote from Moffett, above, pp. 153-154.

> In fact, I will make the assertion that neither abstracting from nor abstracting for exists apart from the other in the universe of discourse. 'Composition' means handling both dimensions at once; a speaker always stands in some relation to both his subject and his audience. (pp. 31-32)

Moffett's sequence of activities--his "spectrum of discourse" --takes the theoretical form of a hierarchy of levels of abstraction and the practical form of a wide range of writing options which follow the series of movements I outlined on p. 159.

Interior Dialogue
(egocentric speech)

Vocal Dialogue
(socialized speech)

Correspondence

Personal Journal

Autobiography

Memoir

Biography

Chronicle

History

Science

Metaphysics

Clearly, Moffett's sequence, like those of Britton and Emig, begins with the self and moves outward, in a developmental pattern which parallels the psychology of the learner:

> The primary dimension of growth seems to be a movement from the center of the self outward. Or perhaps it is more accurate to say that the self enlarges, assimilating the world to itself and accomodating itself to the world, as Piaget puts it. The detailed forms which this movement takes are various and often paradoxical. In moving outward from himself, the child becomes more himself. The teacher's art is to move with this movement, a subtle act possible only if he shifts

> his gaze from the subject to the learner, for the subject is in the learner. (p. 59)

With Moffett's sequential model, we arrive at the intersection of a structure for composition--the nature of discourse--with a sequence for composition--a movement from the personal to the public, from the less abstract to the more abstract, and from the self in relation to itself to the self in relation to the world. Such a sequence may be indigenous to the structure of composition in that it embodies the essential principles of that structure that I stressed on p. 155: that language be used; that language be used as it really exists--in a speaker-audience-subject context; and, that language be used as it occurs naturally--in a variety of contexts and for a variety of purposes.

A third aspect of composition theory is the nature of the composing process. Implicitly or explicitly, whatever view teachers hold of the composing process will inform many of their classroom strategies. Similarly, whatever view students hold of the composing process will inform many, if not all, of their writing strategies. Thus, a theory of the composing process is essential both for teachers and for students.

The composing process has been described, however, in a variety of models. A linear model, for example, conceives of a uni-directional process which can be divided into stages, such as choosing and narrowing a subject, outlining, writing, and revising. Prewriting, writing, and rewriting is another, more familiar way of describing this process. A second model is what might be called cyclical, in which the "stages" of writing are less discrete. The

writer continually fluctuates between matters of content, style, and structure in what is essentially a recursive give-and-take between form and content, with formal methods of invention assisting in the process. A third model is the discovery conception of the composing process. Here, the act of writing itself serves as a way of generating content and style. The writer simply writes to find out what he wants to say and how he wants to say it; he is governed by no set procedures other than making discoveries through the act of writing, which is viewed as an organic process.

These three models focus on the generative operations of the mind in the composing process. An alternative to these is the behavioral model, which is less concerned with the mind as the generative source of thought and language and is more concerned with the writer's interaction with the external environment as the stimulus of thought and language. That is, the writer relies on talk--with other writers and speakers--before and during the composing process. Talk becomes a way of both discovering and refining thought and language.

Clearly, then, the composing process can be viewed in many ways. Each view has its benefits as well as its limitations. The linear model, for example, works well when the writer knows enough about his subject to discern its structural and developmental patterns or knows just how he wants to "say it." But it is an inadequate model when the writer does not possess such knowledge--that is, when he must discover his subject's ordering principles by writing or talking his way to them. Similarly, the cyclical, discovery, and behavioral models are most helpful when the writer is in the position

of not knowing what he thinks until he says it, as E. M. Forster put it.

In short, all models of the composing process bear on the act of writing in its largest context. They are not mutually exclusive but rather complementary. It would appear, then, that the best model of the composing process is what I refer to as the integrative model--one which overcomes the limitations of subscribing to any one model by recognizing the strengths of all and relying on these strengths in various writing situations.

The integrative model is more useful for two reasons. First, it is comprehensive--it embraces all models of the composing process. Second, it is flexible enough to become relative to the writing task at hand and adaptive to many writing situations; that is, it helps students to prepare themselves for the universe of writing situations they face in their everyday lives by making them aware of many ways to proceed in diverse writing tasks.

In summary, I have proposed that the structure of composition is the nature of discourse--which is itself an operational definition of the communicative process. I have proposed a sequence in composition which is learner-centered in that it is patterned on stages of psychological growth. Finally, I have proposed an integrative model of the composing process which is more comprehensive and flexible than is any singular model; adherence to any one model, I have argued, simplifies and constricts the complex operations of the writing process while it fails to recognize the immense diversity of real writing situations.

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In my extrapolation of principles and implications from learning theory, language theory, and composition theory, a number of overlapping themes have emerged. This is as it should be, for in keeping with the "explosion of knowledge" discussed at the start of this chapter, we now know that many common insights derive from what might appear to be diverse and unrelated fields. Here are the insights common to the three theoretical fields I have examined in this chapter:

1. The role of process in learning, language, and composition.
2. The problem-solving nature of learning.
3. The trial-error-feedback model of hypothesis-testing.
4. Conceptual and stylistic risk-taking.
5. Conceptual and stylistic decentralization.
6. The role of environment in meaningful learning.
7. The meaning-centered context of learning and language use.
8. The active nature of the learner and the learning process.
9. The role of audience in language use.

I will have more to say in regard to these common insights at the end of this chapter when I formulate a theory of instruction for the teaching and learning of composition. But first, I will consider research in composition once again to discern its common ground with my discussion of theory.

In Help for the Teacher of Written Composition, Sara W. Lundsteen presents twelve recommendations for the teaching and learning of composition. These twelve recommendations derive from research conclusions over the past fifty years as well as from the

conclusions formed by leading spokesmen in English and the language arts. Lundsteen proposes that these twelve points "could stand as a platform upon which to build programs for children and young people." Lundsteen's twelve points, which appear below, offer many directions for the composition classroom which are soundly based on research and much critical thinking:

1. Oral language base. Written composition needs to be tied to oral language. Conversation and "free talk" are the basis for consciously structured reporting, story telling and retelling, both original and from other sources. The confidence and fluency that stem from composing with spoken words and body language is essentially related to composing with written words. Dramatics and pantomine add other dimensions to the composing process and promote vividness of characterization and economy of action, as well as clearer conceptualization of plot and episode. Partnerships in writing spring almost spontaneously from person-to-person talk and from dramatization, whether spontaneous or planned.

   No doubt the most obvious and helpful link between oral language and written composing involves dictation by a child to a teacher who puts the child's spoken words into visible written form. Whether done on an individual or a group basis, hearing and seeing one's unique combination of words--whether a question or phrase, picture caption or whole sentence--is an exhilarating experience. This method also introduces children to the concept that written symbols stand for oral symbols. Gradual growth from dictation to shared writing to independent writing seems a natural sequence for a great majority of ready young learners.

2. Environment. A varied environment that stimulates many kinds of creative response adds depth and increases potential for selection of content. Experiences with music, dance, paint, clay, drama, rhythmic expression, and other media foster zest for experiment and inventiveness in the whole realm of curriculum--including writing. We need to spend more time on what happens before a child writes.

3. Inner motivation. Motivation to communicate comes from within. It is innate. Shared by humans of every culture, and apparently by some lower mammals, this urge is universal. For humans, writing is part of the urge. Oral languages historically advance into written forms; roughly 2000 of the more than 3000 oral languages now

in existence have gradually developed to the point that they have written forms.

Teachers cannot "motivate" children to write; they can only stimulate them. When actually used to relate to peers and adults, children's writing is a vehicle both for self-expression and for affecting their audience. In almost any setting, children's unassigned writing exceeds their writing on assigned topics. Individual selection is not only possible but requisite, even when part of a cooperative authorship of books or letters or reports. Composing in writing is an intensely individual process. The individual writing conference between teacher and child may assist this process.

4. The contribution of children's literature. Children's literature can contribute greatly to the written and oral composing of children. Awareness in children of what a story is grows from early exposure to stories heard and read. From the earliest here-and-now accounts of objects and events shared with infants and toddlers, through the "safer" folk tales and (at somewhat later ages) tales made of sterner stuff, through imaginative and realistic literature, the oral and written heritage is a vast resource for children to draw upon in their own composing. Using known characters for new exploits can help many children to be truly original; for example, a popular dilemma from literature children often use is that of being the youngest or weakest, yet being able to achieve or overcome.

5. Audience. Various audiences help to shape the style and content of writing. Stories written for younger friends or classes have characteristics quite different from those written for older students or adults. This adaptation of writing style for different audiences holds whether the writing is factual, imaginative, speculative, or persuasive. And, since the product belongs to the producer, a story, poem, or any other writing should not be given to an audience until the young author releases it to that audience.

6. Positive response. Enjoyment of stories and reports, appreciation for a bit of original phrasing or a unique character or event, is the response to be encouraged. This reaction is positive and yet selective. Rating and grading have no part in unifying writer and audience. Appreciation of factual accuracy and questions reflecting a new curiosity awakened by a report show that an author has respected and affected his or her audience. Such positive reaction from teacher and peers is evaluative and is the kind of stimulus that builds motivation for further writing. Teachers help children by looking for strengths and pointing them out.

Negative criticism should be avoided because it implies rejection. Red-penciled correction and authoritarian comment can thwart the confidence needed for further exploration. Editing with a child when a paper is to be put into "good" form for display or in a permanent collection can and must be a supportive relationship. The purpose of editing is to help young authors say what they want to say. Even another child serving as editor can adopt a sharing attitude for the purpose of making the writing clear, precise, and easy to understand. If serious reshaping of a sequence of ideas is needed, this should be done on a separate paper. Respect for children's own words is thus maintained, and planning or accepting of a better approach is less likely to damage self-esteem.

7. Drafts. Children's first drafts are usually messy. Words are omitted or spelled wrong; handwriting is often poor. This is often true of many adult authors. One of the truisms of composing is that ideas forging ahead of one's pencil or typewriter cause many surface errors.

8. Oral display. Not every piece of writing needs to be corrected or copied. Much of a child's writing is best read aloud, if the child permits, and filed in a private folder. An audience might be large or it might be as small as one peer or one teacher. If the story, verse, letter, or report is to be read by persons other than the teacher-intermediary, then editing and writing in appropriate form are usually necessary. Seeking the author's approval for the finished copy helps to build pride, a strong force for further interest in writing.

9. Developmental irregularity. Development in writing occurs in irregular spurts. Although learning curves may appear when exact test scores are smoothed into a growth picture, such ratings are neither accurate nor appropriate for composition. Not every story or other piece of writing is better than the preceding one for a child or for a professional. Teaching needs to be based on developmental knowledge of children's composition.

10. Observation. Developing powers of observation is essential to the writing process. Welcoming oral comment upon observations strengthens abilities needed in composing--for example, how the sand looks or feels when it blows, how birds fold their wings when they alight, why people prefer to be in groups rather than alone, or how an author makes an idea clear.

11. Voice. As children mature in supportive environments, they develop an individual "voice." They must be helped to understand who they are (in positive terms) and what values

they stand for in order to develop their own style and project their creativity into their products.

12. Creative problem-solving. Creative problem-solving, an important part of composition, can strengthen essential processes of selection. The word creative implies child autonomy, child choice, some areas of the unknown, not just being handed a writing task, topic, or problem. Teachers, of course, can provide frameworks for writing problems ("Why don't you try composing a tall tale, something like those we've been reading and talking about."), but the substance of the composition needs to come from the child's own observation and imagination.[38]

To Lundsteen's twelve points I would add the following additional points which derive from the research I have compiled in Chapter III:

13. Fear of language. Hostility or indifference to writing often stems from rejection of divergent dialects in the classroom. Also, students are often inhibited in acquiring written fluency because of an over-emphasis on "correctness" in written composition. (See Question Three in Chapter II.)

14. Writing Labs/Workshops. Students make greater gains in writing competency when classroom procedures are based on a workshop model. A small class meeting in an informal atmosphere with intensive tutoring available greatly facilitates development of composition skills. Class sessions marked by in-class guidance of writing assignments and group problem-solving of writing tasks focuses on writing in process and provides opportunities for problems to be met when they occur. (See Question One in Chapter II.)

15. Collaborative learning. Peer interaction in the composition classroom is an effective pedagogical strategy. Students can collaborate at all stages of the writing process, from prewriting to revising and editing. Collaborative learning is particularly effective for average and below-average composition students, and a powerful motivational device for students at all ability levels. (See Question Five in Chapter II.)

16. Reading. A close relationship exists between reading background and writing competence, as Lundsteen demonstrates in her comments on the contribution of children's literature. Though researchers cannot say precisely why,

findings indicate that effective writers most often read more than less effective writers. (See Question Nine in Chapter II.)

17. Sentence combining. If elaborate sentence structures are considered positive increments to writing competence, then sentence combining exercises can promote syntactic fluency and can improve the overall quality of student writing. Thus, such activities can be a useful and effective supplement to other activities in the composition classroom. (See Question Seventeen in Chapter II.)

18. Writing preferences. Professional writers indicate that the origins of their ideas lie in their backgrounds and personal lives. Inquiries into student preferences indicate some agreement on interest in writing about topics which affect their own lives in some way. Since research has indicated that a relationship exists between the quality of writing and the writer's interest in his subject, then student writing preferences should be given consideration in the classroom. In addition, since there is a wide spread of specific writing interests among students at all levels, then equal consideration should be given to providing a variety of writing topics on any writing occasion. (See Question Two in Chapter II.)

19. Pedagogy. As I indicated in my examination of many of the studies under Question One in Chapter II, certain pedagogical procedures affect both writing performance as well as attitudes toward writing. More important, however, is the long-range effect pedagogy has on the reciprocal nature of performance and attitudes, for it is clear that some pedagogical procedures facilitate the development of writing competence more than do others, and thereby promote a continued and renewable interest in the development of writing proficiency. (See Question One in Chapter II.)

These nineteen points, then, illustrate strongly supported directions in composition research. None are based on isolated experimental studies; rather, they derive from a number of research studies which come to similar conclusions. They apply to a range of levels of schooling and to a range of instructional conditions. Along with the insights which derive from the theoretical fields that I summarized earlier, these nineteen points must be taken into consideration in curriculum design at all levels.

Since curriculum usually implies specific methods and materials, I prefer instead to develop a "theory of instruction"--a phrase popularized by Jerome S. Bruner. According to Bruner, a theory of instruction "sets forth rules concerning the most effective way of achieving knowledge or skill. . . . A theory of instruction . . . is concerned with how what one wishes to teach can best be learned, with improving rather than describing learning." Thus, a theory of instruction is concerned with the process of learning. And, it is intricately related to pertinent theory, as Bruner points out: "a theory of instruction must be concerned with both learning and development and must be congruent with those theories of learning and development to which it subscribes."[39] Though a theory of instruction is less concerned with specific methods and materials, these matters are still involved, but only to the extent that they relate to a theoretical framework. The focus must be on the most effective means for facilitating learning.

Bruner establishes four components of a theory of instruction:

1. Predispositions. This refers to attitudes which facilitate the learning process--"learning in general or a particular type of learning. For example, what sorts of relationships with people and things in the preschool environment will tend to make the child willing and able to learn when he enters school?" (pp. 40-41).

2. Structure. By this, Bruner means the underlying principles of a subject, or, ways of thinking about the fundamentals of a subject.

3. Sequence. This refers to a developmental way of presenting whatever is to be learned.

4. Reinforcement. Bruner uses this term in the generally accepted sense--"the nature and pacing of rewards and punishments in the process of learning and teaching" (p. 41). But he does not intend the term to be taken in a behavioral psychology sense; rather, he refers to

> reinforcement in the cognitive sense of knowledge of the results of a learning trial which satisfies some inner need for such knowledge: "Learning depends upon knowledge of results at a time when and at a place where the knowledge can be used for correction . . . 'Knowledge of results' is useful or not depending upon when and where the learner receives the corrective information, under what conditions such corrective information can be used, even assuming appropriateness of time and place of receipt, and the form in which the corrective information is received" (p. 50).

A theory of instruction, then, because it <u>is</u> theoretically oriented, has greater applicability than a specific curriculum or instructional model. That is, it is more concerned with <u>how</u> something is learned than with <u>what</u> is learned. It is thus a more valuable guide to curriculum design because it is learning-centered rather than materials or methods-centered. As such, a theory of instruction is primarily geared toward the learning process, as Bruner emphasizes: "a theory of instruction seeks to take account of the fact that a curriculum reflects not only the nature of knowledge itself but also the nature of the knower and of the knowledge-getting process. . . . Knowing is a process, not a product" (p. 72).

I turn, finally, to a theory of instruction for the teaching and learning of composition. On the basis of all that I have discussed previously in this chapter--the principles and implications of learning theory, of language theory, and of composition theory and the insights derived from research in composition--I will formulate a representative theory of instruction which integrates both theory and research. As a frame of reference, I will use the four components of a theory of instruction proposed by Bruner. Though I am mainly concerned with the principles of a theory of instruction for composition, I cannot avoid occasionally referring to methods and materials.

What is most essential is that the use of particular methods and materials be informed by a theory of instruction which is solidly based on relevant theory and supported by research. In short, methods and materials abound in curriculum; what is needed is sound reasons for using them.

The first component of a theory of instruction for composition concerns predispositions toward learning. The goal here is to develop attitudes which facilitate the learning process in the most effective ways. In this regard, we may recall the powerful motivational forces at work in "meaningful learning" in general and in language learning in particular. In both instances, the learner is confronted with a problem-solving situation which creates its own inner motivation--to find a solution in a trial-error-feedback procedure. Thus, genuine problem-solving becomes a model for fostering learning predispositions. While I must admit that artificiality is difficult to entirely remove from the composition classroom, problem-solving situations such as the following can provide meaningful occasions for writing problems: "Can you write a story about your camping trip for the other kids in class to read?" or, "Can you write a script for a radio play that you and your classmates can produce?" or, "Can you polish up this story for other readers so we can put it in our class anthology?" or, "Can you make your audience draw appropriate inferences from a paragraph based on purely observable facts?" or, "Can you make this same point, but for the campus newspaper audience, who know less about your subject than your present audience?"

Problem-solving situations such as these focus on writing in a meaning-centered context (not an "exercise," but a real discourse);

they involve students in the dynamics of writing for real audiences; and, they initiate the cyclical model of skill acquisition that I presented on p. 135. This is precisely the kind of creative problem-solving Lundsteen refers to when she cites research supporting this approach to composition:

> The selective processes in creative problem-solving parallel some of the composing processes. Some parallels include the gathering and selection of details (observations or facts), the planning and selection of procedures, and the planning and selection of ways to evaluate the results, or consequences ("Did my 'funny' story make the group laugh?")
>
> In essence, children can apply what they know about productive problem-solving to composing in writing. They need that same quality of creative autonomy and that same selectivity that they have used before on unknown, undecided, and unmastered areas. . . . (p. 5)

Inherent in problem-solving are three principles which I cited throughout my examination of learning theory, language theory, and composition theory: risk-taking; decentralization; and meaningfulness.

Earlier in this chapter I discussed how conceptual risk-taking --readiness to expose one's ideas, however half-formed, to an audience--and how stylistic risk-taking--writing without fear of making mistakes in rhetorical, stylistic, or mechanical aspects of composing--can be promoted as a natural part of learning to write. Research support for conceptual risk-taking derives from Piaget's work with children and from Perry's work with older students,[40] both of whom found that intellectual maturity is closely related to one's willingness to expose one's ideas to the scrutiny of others. Furthermore, the research by Walter Loban in 1961 shows a close correspondence between conceptual and stylistic risk-taking. The results of the Loban Project are summarized in the Braddock Report as follows: "'Those subjects who proved to have the greatest power over

language . . . were the subjects who most frequently used language to express tentativeness. Supposition, hypothesis, and conditional statements occur much less frequently in the language of those subjects lacking skill in language.'"[41] The Loban Project makes clear the interrelatedness of both kinds of risk-taking: students who are willing to take conceptual risks also explore more writing strategies.

The research by Piaget, Perry, and Loban also supports the principle of decentralization: students who are encouraged to explore their ideas through talking and writing recognize both the validity and the limitations of their ideas, as well as the most effective means for expressing them.

In regard to meaningfulness, I have repeatedly asserted that meaning is at the heart of all learning--the desire to make sense of the world and of language and, in composition, the desire to transmit meaning to an audience. Once we remove the audience from the context of language use, we remove one of the most essential purposes for using language--to communicate. Furthermore, we know from the research conclusions cited by Lundsteen that audience figures centrally in the writing process: "Various audiences help to shape the style and content of writing" (p. 31). Lundsteen's conclusions are corroborated by the numerous studies I cited under Questions One, Fourteen, and Five in Chapter II, studies which show that when students act as audiences for one another's writing, their writing improves more than when no audience is provided.

Predispositions toward learning composition, then, can be generated by creating genuine and meaningful problem-solving situations in which risk-taking, decentralization, and meaningful language

use are encouraged. I would stress again that the learning model most compatible with problem-solving is trial-error-feedback, which provides for maximum operation of the principles of problem-solving.

The second component of a theory of instruction for composition concerns structure. Since I have proposed that the structure of composition is the nature of discourse (somebody-talking-to-somebody-else-about-something), a theory of instruction should be informed by the features of the nature of discourse. Of these features, the first is that discourse is a process of shifting roles among the three elements of a discourse occasion (writer-audience-subject). Second, the nature of discourse is both a thought and a language process, which means it integrates all language functions--writing, reading, speaking, and listening--with thinking in order to generate and transmit thought. Finally, it is an active process--active both in the generation of meaning and in the communication of meaning.

If we combine all of these features and relate them to research on instructional methodologies, we see that the most effective instruction model is the writing lab or workshop, where students engage in the shifting relations between writer-audience-subject; where they use language (hopefully) for real purposes--to get effects on an audience; where they integrate all language functions in the total process of writing; and where they are actively involved in the process of language production. The focus of the workshop is on the process of composing, be it during the actual writing, or during the discussion and revision of drafts.

We see research support for the workshop methodology in Lundsteen's comments on environment, inner motivation, audience,

drafts, and oral display. Additional research support derives from the numerous studies of the effectiveness of writing labs/workshops that I cited under Questions One, Fourteen, and Five in Chapter II.

The third component of a theory of instruction is sequence. In my earlier section on composition theory, I advocated a sequence in composition which moves from the personal to the public, from the less abstract to the more abstract, and from the self in relation to itself to the self in relation to the world. This sequence is based not only on the thinking of leading spokesmen in composition theory but also on models of intellectual, ethical, and emotional growth. Such a sequential model suggests an instructional strategy in which students begin writing about personal experiences and, through a series of transitional stages, move gradually to writing about more public concerns--that is, matters of a more experientially generalizable nature.

As I pointed out earlier in this chapter, many sound and convincing positions on this sequence are advocated by such writers as James Britton, Janet Emig, and James Moffett. But, since researchers have not investigated the effectiveness of sequential models in composition, a need for such research exists. Presently, however, the experiences of many writing teachers lends much support to the implementation of the sequence I am proposing here, as Mina P. Shaughnessy points out in a recent essay: "It would be difficult to argue against the accumulation of experience in basic writing that suggests autobiographical content, expressive forms, and write-talk or feel-think models of composing as most effective for beginning writers, even where the intent is to end up with formal academic writing."[42]

The final component of a theory of instruction concerns reinforcement. From both learning theory and language theory, we know that an environment is most conducive to learning when errors are considered as much a part of learning as are successes. This is particularly true in the composition classroom, where students continually learn from the mistakes they make. Most teachers, however, look on mistakes as something to be avoided, primarily because teachers too often focus exclusively on the written product rather than on the writing process. But, when mistakes are seen as a natural part of the writing process, not something to be avoided at all costs but rather something to learn from, then mistakes are vital--they define, as James Moffett says, "what is good":

> I think any learning psychologist would agree that avoiding error is an inferior learning strategy to capitalizing on error. The difference is between looking over your shoulder and looking where you are going. Nobody who intends to learn to do something wants to make mistakes. In that sense, avoidance of error is assumed in the motivation itself. But if [the student] is allowed to make mistakes with no other penalty than the failure to achieve his goal, then he knows why they are to be avoided and wants to find out how to correct them. Errors take on a different meaning, they define what is good. (pp. 199-200)

One aspect of reinforcement, then, involves reinforcing the value of mistakes in the learning process. Another aspect concerns evaluation. We know from learning theory and from language theory that positive evaluation is the most effective strategy for developing positive attitudes toward learning, particularly if we seek long-range results, such as the development of writing competency. This is not to say that there is no place for negative criticism in the composition classroom, but only to suggest that the power of positive evaluation be observed and implemented most effectively. Students

with a history of writing problems most often have had their weaknesses drilled into them while their strengths have been ignored. Depending upon a student's writing history and his purpose for writing a particular piece, a careful balance of positive and negative criticism may be the most effective formula.

It is clear from research in composition that positive evaluation is more effective in generating and maintaining positive attitudes toward writing. Also, students learn more from their mistakes when such mistakes are treated positively--as a perfectly normal part of learning to write. As Lundsteen remarks in her sixth point--Positive response--"Teachers help children by looking for strengths and pointing them out" (p. 3); and, as I pointed out under Questions One and Fourteen in Chapter II, studies done with older students also support the value of positive evaluation of writing. The conclusions reached by Thomas C. Gee in his 1970 study of evaluation procedures used with eleventh graders summarizes well the research basis for my proposal that teachers make greater use of positive evaluation (while not excluding negative evaluation):

> Students seem to have more patience in working on their compositions if they think they will be rewarded for what they do well and if they are encouraged along the way. This study indicates that to assist the building of positive attitude, teachers must give a pat-on-the-back for the improvements that the student makes. To withhold praise until the student has achieved an ideal performance is educationally unsound. It is an easy thing for teachers to mark a set of papers by correcting errors in grammar, usage, spelling, and punctuation and by making suggestions for improving organization, transition, and clarity. It is often somewhat harder to find several points to commend, but students need encouragement and rightly merit praise for things well done. Their continued improvement apparently comes from recognition of what they do well in addition to what they do not do so well. Certainly their confidence and pride in their efforts, and their enjoyment of writing, are enhanced by

> a teacher's assurance that they are beginning to master the skills required for good writing.[43]

The form of evaluation is another matter which bears on reinforcement. From the research I cited under Questions One and Fourteen in Chapter II, we know that certain forms of feedback on student writing are more effective than others. For example, Stiff (II, p. 54) found that combined marginal and terminal comments were more effective than either marginal or terminal comments alone in having long-range positive effects on student attitudes toward writing and possibly on writing performance. Furthermore, Sweet (II, pp. 54-55) found that spontaneous comments made by teachers on student writing effected a significant improvement in student performance over an extended period of time. Similarly, Adams (II, pp. 55-56) found that students were more enthusiastic when their themes were evaluated primarily on the basis of thoughts and ideas.

These studies suggest that the best form of evaluation is the written commentary which focuses primarily on the content of compositions. The efficacy of simply grading compositions finds little support in the research, as Lundsteen points out: "Rating and grading have no part in unifying writer and audience" (p. 3). But since grading is such a permanent fixture in education today, this presents a dilemma: how do teachers grade student writing? Perhaps the best alternative to grading individual compositions is the procedure of filing papers in a portfolio which Moffett proposes: after students have completed work on a composition, their writing goes "into folders for each student and when the teacher has to evaluate student work for the benefit of administration, he makes a general

assessment of the writing to date. No grades are given on individual papers" (p. 198).

Though researchers have not investigated the effectiveness of grading on a portfolio basis, there are strong indications from composition testing methodology that such a procedure is necessary when we consider the variability in student writing performance--that is, no one writes well at all times. This variability and its implication for testing are brought out in the Braddock Report when the authors remark that "if an investigator wishes to measure individual students' improvement in writing, he should provide for at least two writing occasions as a pretest, at least two as a post-test, and count the rating only of the better composition on each occasion. If three writing occasions are used for each test, it may be wisest to average the ratings of the two best papers, but more research needs to be done on this possibility."[44] Furthermore, a number of studies cited in the Braddock Report's section on the writer variable (e.g., the Kincaid Study) provide evidence of fluctuation in students' composition abilities over a number of writing occasions (see Braddock Report, pp. 6-7). Grading on a portfolio basis, then, would make allowance for composition fluctuation while it would also implement an evaluative measure which is supported by research methodology.

One final point to make with regard to reinforcement concerns the intrinsic reinforcement inherent in language use. That is, when we speak to someone about something, we can gauge the success of our utterance by whether or not our listener has understood, has been moved, has been convinced by it. This is equally true when our utterance is written, which suggests that the mere fact of audience

feedback is the most natural means of reinforcement--positive or negative. In the writing lab/workshop I have proposed here, reinforcement is built in: a student can make his own evaluation by simply heeding feedback from his audience. If the student's audience consists of peers, then powerful motivational and correctional benefits accrue to the learning situation. The effectiveness of peer evaluation is well put by W. H. Auden, in The Dyer's Hand, when he discusses using apprentice poets to comment on each other's work:

> The apprentices do each other a further mutual service which no older and sounder critic could do. They read each other's manuscripts. At this age a fellow apprentice has two great virtues as a critic. When he reads your poem, he may grossly overestimate it, but if he does, he really believes what he is saying; he never flatters or praises merely to encourage. Secondly, he reads your poem with that passionate attention which grown-up critics only give to masterpieces and grown-up poets only to themselves. When he finds fault, his criticisms are intended to help you improve. He really wants your poem to be better.[45]

The instructional model which derives from this theory of instruction would be a writing workshop where students are engaged in solving writing problems which present meaningful challenge and create a need to extend writing skills. In the writing workshop, students actively participate as both writers and audiences; they encounter real purposes for writing--to get effects on an audience--in a genuine give-and-take communicative context; and they integrate all language functions in the total process of writing, from prewriting to writing and editing. Students write in a sequence which starts from an autobiographical base and moves to writing of a more publicly generalizable nature. Within the sequence, students gain experience with many forms of discourse by writing in a variety of contexts and for a variety of purposes. Students learn to write in an environment

which develops positive attitudes toward acquiring writing competence by encouraging the exploration of thought and language through reduction of threats to conceptual and linguistic experimentation by building on writing strengths; by recognizing the powerful learning value of errors; and by evaluating student writing on the basis of writing portfolios.

I have concluded this chapter with a theory of instruction for the teaching and learning of composition which is based on relevant theory and supported by research. I must emphasize that this is a theory of instruction, not the theory of instruction. I have sought to present a way of formulating a theory of instruction which is soundly based on insights from learning theory, language theory, and composition theory and research. My firm belief is that the composition curriculum must be based on such a theory of instruction--one which derives from the most recent available knowledge. For too long, teachers and curriculum designers have made decisions based on logic, intuition, and experience alone while they have ignored significant theory and experimentation in many areas which bear directly on their work with students.

CHAPTER V

CONCLUSION

Underlying all that I have written so far are two major charges to the profession of English. The first is that the field of composition must be considered a serious intellectual discipline in itself. Writing is a highly complex activity which for too long has been taken for granted as something almost anyone can teach without special study or training. English teachers who claim successful writing programs seldom provide informed rationales for their success; this is not to slight these teachers' success in any way, but merely to cite a need for understanding why some writing programs are successful. As Frank Smith notes in Comprehension and Learning, "many teachers have great insights into instruction, but are painfully unaware of the theoretical justification for their intuitions."[1] Those teachers who admit continued frustration and failure in the teaching of composition join their fellows in the search for better methods, better textbooks, better tricks and ploys, all the while wondering why their students can't learn to write the way methods/textbooks/experience/intuition/logic say they should.

Yet, as I have tried to point out here, composition can and should be approached systematically as a serious intellectual discipline. In the March, 1977, Change, E. Michael Walsh states that

since we know little about writing, "we live in a world of band-aids and hocus-pocus." According to Walsh, the reason for this is our failure to examine fully the skill of writing:

> The root cause of this situation is not that writing is too complex an activity to be examined but that few have ever thought of examining it. The English faculty's long-standing antipathy to scientific experimentation (labeled "educationist" and therefore bad), its emphasis on literature, and its de facto denigration of expository writing have all resulted in the assumption that it is not possible to examine writing with the systematic methods applied to most other phenomena.[2]

When composition is seen as an intellectual discipline in its own right, then the wealth of insights available from research and theory can be brought to bear on our understanding of what happens when a student learns to write and what should happen when a teacher teaches writing. Today, the call for better results and more systematic knowledge on the part of writing teachers and directors of writing programs comes from many directions. The media and the general public mount the familiar bandwagon with their outcries over apparent declines in "basic skills." In our professional journals, we see increasing demands for more informed rationales for writing practices and programs. In 1974, for example, David E. Eskey wrote in a College English essay that "We should, as responsible professionals, thus insist that no English teacher be turned loose in the classroom until he has mastered at least the fundamentals of social and regional dialectology. Such a teacher will know better than to try to sell his students a single brand of English as the one and only English for all times and places. He will deal with the many dialects of the language, and the natural shifting of styles within dialects, as the typical situation it is."[3] Another example appears

in the May, 1977, issue of College Composition and Communication, in which Myrna J. Smith insists on composition programs which are solidly based on learning theory:

> However, in our search for new and better ways of teaching composition, we must go beyond the suggestions of just anyone's successes and ground our teaching in theories of knowing. As the psychologists and psycholinguists refine the theories of epistemology, we teachers must be ready to apply those theories to classroom practice. In our return to basics, let's be sure those basics have solid footing in what is most basic of all: how one learns.[4]

My second charge to the profession is that composition teachers must be broadly trained to fulfill their professional responsibility and to keep abreast of the significant developments in their field--that is, they must be specifically trained as writing teachers through preparation which incorporates background in related research, theory, and pedagogy and which is accompanied by experience in teaching writing. In the December, 1976, College Composition and Communication, Carl Klaus asks,

> shouldn't we demand of ourselves and of those who follow us in our calling not only the ability to read and write proficiently but also a form of training, a kind of knowledge, that uniquely fits us to teach writing, as surely as medical school prepares doctors to practice medicine, or law school prepares lawyers to practice law? If we genuinely believe in the dignity of our calling, then we should assure it the dignity that can only come from our being truly professional about it. And I cannot for the life of me imagine any other way of being professional about it than to know as much about writing as we can.[5]

Can we, as a profession, continue to justify sending out writing teachers whose background is mostly in literature and whose preparation in composition, if any, consists of having taught writing, with little or no training in the theoretical, research, and pedagogical foundations of the discipline? I believe that we

cannot. As Walsh states, "Composition should be as important a subject for research as literature, possibly even more important given the large percentage of an English department's time devoted to teaching it."[6] In this regard, I must reaffirm two of the recommendations to the profession made by the 1974 Carnegie Conference on the State of Undergraduate English:

> --That despite the centrality of this responsibility [for effective instruction in writing] in today's colleges and universities, teachers of English have received their formal instruction in literature and have ordinarily received inadequate (if any) instruction in the teaching of writing.
>
> --That because the profession has not been educated to meet its responsibilities in the area of writing, it has neither a full understanding of the difficulties students have in mastering writing, nor fully effective methods for helping them become better writers; that it often, in fact, employs methods detrimental to the development of good writing.[7]

Clearly, these two charges to the profession are reciprocal. When composition is recognized as a serious intellectual discipline in its own right and when the training of English teachers includes specific preparation in composition and related fields, then composition programs at all levels can be firmly rooted in the most significant developments in research and theory and be implemented by people who know why they teach as they do and why their students learn as they do.

NOTES

NOTES

INTRODUCTION

[1]Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer, Research in Written Composition (Urbana, Ill.: National Council of Teachers of English, 1963).

[2]Henry C. Meckel, "Research on Teaching Composition and Literature," in Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally, 1963).

[3]J. Stephen Sherwin, Four Problems in Teaching English: A Critique of Research (Scranton, Pa.: International Textbook Company, 1969).

[4]Richard Braddock, "English Composition," in Encyclopedia of Educational Research, ed. R. L. Ebel (New York: Macmillan, 1969).

[5]Nathan S. Blount, "Research in Teaching Literature, Language and Composition," in Second Handbook of Research in Teaching, ed. R. M. W. Travers (Chicago: Rand McNally, 1973).

[6]Help for the Teacher of Written Composition, ed. Sara W. Lundsteen (Urbana, Ill.: ERIC Clearinghouse on Reading and Communication Skills, 1976).

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[1]Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer, Research in Written Composition (Urbana, Ill.: National Council of Teachers of English, 1963), p. 1. Further references to this book will appear in my text.

[2]The most comprehensive summary previous to the Braddock Report was R. L. Lyman, Summary of Investigations Relating to Grammar, Language, and Composition, University of Chicago Supplementary Educational Monographs, No. 36 (Chicago: University of Chicago, 1929).

[3]Nathan S. Blount, "Research on Teaching Literature, Language and Composition," in Second Handbook of Research in Teaching, ed. R. M. W. Travers (Chicago: Rand McNally, 1973), p. 1084.

[4]Ibid., p. 1088.

[5]Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1966). (First published in Handbook of Research on Teaching, ed. N. L. Gage [Chicago: Rand McNally, 1963]). Further references to this book will appear in my text.

[6]Henry C. Meckel, "Research on Teaching Composition and Literature," in Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally, 1963).

[7]J. Stephen Sherwin, Four Problems in Teaching English: A Critique of Research (Scranton, Pa.: International Textbook Company, 1969).

[8]Richard Braddock, "English Composition," in Encyclopedia of Educational Research, ed. R. L. Ebel (New York: Macmillan, 1969).

[9]See note 3.

[10]Help for the Teacher of Written Composition, ed. Sara W. Lundsteen (Urbana, Ill.: ERIC Clearinghouse on Reading and Communication Skills, 1976).

[11]Glenn H. Bracht and Gene V. Glass, "The External Validity of Experiments," American Educational Research Journal, 5 (1968), 265.

[12]Richard E. Snow, "Representative and Quasi-Representative Designs for Research on Teaching," Review of Educational Research, 44 (1974), 265.

[13]See note 11. All further references to this article will appear in my text.

[14]Clinton I. Chase, Measurement for Educational Evaluation (Reading, Mass.: Addison-Wesley, 1974), pp. 202-203.

[15]Ibid., pp. 56-57.

[16]Norman E. Gronlund, Measurement and Evaluation in Teaching, 3rd ed. (New York: Macmillan, 1976), pp. 81-82.

[17]Richard E. Lindeman, Educational Measurement (Glenview, Ill.: Scott, Foresman, 1967), p. 37.

[18]Gronlund, p. 93.

[19]Ibid.

[20]Ibid., p. 84.

[21]Ibid., p. 553.

[22]Standards for Educational and Psychological Tests (Washington, D. C.: American Psychological Association, Inc., 1974), p. 26.

[23]Chase, p. 74.

[24]Standards, p. 48.

[25]Gronlund, pp. 114-115.

[26]Ibid., p. 114.

[27]Standards, p. 50.

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