

TWO MODES OF TEACHER RESPONSE
TO STUDENTS WRITING TO LEARN
IN RESPONSE JOURNALS

by

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B.A., The University of British Columbia, 1973

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES
(Language Education)

We accept this thesis as conforming
to the required standard

UNIVERSITY OF BRITISH COLUMBIA

July 1992

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ABSTRACT

Although student response journals have been demonstrated to be effective aids to learning, primarily through case study reports and articles, there is little evidence to show the most effective ways for teachers to respond to what students write in their journals. The current study examines the influence of two differing modes of teacher response on writing fluency, skills and attitudes toward writing of grade-nine junior high school students. In addition, the study investigates the effects on participating teachers of using response journals in subject area classrooms.

This study is a controlled experiment in which grade-nine students were randomly assigned to experimental and control classes in English and science. The treatment students received open, positive, encouraging comments by subject-area teachers on their response journals in the twelve-week school term during which the experiment took place. Control students received evaluative, corrective comments. An attitude measure, administered both pre- and post-experiment, was used to investigate student attitudes toward writing over all and on four sub-categories (source, audience, response and purpose). In addition, a pre- and post-instruction essay was given in order to ascertain the effects of treatment on writing growth overall and on two subscores, one for content and one for mechanics. Throughout the duration of the experiment students maintained response journals which were analyzed for changes in attitude using a chronological chart

consisting of a core of fifteen common features perceived to be characteristic of good journals. Participating teachers were administered pre- and posttest interviews in order to elicit changes in their attitudes toward the use of response journals. As well, they were requested to maintain individual journals as a record of their impressions throughout the experiment.

Results did not favour expected outcomes. The differences found were not only non-significant but also frequently in the wrong direction with the control group exhibiting more positive growth than the experimental group. A contaminating factor, failure to carry out the procedures as described, seems the most tenable explanation for this study's failure to reject the null hypothesis.

A handwritten signature in cursive script, appearing to read "J. Belanger".

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ACKNOWLEDGEMENTS

Sincere gratitude is expressed to Dr. J.F. Belanger, my advisor, for his encouragement, guidance and selfless generosity in the giving of his time and advice to this project. To the other committee members, Dr. Marion Crowhurst and Dr. Ian Housego, I extend my sincere thanks for their advice and guidance.

I would also like to acknowledge Dr. Walter Boldt and Dr. Bob Conry for their comments on the design of the study and their assistance in the statistical analysis of the data.

To the numerous others who made contributions to the study, a sincere thank-you. In particular, I would like to express appreciation to the following people:

Troy Brown, for his assistance in creating and loading the data base for the statistical analysis of the student response journals; and

Ed Clifford for proofreading both throughout the project and finally, and for his assistance with the construction of the data tables.

Finally, I wish to thank my husband, D'Arcy MacKay, both for his participation as a teacher in the project and for his patience, support and encouragement throughout the completion of this thesis.

CHAPTER ONE

INTRODUCTION AND IDENTIFICATION OF THE PROBLEM

Introduction of the Research Problem

Nothing is known about the effects of feedback during prewriting activities. Observational and experimental studies should be extremely useful in adding to knowledge about the nature and effects of feedback of this kind (Hillocks, 1986, 241).

This study hypothesized that groups of experimental students who were responded to in writing with warm, accepting written comments (open-process response) by their teachers in response journals would, as a consequence, show significantly greater growth in writing skill than the control groups did. The control groups were responded to with directing, critical written remarks (traditional response) by their teachers. It was further hypothesized that these two modes of differing teacher response would result in significant changes in attitudes toward writing, the subject area and/or the teacher with the results favouring the experimental groups.

Educators--in particular English teachers--have become increasingly concerned that for the most part writing in school has been limited to notetaking, answering study or essay test questions and copying. Applebee's (1981) study indicated that only three percent of writing done by secondary school students was of more than a paragraph in length. Furthermore, of all the writing students did, in all subject areas, less than one half of one percent could be termed

'expressive' (Britton, 1975). Often no vehicle is provided for students whereby they can discover meaning in texts for themselves without fear of evaluation. Their initial responses are the final product: perfunctory exercises in "...academic tennis (returning the ball of information served by the teacher)" (Marland, 1977, 148). The evaluative nature of such writing is also of concern; its audience is that of teacher examiner (Applebee, 1981). The traditional mode of teacher response to such writing is corrective, directional and/or informing with the emphasis placed on correctness of surface features such as mechanics rather than content. The effectiveness of such final-product comments is negligible according to available research (Hillocks, 1986).

How does one help students to learn and understand the informative prose that is the norm for most textbooks and reading requirements in subject areas other than English? How does one help students explore their own personal connections with a piece of literary text before handing an essay in to be graded? Response journals provide a vehicle whereby students can explore new knowledge, verify old knowledge, agree or disagree on new meanings (Jacobs, 1978). They provide opportunities for articulating connections between what the reader already knows and new information without fear of evaluation.

Case study research has indicated the value of response journals as vehicles for learning and in changing students' attitudes toward writing (Fulwiler, 1987; Gere, 1985; Peyton

et al., 1988). Such case study research has laid the foundation for this experimental study. To extend and build on this knowledge, this study will explore the effects that the nature of a teacher's written response to students' writing to learn in response journals has on a) students' attitudes toward various aspects of writing, b) students' attitudes toward the subject area teacher, c) students' writing ability and d) students' approaches to problem solving in science.

Purpose of and Rationale for the Present Study

This study is a controlled experiment in which the experimental groups received treatment in writing response journals posited to result in different outcomes from those of the control groups. The purposes of this research are fourfold:

- 1) to examine the effects of two modes of teacher written response (open process/traditional) to students writing to learn in response journals in English (specifically literature) and science on the attitudes of ninth-graders toward source, audience, response and purpose of/for writing,
- 2) to examine the effects of two differing modes of teacher response (open process/traditional) to students writing to learn in response journals in English (specifically literature) and science on the attitudes of ninth-graders toward writing, the response journal itself, and/or the teacher,

- 3) to examine, in particular, the effects of two modes of teacher written response to students writing to learn in response journals on the writing performance of ninth-graders as judged by the overall quality of their essays, and the sub-categories of content and mechanics.
- 4) to investigate the effects of two modes of teacher written response to students writing to learn in response journals on students' approaches to solving a problem in science.

Research Questions

Part A of the study, the survey on attitudes toward writing, is a Likert-type scale that consists of twenty-nine statements about writing. The same form is used as both a pre- and posttest measure. The twenty-nine statements comprised four categories: attitudes toward source, audience, response and purpose (definitions are located in Appendix N) of/for writing. Part A of the study is informed by the following research question:

1. Do students who have been responded to in writing by their subject area teacher using the open-process mode of response (the experimental groups and/or its subgroup of Native Indian students) show more positive attitudes toward writing according to a) source, b) audience, c) response, and/or d) purpose than students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control groups and/or its subgroup of Native Indian

students) as measured by a pre- and posttest attitude survey?

Part B of the study is a chronological chart kept for each student in all four groups. It is a record of possible reflections of change in attitude toward a) writing, b) the response journal itself, and c) the subject area teacher. The chart is a record of how frequently each student used the following modes and formal features in his/her response journal. It is believed that the more often a student made use of these modes and features, the greater he/she valued some aspect of writing.

Modes:

- i. Observations, interpretations, evaluations.
- ii. Insights, understanding.
- iii. Information.
- iv. Revisions.
- v. Creative expressions.
- vi. Questions.
- vii. Digressions.
- viii. Confidences.
- ix. Frustrations.
- x. Speculations.
- xi. Desire to know more.

Formal Features:

- xii. Frequency of entries.
- xiii. Length of entries (number of words).

xiv. Self-sponsored entries.

xv. Organization and neatness.

These modes and formal features were tabulated once a week over the course of the twelve-week treatment period. The two central questions here are:

1. Do students who have been responded to in writing by their English teacher using the open process mode of response (the experimental group and/or its subgroup of Native Indian students) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group and/or its subgroup of Native Indian students)?

2. Do students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group and/or its subgroup of Native Indian students) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group and/or its subgroup of Native Indian students)?

Part C of the study has as its dependent variable the writing quality of the compositions written in English classes, as determined by the ratings of judges. The ratings are based on two formal, in-class, pre-and posttest measures (in-class essays). The writing quality variable consists of overall scores comprised of two subscores: a) content and organization, and b) mechanics. The prewriting components, in preparation for the in-class essays, are teacher instruction in purpose and structure of essay writing and brainstorming for content of topic choices. The measures were conducted in a typical test-like situation with no verbal interaction allowed. One four-by-six file card containing student notes for essay content and structure was allowed for each student for each measure. The critical question here is:

1. Do students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group and/or its subgroup of Native Indian students) show greater gains in writing skill overall and/or in a) content and organization of their writing and b) the mechanics of their writing as measured in the posttest (formal, in-class essay) than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group and/or its subgroup of Native Indian students)?

The dependent variable in Part D of this research is the number of observations made in science experiments as counted

by judges. The numbers are based on two in-class science labs/experiments, pre- and posttest measures. The central question here is:

1. Do students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group and/or its subgroup of Native Indian students) show greater gains in their approaches to solving a problem in science as measured in the posttest than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group and/or its subgroup of Native Indian students)?

Part E of this study is a teacher interview conducted by the researcher with both participating teachers (English and science) that consists of nineteen questions about attitudes and uses of writing in subject area classrooms. The same interview was used as both a pre- and posttest measure. The participating teachers (English and science) maintained individual journals in which they recorded their attitudes toward the use of response journals and the two modes of teacher response (open process/traditional) in both their experimental group and control group. The following research questions are central to Part E of this study:

1. Does the use of response journals affect teacher attitudes toward the types of writing they use in their classrooms?

2. Does the use of two modes of teacher response (open process/traditional) by the same teacher affect changes in attitude toward the use of either response in the teacher?

The hypotheses, both directional and null, were constructed for each of the research questions. Since they constitute ten pages in the body of the thesis, to save space they have been placed in Appendix Y.

Definition of Terms

For the purpose of this study key terms are defined as follows:

- a) 'Response journal' is "...a responsive form of writing in which the student and teacher carry on a conversation over time, sharing ideas, feelings and concerns [about what the student is learning] in writing" (Staton, 1987, 47).
- b) 'Traditional Teacher Response' is directive, informing or corrective, not unlike Hillocks' (1986) presentational mode of instruction.
- c) 'Open-process Teacher Response' is student-centered written responses that are sometimes personal but always positive and non-threatening to the ideas expressed (Fulwiler, 1987).

Limitations

The conclusions that can be drawn from this study are limited by the following considerations:

1. **Teacher bias.** It was believed that, at the onset of the experiment, because both the science and English teachers had consented to participate in this study, it might show a willingness to incorporate writing in their classroom instruction. Such willingness at the outset might have indicated a bias toward writing to learn and resulted in a more enthusiastic and highly motivated approach to the treatment groups receiving open-process response.¹

2. **Instrumentation.** The potential bias in self-report measures is a problem with no satisfactory solution (Borg and Gall, 1989). A number were used in this study: a) an attitude measure, b) teacher interviews, and c) teachers' logs. To a certain extent, the response journals themselves, can also be regarded as self-report measures.

Therefore, this study cannot state with certainty to what degree subjects' responses reflect their true attitudes. Neither could this study control for the 'masking' by the science teacher that hid his true attitude.

3. **Generalizability.** Because the population of the junior high school from which the sample is being drawn is not similar on one critical feature--degree of multiethnicity--to the two other junior highs in the same school district,

¹ The opposite proved to be true to varying degrees in the case of both teachers. In the case of the science teacher, no science data could be analyzed because this teacher failed to fulfill the expectations of the experimental design. In the case of the English teacher, data may have been contaminated by his interpretation and delivery of the treatment which was different than that envisioned by the research design.

generalizations can be made only to the population of this particular school.

"The P & R Writing Attitude Form" was adapted and improved to meet the needs of this study. As a result, the generalizability (of the findings regarding attitudes) to other studies is also difficult.

4. **Loss of subjects.** Because subjects were lost prior to the treatment but after randomization procedures had taken place and during the course of the experiment, the reduction in sample size made it difficult to find statistically significant differences between the experimental and control groups. Furthermore, the initiation of an alternate program that included most Native Indian students in the grade-nine population from which the subjects were drawn resulted in the loss of this subgroup from the experiment.

5. **Loss of data.** Due to the lack of cooperation of one of the teachers, data were not collected so the power of the statistical analysis was greatly reduced.

6. **Extraneous variable--course content.** The chemistry unit that was taught during the course of the experiment may have been an inappropriate match for the integral measure used (response journals).

In the English classes, with the exception of the response journals, the course content was traditional (i.e., chapter questions, quizzes, and tests). In the case of the treatment group, this may have been a confounding factor.

CHAPTER TWO

THE RELATED RESEARCH

The process approach to the teaching of composition has been accepted as the new norm both in theory and, to a lesser degree, in the classroom. As part of this approach, the use of student response journals has also been firmly established as a vehicle for writing to learn. Case study research about the use of response journals applauds the success of such a vehicle. However, few of the investigations of written composition inquire into the relationship between what a student writes in his/her response journal and the ensuing teacher comments.

The current study pursues five strands of inquiry: a) the effects of two modes of teacher written response on students' attitudes toward writing, b) the effects of two modes of teacher written response on students' writing skills, c) the effects of two modes of teacher written response on students' abilities to solve science problems, d) the effects of two modes of teacher written response on the above variables for a specific subgroup--Native Indians, and e) teacher attitudes toward the use of response journals in their content areas. The review of relevant research incorporates findings from these areas.

Because the paradigm shift in research on composition from product to process has resulted in questions and concerns fundamental to any major shift in perspective, an overview

attempts first to place this study in an historical context and second to outline some of the concerns stemming from the change which have given this study direction.

Once this context is established, the review of the research focuses on the more specific components--the effects of teacher response on attitude, writing performance and potential interactions between approach and cultural variables--related to this study.

Composing: The Historical Context

Writing as composing is a relatively new subject, less than a century old (Zemelman and Daniels, 1988). In colonial schools writing used to mean handwriting; the composition by students of original stories, poems or reports thought unnecessary. Unfortunately, the methods of evaluating composition's predecessors (penmanship, spelling, grammar and rhetoric) have been inherited by it. Concern with superficial features and correctness of form were appropriate in the evaluation of such disciplines. That teachers have marked intensively for these same qualities in composition features can be thus accounted for historically. "To us, intensive correction is the standard, responsible professional way of responding to a piece of imperfect student work" (Zemelman and Daniels, 1988, 205).

The so-called process model, viewed in this context, far from being a radical or partisan innovation, is simply the next developmental stage. We certainly needn't be intimidated by the weight of one paltry century of tradition (Zemelman and Daniels, 1988, 216).

But does the traditional approach work? The research and literature suggest that it does not. As the findings from the National (U.S.) Assessment demonstrate (in Zemelman and Daniels, 1988), as the research studied by Hillocks (1986) and others illustrate and as the case studies presented by teachers confirm, such an approach to the teaching and evaluation of writing not only does not work but may have the opposite effect.

The Traditional Paradigm of Writing Instruction

The traditional method of writing instruction emphasizes expository writing, neglects creativity and makes the development of a detached style its main objective (Applebee, 1981; Britton, 1975; Marland et al., 1977; Raphael et al., 1989). The dominance of impersonal writing in school can be attributed to "...an implicit belief that progress in writing is associated with movement away from personal language toward more abstract and impersonal formulations" (Britton, 1975, 8).

The adherents of the traditional paradigm view writing courses as 'service courses' and 'skills courses'. Such a view ignores the importance of writing as a tool for learning and means of development (Britton, 1975; Fulwiler, 1987; Marland et al., 1977; Moffett, 1968; Torbe, 1980).

For the most part, composing in schools has been product-oriented and as a result the teaching of writing and its evaluation have been based on the finished product. Students have been repeatedly shown what is wrong with their writing, error monitoring the primary function of teachers. The effectiveness of such final-product comments is negligible according to available research (Hillocks, 1986). "The writing is not seen as *part* of the learning process but as something which happens *after* the learning" (Torbe, 1980).

The traditional method of writing instruction emphasizes expository writing and ignores the developmental nature and potential of writing to learn by asking students to confine the audience and purpose for their writing to teacher and evaluation (Applebee, 1981; Raphael et al., 1989). The restrictive nature of teacher/examiner as audience

...distort[s] the student's focus on a deeper involvement with the central ideas, placing emphasis instead on the teacher's desire to elicit the kind of paper he or she might write (Heller, 1989, 211).

That the traditional product paradigm does not meet the goals and expectations of writing literacy is clear. The question is, "Why?". Maxine Hairston (1982) in her essay "The Winds of Change: Thomas Kuhn and the Revolution in the Teaching of Writing" states, among other problems that it doesn't address certain crucial aspects of writing: a) content over form, b) the recursive nature of composing and c) the fact that instruction in writing is more than instruction in

editing. In Shaughnessy's (1982) view, it doesn't enable us to "understand what goes on in the internal act of writing... and to intervene during the act of writing if we want to affect its outcome" (in Hairston, p. 84). As a result this decades-old approach broke down. Product-based research in composition is being replaced by process based investigation.

To eliminate the evaluative, judgemental and restrictive factors as aspects of audience for at least some of student writing frees students to search for their own meanings in their own language (Britton, 1975; Fulwiler, 1987; Johnston, 1983; Marland et al., 1977; Moffett, 1968).

Writing Across the Curriculum

The goals and aims of writing across the curriculum are difficult to argue with. At its theoretical base is the belief that writing as a form of language is not just a form of communication but an important tool for learning (Applebee, 1984; Fulwiler, 1987; Gere, 1985; Langer and Applebee, 1987).

Writing across the curriculum implies that subject specialists will teach their students the specialized forms of writing used in their subject areas. Thus, all teachers become teachers of writing. "In schools where writing is used across the curriculum, students' writing performance grows strongly" (Zemelman and Daniels, 1988, 28).

Even though the objectives of "Writing Across the Curriculum" are educationally sound, available evidence suggests that the movement has failed to be implemented to any significant degree. Nowhere is this more glaringly stated

than in Arthur Applebee's Writing in the Secondary Schools: English and the Content Areas (1981). The majority of writing tasks that students undertake in the secondary schools are limited to notetaking, answering study or essay test questions and copying (Applebee, 1981; Britton, 1971; Marland, 1977). Applebee's study (1981) indicated that of all the writing students did in all subject areas less than one half of one percent could be, in Britton's (1975) term, called 'expressive'. Writing as a tool for learning and means of development is essentially ignored (Britton, 1975; Fulwiler, 1987; Marland et al., 1977; Moffett, 1968; Torbe, 1980).

The Applebee report can be considered a "best case" study for the writing since only those teachers recommended by their principals as 'superior' were involved. In the year of observations spent in classrooms across the content areas, forty-four percent of observed time was spent in writing. Of this, twenty-four percent was spent on mechanics and twenty percent on recording information. Of this twenty percent, seventeen percent was spent on notetaking. Actual writing of more than a paragraph in length was observed as two percent of class time. Further evidence suggests that even when teachers are willing to incorporate writing as a means of facilitating learning, its implementation is not easily integrated (Langer and Applebee, 1987). When implemented it is often a facade behind which the "static and insular" ways (Rose, 1981, 65) of previous mechanistic approaches to the teaching of writing hide.

Since Applebee's (1981) landmark study eleven years ago, articles have been written to extend the argument for promoting writing in the content areas (Applebee, 1984) and texts published to aid teachers in the practical application of writing theory in their content areas (Gere, 1985; Moore et al., 1988). However, the literature reveals little to suggest that the movement has been implemented to any greater degree than it was before the Applebee (1981) study.

The Writing Process and the New Paradigm of Writing Instruction

Hairston (1982) sees this "...traditional prescriptive and product centred paradigm that underlines writing instruction...beginning to crumble" (p. 82).

Through controlled and directed research studies on writers' composing processes, we are beginning to find out how people think as they write. The new paradigm for teaching writing is based on these findings and focuses on the writing process as well as the product.

We know that competent writers do a great deal of planning (Hayes and Flower, 1980; Matsushashi, 1981; Perl, 1979; Pianko, 1979), that this planning involves a great deal of production time (Matsushashi, 1981), and that planning can take place at any time during the writing process (Calkins, 1979; Emig, 1971; Scardamalia, Bereiter and Goelman, 1982).

Donald Murray estimated that "...70 to 85 percent of the writing process is prewriting of some type" (in Kelly and Small, 1985, 2). Hayes and Flower also show the importance of

prewriting activities in the form of generating ideas prior to formulating a plan, outlining or making a statement. This stage in the writing process, the generation of ideas, is the focus of this study, although it cannot rightly be called a stage as

...usually the writing process is not linear, moving smoothly in one direction from start to finish. It is messy, recursive, convoluted, and uneven (Hairston, 1982, 85).

The New Paradigm: Talk-Write Connections

Interrelationships between writing development and the development of oral skills have often been discussed by philosophers and linguists. We learn by talking (Sapir, 1961; Vygotsky, 1978).

It is through the enormous variety of dialogue with others that we gather together the linguistic resources to dialogue in our heads; there is nowhere else to get them from. Restrict the nature and quality of that dialogue and ultimately you restrict thinking capacity (Rosen in Barnes et al., 1971, 126).

By talking to others we can explore new knowledge, verify old knowledge, agree or disagree on new meanings (Barnes et al., 1971). In this sense, talking is important but the social psychologist, Vygotsky (1978), sees writing as more directly connected to inner thought than speech. In speech, conversation is 'other directed' and 'unconstrained', the focus of thought directed by the response of another. "In written dialogues, the closeness of the writing to one's thoughts is retained" (Staton, 1987, 55).

Vygotsky implies that the function of talk as exploration can be focused through "...personal, near-to-speech reflective writing...and in addition provide opportunities for sustained reporting and reflection which talk does not" (Martin, 1983, 150). Moffett (1968) supports this statement in his belief that written down 'monologue' forms the best basis for writing. Such a 'naturalistic' approach to the teaching of writing is more focused on the 'cognitive growth of the learner'. Skillful oral language development does not take place through intensive correction of faulty usage patterns. As parents and teachers we tend to listen and try to make sense of the content of the utterance. Content rather than form is valued (Zemelman and Daniels, 1988). Providing opportunities to write in a 'speech-like' context can achieve this purpose and can effectively provide a bridge to the performance of more formal writing tasks required in the upper levels of secondary schools and post-secondary learning institutions (Staton et al., 1988; Yinger, 1985).

...[D]ialogue journal writing is one powerful means of bridging the gap between the oral language competence that students already possess and the competence necessary for writing extended prose unassisted (Staton et al., 1988, 91).

The New Paradigm: Read-Write Connections

Many students read and write with great difficulty, especially in the content areas. How does one help students to learn and understand the informative prose that is the norm for most textbooks and reading requirements in subject areas other than English? Furthermore, how does one help students

explore their own personal connections with a piece of literary text before handing it in to be graded? Writing to learn (Gere, 1985) rather than as something to be learned can aid students in discovering meaning in texts for themselves.

Students can discover meaning through writing if they are uninhibited by the superficial expectations of style, structure and mechanics that interfere with the generation of ideas. Pianko (1979) and Shaughnessy (1977) suggest that some writers, when their written product is primarily for evaluation, become so preoccupied with the mechanics of writing that the quality is adversely affected. Students need opportunities to express their ideas fully without worrying about correctness until a later draft (Britton, 1975; Langer and Applebee, 1987; Hillocks, 1986).

One solution might be to distinguish between things that children write that are essentially their own learning operations (using their own formulations and expressions) on the one hand, and on the other hand the things that they write which are presentations of information for other people (Marland, 1977, 168).

If we give students the freedom to "...actively explore connections between the language of their world and the language of the text," (Johnston, 1983) through writing, they will be making a personal commitment through their own interpretations.

An engaged reader contributes some things (interpretation) to the reading of the text while the text contributes some other things. The meaning is composed by both the reader and writer so that the "pattern of expression"

is "...a new event, larger than the sum of its parts" (Harste, 1984, 22). To deny the value of a student's initial, spontaneous response to a work ignores the necessary basis for scaffolding (Langer and Applebee, 1987) on which students can be guided to greater understanding (Crowhurst and Kooy, no date). Such a vehicle for engaging the reader with the text is writing-to-learn through response journals.

Writing to Learn through Response Journals

O, the comfort, the inexpressible comfort of feeling safe with a person, neither having to weigh thoughts nor measure words, but pouring them right out, just as they are, chaff and grain alike; certain that a faithful hand will take and sift them, keep what is worth keeping and then with the breath of kindness, blow the rest away (George Eliot in Fulwiler, 1987, 47).

Researchers are realizing that the power of entering into just such a responsive dialogue as that expressed by George Eliot is inherent in the informal language of response journals. Leading scholars of language argue that people make meaning of the world through their own personal uses of language (Britton, 1971; Emig, 1971; Johnston, 1983; Moffett, 1968; Shaughnessy, 1977).

The importance of writing as a tool for learning and means of development cannot be ignored (Britton, 1975; Fulwiler, 1987; Gere, 1985; Langer and Applebee, 1987; Torbe, 1980). Expressive writing can aid in this development better than any other form of instruction (Hayes and Flower, 1980; Moffett, 1968) "...and is likely to be both the most accessible mode for young writers and the key to developing

confidence and range in using written language" (Britton, 1975, 42). In the expressive mode a writer "...feels free to jump from facts to speculation to personal anecdote to emotional outburst and none of it will be taken down and used against him..." (p. 137).

Teachers, in all subject areas, have found that when students write about what they are reading, listening to, and talking about in their classes they "...understand better what they know, don't want to know--and how it all relates to them" (Fulwiler, 1987, 6). Writing "...has value in and for itself" (Gere, 1985, 4). The current study explores the use of response journals in two subject area classrooms (science and English) in order to provide students with opportunities for writing to learn in just this way.

Instructional Approach and Attitude toward Writing

It is assumed that improved attitude to writing may lead to improved quality of writing. Modifying of attitudes is seen as critical because, as John Daly (1988) observes, "A positive attitude about writing is associated with, and may even be a critical precursor of, the successful development and maintenance of writing skills" (p. 44). The use of response journals in the present study explores the connection between two differing instructional approaches (open process/traditional) and student attitudes toward writing, the subject and/or the teacher.

The traditional approach, as conceived in this study, can be considered an aspect of Hillocks' (1986) 'presentational'

mode in that "...users of the mode assume that...knowledge is best conveyed directly in the form of verbal formulas, rules, examples, or admonitions" (p. 118). Although the response journals in both experimental and control groups provide opportunities for teacher feedback prior to final product evaluation, the mode of response in the control groups is directing and critical throughout.

In contrast, the open-process mode of teacher response used in the experimental groups' response journals can be considered an aspect of 'natural process' (Hillocks, 1986) with the teacher as 'facilitator' and ongoing feedback "...usually designated as being positive" (p. 129).

This study attempts to build on and extend the knowledge about teacher written feedback and its effect on students' writing skills and attitudes toward writing as reported and synthesized in Hillocks' meta-analysis (1986) by concentrating on one of his recommendations for research. Because only a few of the studies available for the meta-analysis stipulated "...positive feedback in one treatment and negative in the other" (p. 221), this study extends the knowledge about research in composition by asking, "Will there be a difference between conditions of positive (open-process response) and negative (traditional response) feedback?"

Instructional Approach and Growth in Writing Ability

Carroll (1984), Hillocks (1986), and Clifford (1981) indicate that a process approach toward instruction leads to an improved product. Stein (1984) suggested that the environmental approach (Hillocks 1986) may owe its success to increased opportunities for feedback. The use of response journals provides for this feedback at the prewriting stage through teacher comments.

Teaching Style: Methods of Implementation

Most of our knowledge about the effects of teaching methods on student learning and attitudes comes from studies on the verbal interactions between teachers and students. However, one recent study by Peyton and Seyoum (1989) investigates the ways in which a teacher's strategies used in written dialogue with her students inhibit or promote student involvement in the dialogue. This study shows that employing interactive strategies that are responsive to what a student writes rather than directing can result in the promotion of student writing. Although the findings indicate "...that teacher strategy may affect student response to some degree,...it is not the only determining factor" (p. 329). However, over time, students write longer and more elaborate entries in their journals when the teacher's responses are less controlling and more responsive to the content of what they have written. Moreover, research on motivation implies that even enjoyable activities can become tedious should the subject feel he is being 'controlled' (Bowman, 1983, 63).

Native Indian Students

Schools as institutions of learning in this country (the U.S.A.) are set up to accommodate styles of teaching and learning which are incongruent with the traditional values and styles of learning that characterize many American Indian/Alaskan Native students (Swisher, 1990, 36).

Concern about the high rate of Native Indian students dropping out of school continues in both the United States and Canada but the problem is still unsolved (LeBrasseur and Freark, 1982). The forced assimilation of Native Indian students as opposed to integration may account for their lack of success in our school systems (LeBrasseur and Freark, 1982; Rhodes, 1988; Swisher, 1990).

Swisher (1990) in her synthesis of the literature pertaining to the learning styles of Native Indians found well documented evidence of learning styles among Native Indians which seem to be culturally patterned; prevalent among them is a "...constant fear of standing out" (p. 37). Rhodes (1988) advocates individualizing instruction that takes into consideration different "... learning styles for different students" (p. 28) and stresses "...non-threatening evaluations" (p. 26).

Effective teachers of Indian students create a caring atmosphere (Kleinfeld, 1975; Swisher, 1990). Their role in the classroom is one of mentor rather than judge. Supportive comments rather than critical evaluation (regardless of how well meaning) dominate. Their effectiveness stems from an interactional style of instruction (Kleinfeld, 1975) that downplays competitive styles of learning and emphasizes

co-operative learning styles (LeBrasseur and Freark, 1982; Swisher, 1990).

"Indian teachers tend to utilize a cluster of teaching strategies which are consistent with Indian cultures..." (Herbert and Barman, 1987, 3). Response journals, wherein teachers are supportive and nonevaluative in their comments, could be such an effective strategy.

Context of the Present Study

A review of the literature has shown that the paradigm shift from product to process has been accompanied by questions, concerns, insecurities and conflict within the discipline and across the curriculum. This transition is a part of the emergence of a new norm.

Concurrent with the shift from product based research to a process-oriented inquiry has been a broadened scope of inquiry. The use of dialogue/response journals figures greatly in the new case study reports and research on composing. Motivation and attitude toward writing are also seen to be important avenues of research, providing insight into students' 'willingness to perform' (Peyton and Seyoum, 1989).

The present study extends the understanding of the use of response journals as part of a process approach to writing by examining the effects of two different modes of teacher response (open process/traditional) to what students write in their journals on their attitudes and writing ability. The investigation does so by comparing two experimental groups (one in English and one in science) with control groups. As

well, the study pursues inquiry into the effects of two modes of teacher response on a specific subgroup, Native Indians. The effects on the attitudes of participating teachers toward the use of response journals in their classrooms is also examined.

CHAPTER THREE

PROCEDURES

Design of the Study

The purpose of the present study, as outlined in Chapter One, is fivefold. The primary objective is to investigate whether students writing to learn in response journals in English and science classes who received the 'open-process' treatment show more positive attitudes toward writing than do those students who received the 'traditional' treatment. The second objective is to examine, using the response journals as the measure, whether students who received the 'open-process' treatment show more positive attitudes toward writing, the response journal itself, and/or the teacher than those students who received the 'traditional' treatment. The third objective is to discover whether students from the 'open-process' treatment group in English show greater improvement in writing ability than do students from the 'traditional' treatment group in English. The fourth objective is to determine whether students from the 'open-process' treatment group in science show greater gains in their approaches to solving a problem in science than do students from the 'traditional' treatment group in science. The fifth objective is to investigate whether the subgroup of Native Indian students who received the 'open-process' treatment while writing to learn in response journals in English and science classes shows more positive growth in attitude, writing ability and/or problem solving on all measures indicated above

than Native Indian students who received the 'traditional' treatment. The final objective is to discover whether the use of response journals and two modes of teacher response have an effect on the attitudes of subject area teachers toward students writing to learn in their classrooms.

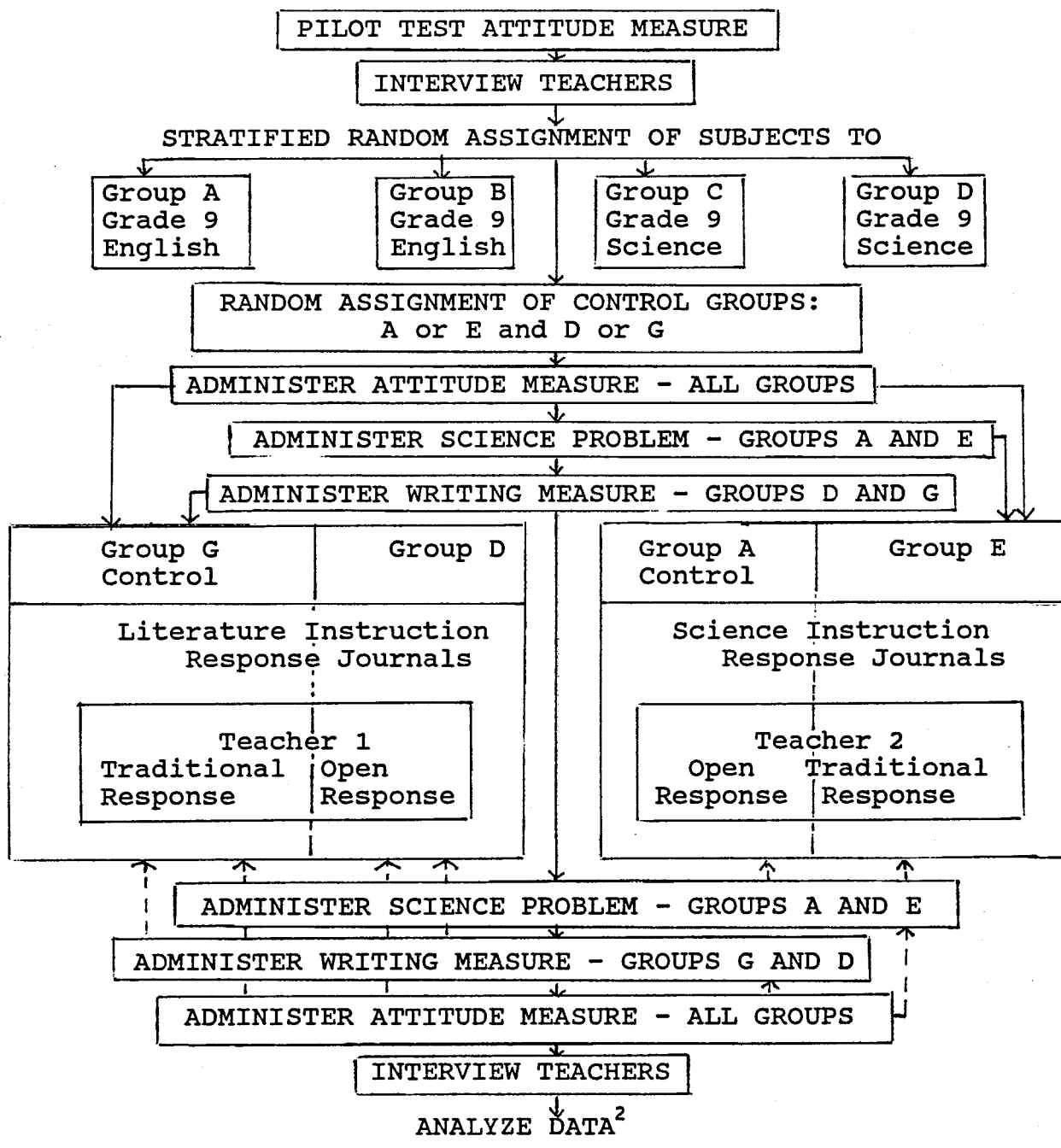
The methodology in this study included: 1) randomly assigning, by computer, the grade-nine population of a junior high school (grades seven to nine) in British Columbia to science and English classes, 2) pilot testing the attitude measure twice, 3) pilot testing, with the participating teachers, two modes of teacher response on intact grade-seven and eight- classes during term one of the year treatment took place, 4) delivering the treatment, 5) selecting instruments to be used in the scoring and coding of data, and 6) analyzing the results. Figure 1 is a flow chart showing the design of the study.

Subjects

i) The Students: The subjects were grade-nine students selected from the total grade-nine population of a junior high school in British Columbia that serves students in grades seven, eight and nine. The school is multi-ethnic with a high ratio of Native Indian students to non-Native, approximately one to five.

FIGURE 1

DESIGN OF THE STUDY



² Science data were not analyzed because the science teacher failed to fulfill the requirements of the experimental design.

A stratified random assignment procedure was followed to ensure that Native Indian students were represented in each class in proportion to their numbers in the total grade-nine population. All ninth-grade pupils in the school were divided into two groups: Native and non-Native. By stratified random assignment, students were assigned by computer to one of four classes, two English and two science. New registrations were added to existing classes during the first term preceding the treatment term through the use of a random assignment table designed for this purpose. The classes were composed of four unique populations of approximately twenty-four students each. No students were added to the experiment's four classes once the treatment began. Students transferring out of the experiment's four classes before the end of the treatment were not included in the data base.

ii) The Teachers: One full-time science teacher, who is also department head, consented to participate in the study. He had twenty years of experience teaching science at the junior high level.

The teacher of English (who is also the spouse of the researcher) had seventeen years of teaching experience at a variety of levels and schools. He is a full time employee as well but divides his time between teaching English half time and counselling. He is presently the head of the counselling department at his school. Each teacher taught both the control group and experimental group in his subject area.

Attrition

"Robert Goodrich and Robert St. Pierre estimated that 20 percent attrition per year is a realistic level for planning" (in Borg & Gall, 1989, 235).

Normal registration for grade-nine classes at the junior high school is between twenty-four and twenty-eight students per class. The overall attrition rates for grade nines in this particular school over the past three years have been: i. 1987 - 1988: sixteen and one half percent, ii. 1988 - 1989: twenty-one percent, and iii. 1989 - 1990: eighteen percent with the average attrition rate over the three years of eighteen and one half percent.

Attrition occurs for several reasons. In the case of this particular population attrition occurs due to the transitory nature of the Native Indian population among reservations and the instability of the primary industry, logging/pulp and paper, in the community which this school serves. The experimental class in English began with twenty-five students, finishing the treatment term with twenty-two for an attrition rate of twelve percent. The control group in English began with twenty-five students, finishing the treatment term with twenty-one for an attrition rate of sixteen percent. The experimental class in science originally had twenty-six students registered with twenty-four completing for an attrition rate of eight percent. The control class in science began with twenty students and ended with nineteen for an attrition rate of five percent. The overall rate of

attrition by the end of the experiment was ten percent, indicating that participants in the experiment withdrew at a rate dissimilar from the 'realistic' withdrawal rate suggested by Goodrich and St. Pierre. A possible explanation for the low attrition rate of the grade-nine population during the year this experiment took place is the establishment of an alternate program within the school that included most grade-nine Native Indian students.

Treatments

Two Modes of Teacher Response

The terms 'open-process' and 'traditional' in reference to teacher mode of written response have been defined in Chapter One and are described here specific to the treatment. This section will elaborate by specifying the methods and materials used in the two treatments, open process and traditional.

Of the four instructional groups, two in science and two in English, one in each subject area was randomly assigned to be the control group. The same teacher instructed both the control group and the treatment group for each subject. All students in all four groups maintained response journals. Teachers issued parallel guidelines for the use of student response journals (Appendix C) to all four classes.

Instruction in both English classes (literature) was parallel as was that in the science classes. The experimental groups differed from the control groups in each subject area

on one variable only--the mode of teacher response to what students wrote in their journals. The control groups for both the English and science classes received written reactions to what they wrote in their journals in the traditional response mode. The experimental group received open-process responses.

i) The Open-process Mode of Response

The open-process mode of response as implemented in the study required the teacher to make student-centered written responses that were positive and non-threatening to the ideas students expressed in their journals in an endeavor to make writing "...part of the learning process..." (Torbe, 1980). This mode of response also used student response journals to focus on the idea/generation rehearsing stage of the writing process (Hayes and Flower, 1980), often called prewriting, as a vehicle in which students could express their ideas about, and interpretations of, the text without fear of evaluation. In the English classes students were encouraged to express their opinions, make observations, ask questions and so on in their journals about the text When the Legends Die by Hal Borland. Students then handed in their responses for comment(s) from their teacher. The teacher would comment, in pencil, and return the journals to the students at the beginning of the next English class thus initiating and maintaining a written dialogue that was warm and accepting of the students' ideas. Students were encouraged to use their response journals as a source for ideas when planning the content of their posttest essays. Examples of teacher

responses that are in the open process-mode of response are provided in Appendix D. In science classes students were encouraged to use their response journals in reference to the chemistry unit they were being taught in class.

ii) The Traditional Mode of Response

The traditional mode of response required the teacher to make written comments that were directive, informing and/or corrective in response to what students wrote in their journals. Teacher comments (Appendix D) resemble those that can be found on a finished product. Usage errors are red circled. Students are shown what is wrong with their ideas as well. The dialogue thus initiated is one based on evaluation. As in the open-process mode of response, students in the English classes were encouraged to use their response journals as a source for ideas when planning the content of their posttest essays.

English classes--course content

The course content for both English classes was parallel, centering around a novel study of When the Legends Die by Hal Borland. See Appendix E for English course outline. A pretest and posttest essay (Appendix F), each preceded by one lesson on the writing of essays (Appendix G), were included in the course content. Both the pretest measure and the posttest measure were marked by the subject area teacher as part of the term mark before handing in as data for research purposes.

Science Classes--course content

The course content for both science classes was parallel, centering around an introductory chemistry unit based on Science Probe 9. Labs, quizzes and tests were used to evaluate student progress throughout the term. See Appendix H for course outline. A pretest experiment, "The Candle", (Appendix I) and a posttest experiment, "Mixing Chemicals", (Appendix J) were included as part of the course content in science. Lab write-ups for both experiments in all four classes were marked by the subject area teacher for part of the term mark before collection for research purposes.

Pilot Study

Prior to the treatment period, in preparation for the research experiment, teachers received coaching in both modes of response, practice in both modes (with present intact classes) and collaborated with the researcher as to the parameters of teacher response that would be adhered to in each group throughout the treatment period. The teacher of English practised on an intact grade-seven literature class and the science teacher practised on an intact grade-eight science class. Each class was divided in half, one-half designated as the control group and the other as the experimental group. This coaching session was for the purpose of practising teacher responses in the two modes only so random assignment of students to groups was irrelevant.

Teachers asked students to respond to what they were learning in class following "Guidelines for Student Responses"

(Appendix C). Initial responses were collected and both teachers met with the researcher on the same day in order to formulate responses to what the students had written. The two modes of teacher response followed the guidelines set up in Appendix D. Examples were provided of a writing sample to which both modes of teacher response had been used (Appendix K). Coaching sessions took place over a period of two weeks during which six practise response sessions took place.

Measures Used

Part A: The P & R Writing Attitude Form (adapted)

Part A of this study consists of an attitude survey toward writing (Appendix L) that is based on and adapted from "The P & R Writing Attitude Form" (Appendix M). "The P & R Writing Attitude Form" is a Likert-type scale that has as its basis four categories: source, audience, response, and purpose. Source can be defined as that from which the assignment originated (e.g. textbook topic); audience--by whom the assignment will be read (e.g. examiner or peer group); response--how the assignment will be evaluated (e.g. no grade or peer evaluation); and purpose--why the assignment was written (e.g. self-understanding or to give information). More detailed definitions for each category are located in Appendix N. Free choice and personal expression versus teacher choice and school assignment are designated as opposing concepts on the scale.

To ensure that the college-level vocabulary of "The P & R Writing Attitude Form" had been adapted to a grade-nine

readability level and that the interpretations students made still adhered to those intended by their initial categories (Appendix O), the proposed attitude measure was pilot tested with an intact grade-nine class in June of 1990. Students were asked to make note of any words they had difficulty in understanding. Their suggestions were incorporated in the adapted version.

In August of 1990, following the suggestion of the researcher's thesis committee, "The P & R Writing Attitude Form" was further adapted so that students responded to statements rather than to opposing, single-word choices. It is believed that this format is more clearly understood by grade-nine subjects. The original form is also lengthy, comprised of fifty-two items. These items were reduced to twenty-nine statements in the final survey form because many of the items were believed to be redundant. The criteria were to make the survey clear and understandable, easy to administer, and brief while still maintaining the integrity of the four initial categories of source, audience, response and purpose of/for writing. In addition two practise questions were included, one related to writing and one unrelated (Appendix L), for subjects to practise on first during administration of the attitude measure.

A second pilot test of the measure was conducted in September 1990. Six grade-nine students, who were not participants in the experiment, were asked to complete the measure using a think-aloud protocol that was tape recorded.

This record of misinterpretations (interpretations that were not intended in the adaptation) and difficulties students had in understanding particular words facilitated in further adapting the instrument so that differences observed between the pretest and the posttest can not be attributed to the measure. The same measure was administered for both the pre- and posttest. See Appendix X for a detailed description of alterations and modifications made to the original measure as a result of each pilot test.

Part B: Student Response Journals--The Chronological Chart

A chronological chart (Appendix P) was kept for each student which is a record of possible reflections of changes in attitude toward:

- i. writing,
- ii. the response journal itself, and
- iii. the teacher.

Frequency of the following modes and formal features in student response journals was tabulated for each week over the course of the twelve-week treatment period. It is believed that the more often a student made use of these modes and features, the greater he/she valued some aspect of writing. Definitions for categories and types of entries are located in Appendix Q. With the exceptions of numbers 5, 8, 9, and 11, the definitions for modes and formal features are those of Toby Fulwiler in his "Introduction" to The Journal Book (1987, 3). Because the present study is an exploratory study, the data may indicate a need for further or different categories.

Modes:

- i. Observations, interpretations, evaluations.
- ii. Insights, understanding.
- iii. Information.
- iv. Revisions.
- v. Creative expressions.
- vi. Questions.
- vii. Digressions.
- viii. Confidences.
- ix. Frustrations.
- x. Speculations.
- xi. Desire to know more.

Formal Features:

- xii. Frequency of entries.
- xiii. Length of entries (number of words).
- xiv. Self-sponsored entries.
- xv. Organization and Neatness.

Part C: Holistic Marking Scale

Part C of this study required an instrument to measure writing quality. A criterion-based scale (Appendix R) was chosen which would allow for both overall ratings and subscores for: a) content and organization, and b) mechanics. The subscores are weighted equally--fifteen points for content and organization and fifteen points for mechanics--for a total of thirty points.

Part D: Science Experiments--Observations

Part D of this study required an instrument to measure student growth in solving problems in science. The number of observations made in two science experiments--a pretest (Appendix I) and posttest (Appendix J)--was counted.

Part E: Teacher Interviews/Teacher Personal Logs

Pre- and post-interviews were conducted with both participating teachers using the same measure (Appendix S) in order to ascertain any changes in their attitude toward the use of response journals in their classrooms. In addition, the teachers were requested to maintain personal logs throughout the duration of the experiment in which they recorded their perceptions on various aspects of the experiment.

Collection of Data

Six kinds of data were collected: an attitude survey, student response journals, writing samples, science experiment observations, teacher interviews and teacher personal logs. The schedule for administering the measures used, the criteria for their administration and the procedures used for the collection of each data set are explained in this section.

Part A: Completion of the Questionnaire on Attitude toward Writing

The attitude measure (Appendix L) was administered immediately before and immediately after the twelve-week (one-term) experimental period. All four experimental groups were administered the survey by the researcher at the beginning of their first second-term classes (November 1990) and at the end of term (February 1991). They were given the necessary time to complete the form, approximately twenty to thirty minutes. If any questions were asked, the researcher answered them. Students who were absent for the survey were called out of class during the researcher's next preparation block to be administered the survey. Questionnaires were coded in order to ensure anonymity.

Part B: Student Response Journals

To ensure that instruction was parallel in both English classes and both science classes, the same teacher taught both the control group and the experimental group. Instruction in English classes centered around a novel study, When the Legends Die by Hal Borland. The teacher's course preview is located in Appendix E. Instruction in science classes centered around a chemistry unit (see Appendix H for science preview). Both classes in both subject areas were issued the same assignments, in the same order and were given the same amount of time for completion. All students in all four classes were expected to maintain response journals in which they were to share ideas, feelings, concerns and insights

about what they were reading/and or learning in class. Parallel guidelines for the use of student response journals were given to all four classes (Appendix C). Subjects were informed that their journals would count as twenty percent of their second term subject area mark. They were also informed that they were expected to write in their journals at least once a week resulting in a minimum expectation of twelve entries per journal at the end of the term. Class time was provided equally to both groups in each subject area for writing responses to what they were reading and learning in class.

Student response journals were collected at the end of the instructional period and coded to ensure anonymity.

Part C: The Writing Samples

Two aspects of the writing samples are explained below: the selection and description of the composition topics and the writing schedule for the topics.

i) Composition Topics

Four topics were selected for use in the current study (Appendix F). These topics were composed by the researcher and deemed acceptable by her faculty advisor. Topics one and two were presented to both the control and experimental groups as choices for writing an in-class essay during the first week of the experimental period before the novel study and use of response journals were initiated. Topics three and four, parallel to topics one and two, were given as choices in the posttest situation.

Both the pretest and posttest measures were administered during a regular fifty-five minute instructional block preceded by one class of general instruction in the organization and purpose for writing essays. The plan for this lesson is located in Appendix G. Prior to administration of the posttest measure, the English teacher instructed students in both groups to use entries from journals in preparation for the in-class essay if they so desired.

ii) Schedule

The pretest was administered during the first week of instruction in term two (November 1990) and the posttest was given during the last week in term two (February 1991).

Part D: The Science Experiments

Two aspects of the science experiments are explained below: the selection and description of the science experiments and the schedule for conducting the experiments.

i) Experiments--Pre- and Posttest Measures

Two science experiments that include observation as their central student task were used in this part of the current study (Appendices I and J). Both experiments are alternate versions of each other at the same level of difficulty.

ii) Schedule

Both the control group and the experimental group in science were administered the pretest experiment (Experiment One--The Candle) during the first week of instruction for term two (November 1990) and the posttest experiment (Experiment

Two--Mixing Chemicals) during the last week of term two (February 1991).³

Part E: Teacher Interviews and Personal Logs

Interviews (Appendix S) were conducted with both participating teachers (English and science) in order to examine the effects the use of response journals had on their attitudes toward writing in their subject areas. Pre-experimental interviews as well as post-experimental interviews were conducted with both participating teachers and all interviews were tape recorded. Transcripts of interviews are located in Appendix T.

Since both teachers used the traditional mode of written response and the open-process mode, changes in attitudes toward this aspect of their writing instruction were examined. In addition, throughout the treatment period, both instructors maintained personal logs in order to keep a record of the following:

1. observations of behavioural changes in students that could indicate attitude changes toward--a) writing, b) writing in their journals, and/or c) the teacher;
2. personal reactions to the use of response journals as vehicles for writing to learn in their subject areas; and

³ As noted above, all science data were discarded and not used in the analysis because the science teacher did not fulfill the requirements of the experimental design.

3. insights regarding the effects that the nature of their responses have on student attitudes toward--
a) writing, b) writing in their journals, and/or c) the teacher.

Preparation and Scoring of Data

Four components of the study were scored and/or coded: an attitude measure, student response journals, writing samples and science experiment observations. A fifth component, interviews, were conducted and personal logs collected from the participating teachers.

Anonymity

All data collected from students were organized into treatment groups and arranged alphabetically by surname for each group. Control group subjects were assigned odd numbers alphabetically beginning with number one. Experimental group subjects were assigned even numbers alphabetically beginning with number two. All data collected from individual subjects were coded with the same number. In addition all members of the designated subgroups were assigned the letter S with their code number. Subject names were then removed from all data to ensure anonymity.

Part A: The Attitude Measure

Responses were tallied for each of the twenty-nine statements that constitute the Likert scale measure (Appendix L) using a Sentry 2050 computer scanner. All tallies were then personally rechecked by the researcher and re-tallied by

hand. No computer errors were found. All students participating in the survey answered all questions so there was no need to exclude any student in any item tally. The same procedure as outlined above was then repeated for the twenty-nine statements according to four categories: a) source, b) audience, c) response, and d) purpose of/for writing.

Only complete data sets were used. In other words, a student had to be present for both the pretest and posttest in order to be included in the study.

Part B: Student Response Journals

The coding and scoring of student response journals is explained in four sections: training sessions, coding, the scoring of data and how facets were made from the original fifteen features and modes on the chronological chart.

i) Training Sessions

Three raters were responsible for the coding and scoring of the response journals. One week prior to the training session each received a copy of Hal Borland's When the Legends Die and a copy of the "Introduction" to Toby Fulwiler's The Journal Book in which the modes and formal features used in the scoring measure (The Chronological Chart) are defined. In preparation for the training session raters were asked to read these materials.

Raters were given a sample chronological chart at the beginning of the training session, fifteen highlighting pens (all different colours) and one response journal each.

Interpretations of the modes and formal features on the chronological chart were discussed. These were then colour coded with the highlighting pens and dates were entered across the top by week, designating each of the twelve weeks of the experimental period. This chart became the master key for each rater.

Raters then practised on a response journal which they would not be responsible for coding by listing examples from the journals of modes and features. All examples were discussed until consensus for understanding of the terms used and interpretation of student responses was demonstrated by the raters.

ii) Coding

Student response journals were coded according to fifteen modes and formal features using a chronological chart (Appendix P). Student entries were coded with highlighting pens, each colour corresponding to a different feature or mode.

iii) Scoring

Two raters took home one set each of response journals. They were instructed to code ten journals then meet with the researcher on an individual basis to go over what they had done. Problems with classification of responses were discussed and adjusted if necessary. Raters were then asked to complete the set before being issued another set.

The third rater was called in to cross check all four sets of journals for consistency and accuracy. Any

discrepancies were brought to the attention of the researcher. She was the final arbiter. In addition, the researcher randomly checked samples from each set.

The following unedited examples from the journals illustrate how the responses were coded and counted for each category. Each portion of a response that was coded as one for the designated category is underlined.

1) Observations, interpretations, evaluations. I feel sorry for Tom because nobody likes or wants him and because people take advantage of him.

2) Insights, understanding. I believe that this is a philosophical statement.

3) Information. ...the cowhand pays Tom a dollar to just go get the horse & ride it a bit.

4) Revisions. I really don't know why I picked Meo as being selfish too.

5) Creative expressions. As people say, 'No two people are alike.

6) Questions. Why did he give up and go back to school?

7) Digressions. When it comes to books I like or are interesting, I can't stop myself from reading. \ Sure I have stay up late to do my homework or don't finish my chores, but hey I have to read something I like don't I? \ I know I am carring off the topic and now I will return.

8) Confidences. I would never, ever have the courage to actually get on a horse. \ I have a great fear of falling, \ almost as great as my fear of failure.

9) Frustrations. It's hard to remember all the names and by the time I know who a person is they aren't involved anymore.

10) Speculations. He will never find a woman to love and never have children.

11) Desire to know more. I want to know what happened to the rest of the characters.

An example of how some responses fit simultaneously into more than one category follows. The same student entry is used to illustrate how it fits into four categories (6-Questions, 9-Frustrations, 10-Speculations, and 11-Desire to know more) concurrently. Each portion of a response that was coded as one for the designated category.

6) Questions.

I really don't understand what you mean by 'What do Meo and Tom in common.' Do you mean that both of their families are dead and they have no one but themselves? Or that they are only hanging around Red because it is a place eat and sleep and for Tom to learn some things about the rest of the world? \ Or both?

9) Frustrations.

I really don't understand what you mean by 'What do Meo and Tom in common.' Do you mean that both of their families are dead and they have no one but themselves? Or that they

are only hanging around Red because it is a place eat and sleep and for Tom to learn some things about the rest of the world? Or both?

10) Speculations.

I really don't understand what you mean by 'What do Meo and Tom in common.' Do you mean that both of their families are dead and they have no one but themselves? \ Or that they are only hanging around Red because it is a place eat and sleep and for Tom to learn some things about the rest of the world? \ Or both?

11) Desire to know more.

I really don't understand what you mean by 'What do Meo and Tom in common.' Do you mean that both of their families are dead and they have no one but themselves? \ Or that they are only hanging around Red because it is a place eat and sleep and for Tom to learn some things about the rest of the world? \ Or both?

Individual totals of coded responses for the fifteen modes and formal features in each of the three time periods were entered in a data base, "D-Base Three Plus". For an example of how this data base collated the experimental data, see Appendix U. The data base computed overall totals for the fifteen modes and formal features by treatment (experimental and control) and the three time periods used in the experiment.

iv) Combining Journal Modes and Features into Facets

The fifteen modes and formal features were reduced to five facets following the elimination of: number 12 (Frequency of entries), number 14 (Self-sponsored entries) and number 15 (Organization, neatness). Self-sponsored entries and Frequency were discarded because many students did not date their entries making it virtually impossible to discern which entries were required and which were self-sponsored. This inconsistency did not allow for the calculation of entry frequency for the three time periods of the experiment because it was difficult to tell in which time period many entries were made. Organization, neatness was discarded as a formal feature because, with the exception of two journals in the English classes, all were in notebooks or duo-tangs (as required by the English teacher). Neatness and organization appeared to be of consistent quality throughout both the experimental and control groups' journals therefore analysis of this feature seemed irrelevant. In the science classes all students made their journals during a science class from materials provided by the science teacher. Revisions (Facet 4) were discarded because minimum scores were barely below the mean but maximum scores were much greater which resulted in a skewed curve.

The remaining features and modes were combined into five facets to eliminate redundancies. So that all components could be measured on the same scale, raw scores were converted first to z scores then to t scores. Raw scores for journal

length, for example, ranged from 16,925 words to 17,783 words and would overpower journal questions which ranged from 153 to 181. The features and modes were combined according to perceived similarities and created in the following manner:

Facet One. 1) Observations, interpretations, evaluations was combined with 2) Insights, understanding and 3) Information.

Facet Two. 5) Creative expressions was combined with 7) Digressions and 10) Speculations.

Facet Three. 8) Confidences was combined with 9) Frustrations and 11) Desire to know more.

Facet Five. 12) Frequency of entries (number of entries).

Facet Six. 13) Length of entries (number of words per entry).

Part C: The Writing Samples

The scoring and coding of the writing samples is explained in three sections: data preparation, training sessions, and the scoring of data.

i) Data Preparation

The treatment sessions produced sets of four compositions per student. To ensure anonymity subject numbers were entered in the top right hand corner of a holistic scoring sheet (Appendix R).

The hand-written originals from each test were sorted, in no particular order, into four folders coded DP, GP, D and G. G designated the control group. DP and GP were pretest essays

and D and G were posttest essays. To each essay was clipped a mark sheet for composition rating (Appendix R). Three raters used different coloured marking instruments for scoring. Rater number one used blue pen, rater number two black, and rater number three pencil. The first rater to score an essay indicated her score at the top of the mark sheet and folded the mark sheet under so her score was no longer visible to the next two raters. The next rater folded her score under so the third rater would not be able to discern the first two scores.

Only subscores were indicated because the total of these for each composition generates the overall score which was tabulated after all data had been scored. The subscore for content and organization was indicated first, followed by a slash, followed by the subscore for mechanics. Only complete data sets were used.

ii) Training sessions

Three raters, including the researcher, participated in the study. All three raters marked all four sets of data over the course of two consecutive days.

Two of the raters were unfamiliar with writing scales. At the initial training session, the third rater (the researcher) shared the B.C. Ministry PLAPP pamphlet of scored writing samples (samples in Appendix V) with the others discussing expectations for grade-nine writing levels and why she believed the Plapp samples received the scores they did. Because the researcher has twelve years' experience teaching

English to grades eight and nine, it is believed that she is a capable judge of writing ability and expectations for the experimental grade level. The marking scale used for this experiment (Appendix R) was then distributed and scoring levels discussed in terms of what to look for in the data sets that would correspond to each level of subscores. That discussion completed, a discussion of the composition topics (Appendix F) ensued to ensure raters understood what kind of content for each topic would be appropriate.

Three incomplete data sets were used to train the raters. The three raters scored one paper independently of one another followed by a discussion about the decisions each rater made on the first paper. This cycle was repeated two more times. After each rater had scored the third paper independently, good consensus on the interpretation of the scale was reached. At this point the raters felt ready to begin scoring papers. After each data set (i.e., pretest--control group, pretest--experimental group) was completed the researcher unfolded each completed scale to check for consensus. It had been agreed, if there was discrepancy in consensus, retraining on interpretation of the scale would take place.

iii) Scoring of the data

The pretests were scored on the first day immediately following the training session. After the first folder was scored, raters took a brief, ten-minute break while the researcher checked scores for consensus. No retraining was necessary. The second set of pretests was then scored. The

first scoring session took approximately three hours including the break.

Session two took place the following day preceded by a discussion of topics three and four. One week prior to the training and marking sessions two of the raters were given a copy of When the Legends Die to read before scoring of the posttest measure took place. Neither had read the novel before. The researcher (the third rater) reread the novel during this same time frame. Discussion of topics for the pretest did not require that students make any reference to When the Legends Die as they had not read the novel before writing. Only complete data sets were used.

Using the method suggested by Diederich (1974) the ratings of the first two raters were averaged if they agreed on the rating or were not more than one point apart. In cases where the first two raters disagreed by more than one point, the rating of the third rater was substituted for the rating that was in most disagreement with the third rater's.

Part D: The Science Experiments--Observations

Science observations on the pre- and posttest experiments were analyzed according to one surface measure, the number of observations per treatment condition. Two assistants counted the number separately. Agreement on the total number of observations was unanimous. The following unedited examples from the two science classes illustrate how the observations were counted.

Counted as two observations:

Example A

hydrogen chloride--(white), (clear) liquid

Counted as three observations:

Example B

hydrogen chloride--(white), (clear liquid), (with
bubbles)

Counted as four observations:

Example C

hydrogen chloride acid--(fizzing), (smoke), (heats
up), (dissolves)⁴

Part E: Teacher Interviews and Personal Logs

Comments made by participating teachers in the interviews were examined for changes in attitude toward the use of response journals in their subject area classrooms by comparing answers to the same interview questions asked on both the pre- and posttest measure. Teachers' personal logs were examined for these same changes.

Statistical Treatments

All of the data collected in the study except that used to test the success of the randomization procedures were coded and prepared for statistical analysis using the SPSSX package, version 3.0, at the University of British Columbia Computing

⁴ Because the science teacher did not fulfill the requirements of the experimental design, all science data were discarded.

Centre. To check the rater reliability, Pearson Product Moment Correlation was used. LERTAP was used to calculate the reliability of the individual questions on the attitude measure. t-tests on data for the randomization procedures were calculated using two different programs--SPSSX and the personal computer program "Statistics for Researchers V2.0" (SFRP). For data that were already coded in the computer, SPSSX was used while data not so coded were analyzed using SFRP. Multivariate analysis was employed for the statistical analyses of the data (SPSSX: MANOVA). The SPSSX program also generated the descriptive statistics (condescriptive statistics) used to describe the differences between the experimental and control students.

Calculating Reliability

The item reliability of the attitude test and the rater reliability for the scores on the essays were calculated prior to the major analyses. Pearson Product Moment Correlation was calculated to determine rater reliability in scoring on both the content and mechanics subscores for the essays, pre and post.

The LERTAP program was designed at U.B.C. to test the reliability of items on a test. To establish the overall reliability of the attitude measure, LERTAP was run using the scores on the pre-attitude test of all eighty-nine students originally included in the experiment. Item reliability on the attitude measure was determined by correlating subjects' scores on an individual item with their total test scores.

LERTAP scores included a calculation of the Hoyt Estimate of Reliability.

Multivariate Analysis of Variance: (MANOVA)

Two multivariate analysis of variance (SPSSX:MANOVA) were run, each using treatment as the independent variable. The dependent variables in the first run were essay-content, essay-mechanics and the attitude measure. The dependent variables in the second run were the five facets of the student journals. Two runs were necessitated by the fact that the essays and attitude measures were administered during two time periods (pre and post) while journal responses were calculated over three time periods--weeks two to four, weeks five to eight, and weeks nine to eleven. Although the term was twelve weeks long, the first and last weeks were used for administering the attitude measure and the essay.

The raw data scores were transformed, first to z scores then to t scores, in order that all components were measured on the same scale (so that, for example, journal length, which ranged from 16,925 words to 17,783 words, would not overpower journal questions, which ranged from 153 to 181). z scores were converted to t scores in order to eliminate negative numbers. The fifteen features and formal modes were further reduced to six facets then to five facets before the MANOVA was conducted. Only those groups of variables that showed an overall significant difference at the .05 level or greater were further analyzed using analysis of covariance.

Analysis of Variance (ANOVA)

Analysis of variance was used to test the success of the randomization procedures on the following variables: pretest scores on attitude, essays (content and mechanics) and journal length.

Analysis of Covariance: (ANCOVA)

Analysis of covariance was used to determine the statistical significance level of differences between each of the component variables on any set of measures which proved significant as a result of the multivariate analysis of variance (MANOVA).

t - Tests

To test the success of the randomization procedures, t-tests were used to compare the initial abilities of the experimental and control groups judged by subjects' previous English and social studies marks. These calculations were computed using the "Statistics for Researchers Program" with the significance level set at .05.

Descriptive (Condescriptive) Statistics

As an aid to describing the differences between the experimental and control students, the boys and the girls, the means and standard deviations of the individual scores were calculated on:

- 1) the attitude measure--overall scores and the four subscores for a) source, b) audience, c) response, and d) purpose;

2) the response journals--overall scores and subscores for the fifteen modes and formal features on the response journals; and

3. essays-- subscores for content and mechanics.

Qualitative Analysis

Teacher interviews and logs were examined for changes in attitude toward the use of response journals in their subject area classrooms. Impressions of attitude trends on the parts of participating teachers are reported qualitatively in the form of verbal descriptions in chapters Four and Six.

Preliminary Analyses

The Attitude Measure

The statistical test used to analyze the attitude measure was LERTAP in order, partially, to determine the internal consistency of the twenty-nine items in the questionnaire.

All completed pretest questionnaires were used from all four treatment groups in science and English resulting in an N of eighty-nine. The Hoyt Estimate of Reliability for the twenty-nine items was .84 on the eighty-nine student responses for the pretest only. This was raised slightly to .85 by discarding items twenty-one and twenty-nine. These items were discarded because the correlation co-efficient for item twenty-one equals .072 and .030 for item twenty-eight. All other co-efficients equal .22 or above with only five of the remaining items below .3.

The Hoyt Estimate of Reliability for the posttest, minus items twenty-one and twenty-eight, was raised to .90 for an N of thirty. By combining both pre- and posttest measures for an N of thirty, this translates to a .94 reliability coefficient on the twenty-seven remaining items indicating a good level of internal consistency.

The Essays

Computations were made on the agreement among three raters for the sub-categories (content and mechanics) on both the pre-and posttest measure of the writing sample.

As Table 1 shows, inter-rater reliability using the two primary raters is low ($r=.76$). Adjusted scores show a high level of inter-rater reliability. Using the method suggested by Diedrich (1974), the ratings of the two primary raters, A and B, were averaged if they agreed on the rating or were not more than one point apart. In cases where A and B disagreed by more than one point, the rating of rater C was substituted for the rating of whichever rater was in most disagreement with C. Appropriate ratings of rater C were substituted

Table 1. Inter-rater reliability, essays, pretest/posttest differences on content (C) and mechanics (M)

Raters	Pre-C r	Post-C r	Pre-M r	Post-M r	Overall r
A & B	.78	.78	.70	.79	.76
Adjusted	.93	.96	.94	.93	.94

before Pearson Product Moment Correlation coefficients were computed for inter-rater reliability. Table 1 shows the adjusted inter-rater reliability for the two primary raters. The overall inter-rater reliability for the pre- and posttest measures was .94 (adjusted by third rater) which is greater than the .67 reliability Diedrich (1974) suggests can be expected using this method to mark high school essay examinations.

Success of Randomization Procedures

Although the junior secondary school in which the experiment took place allowed for true randomization procedures, it is believed that the control and experimental groups were not equal at the beginning of the experiment in terms of ability and gender differences and the effects of attrition that occurred after randomization in the spring of 1990 and during the summer and fall of 1990 before the experiment took place in the second term beginning November 19, 1990.

To test the success of the randomization procedures, a composite of both control and experimental subjects' previous English and social studies marks, pretest scores on essays, attitude measures and journal length was constructed. Table 2 presents the findings of this composite. As Table 2 shows, on all nine of the measures calculated the experimental and control groups were not significantly different. On only one, the length of the pre-journals, did the differences even approach significance. These differences, although not

significant, were substantial (favouring the experimental group) and tended to influence the findings reported in Chapter Four. The average probability ranged between .5 and .8 on the other measures. It appears that random procedures

Table 2. Success of randomization procedures; explanation of two tailed test for comparison between treatment conditions

Measure	Experimental		N	Control		N	t-Value	D.of F	Two tailed prob.
	\bar{x}	s		\bar{x}	s				
Eng. Final LG-June 1990	4.38	2.26	13	4.65	3.37	17	-0.42	28	NS*
S.S. Final LG-June 1990	5.31	1.73	13	5.00	3.75	17	0.49	28	NS*
Eng. 1st term LG-Nov.1990	5.31	1.56	13	5.00	2.20	17	0.61	28	0.55
S.S. 1st term LG-Nov.1990	5.38	1.26	13	5.06	2.81	17	0.60	28	0.55
Attitude-Pre	95.20	17.00	13	90.80	14.80	17	0.77	28	0.45
Essays-Pre	8.70	2.70	13	8.90	2.40	17	-0.23	28	0.82
Content									
Essays-Pre Mechanics	9.00	2.50	13	8.70	2.20	17	0.39	28	0.70
Journals-Pre Length	231.50	110.40	13	160.70	101.00	17	1.83	28	0.08
Attitude-Pre	93.60	14.70	49	91.20	15.70	40	0.75	87	0.45

*The first two calculations were computed using the program "Statistics for Researchers" which did not report the probability if there were no significant differences.

were successful. However, as will be discussed in Chapter Six, the teacher of English felt that the control class was superior to the experimental group, a feeling that was somewhat borne out by the differential drop-out rate: more experimental than control students were excluded from the final calculations because they did not complete all of the assignments.

CHAPTER FOUR

FINDINGS

The findings of the study are presented in this chapter, categorized separately by the research questions that were presented earlier in Chapter One. Part A looks at whether students who have been responded to in writing by their subject area teacher using the open-process mode of response (experimental group) show more positive attitudes toward writing overall and according to four sub-categories (i.e., source, audience, response and/or purpose) than students who have been responded to in writing by their subject area teacher using the traditional mode of response (control group) as measured by a pre- and posttest attitude questionnaire.⁵ Because the statistical analyses grouped the data from the attitude and writing measures for one multivariate analysis of variance (MANOVA) and the data from the student response journals for another, the order of reporting the findings has been changed to reflect these groupings. Therefore Part A will also include the findings from the (MANOVA) on the essays and investigate whether students in the open-process teacher response group showed greater growth in writing quality on overall scores as well as on subscores than did those students

⁵ Because Native Indian students were not represented in the subject groups in numbers that could lend themselves to statistical analysis, this part of the research question could not be addressed.

in the traditional teacher response group. Part B examines whether subjects in the experimental group reflected more positive changes in attitude to writing than the control group overall and as measured categorically by the number of modes and formal features in response journals. Part C⁶ examines, qualitatively, comments made by the English teacher in pre- and post-interviews (Appendix T) to determine differences in the teacher's attitude about the uses of writing in his subject area classroom.

Tables that summarize the statistical analyses of the data are provided and interpretations of the findings are offered in order to give a clear picture of how the subjects responded to the treatments. Ancillary tables of the statistical results have been included in the appendices.

Part A: The Attitude Measure and the Effect of Treatment
The English Essays and the Effect of Treatment

The discussion of the findings for Part A is divided into three components of the research questions on the attitude measure and the English essays:

i) the attitude measure--Overall growth in total scores and growth on the subscores (i.e. source, audience, response and purpose) are reported. Both of these components are further divided into two areas. First, the multivariate analysis of variance results are reported to indicate the

⁶ In previous chapters, Part D discussed aspects of the science classes in this experiment. Because of inadequate data from these classes, the findings can not be discussed and have been omitted. Part E--Qualitative Analysis of Teacher Interviews and Personal Logs--now becomes Part C.

statistical significance of the differences between the experimental and control groups. Second, the changes in raw scores are reported to demonstrate the magnitude of the differences.

ii) the English essays--The discussion of the findings for the English essays and the effect of treatment is divided into two parts reflecting the two research questions: overall growth in total scores and growth on the subscores for the essays (content and mechanics). First, the multivariate analysis of variance (MANOVA) results are reported. Secondly, the pre-/post-means, standard deviations and the differences in the means are reported.

Attitude Measure: Growth--Overall and Subscores

The first question asked in the study was, "Do students who have been responded to in writing by their subject area teacher using the open-process mode of response (the experimental group) show more positive attitudes toward writing overall and according to subscores on a) source, b) audience, c) response, and/or d) purpose than students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control group) as measured by a pre- and posttest attitude questionnaire?"

At the beginning of the experiment and at the end all students participating in the experiment were asked to respond to a survey on their attitudes toward writing (Appendix L) that was adapted from "The P & R Writing Attitude Form"

(Appendix M). The same measure was used as both the pre- and posttest measure. Students responded to twenty-nine statements that examined their attitudes toward writing. The attitude form is a Likert-type five point scale on which students responded by: a) agreeing strongly, b) agreeing somewhat, c) stating that they perceived no difference in the two ideas presented, d) disagreeing somewhat or e) strongly disagreeing with each statement.

i) Overall Growth: the Attitude Measure and the English Essays

As Table 3 shows, there were neither statistically significant initial differences on essay-content, essay-mechanics and the attitude measure nor on the posttest measures when multivariate analysis of variance (MANOVA) was performed on transformed scores. The probability figure of

Table 3. The attitude measure and the English essays:
multivariate analysis of variance

	Wilks Lambda	Mult. F	D.F.	Sig. of F
Pretest:				
Treatment	0.96	0.38	3,26	0.77
Posttest:				
treatment by time	0.89	1.04	3,26	0.39

.77 for the pretest treatment groups is very high and suggests few initial differences between the two groups. The multivariate analysis of variance also reveals non-significant differences when the posttest scores were analyzed with the probability of .39 that either of the two separate measures (attitude and writing) was significantly different. Since there were no significant differences on the MANOVA, separate analyses were not carried out for the pre- and posttest essay and the pre- and posttest attitude measure. However, it must be kept in mind that the very small final numbers of subjects (13 experimental and 17 control) reduced the power of the statistical treatment considerably.

ii) Overall Growth: the Attitude Measure

As Table 4 shows, pretest/posttest differences on the

Table 4. Attitude measure (adjusted by removing the two items found unreliable by LERTAP): means, standard deviations and pretest/posttest differences

Treatment N		Pretest \bar{X}^1 s		Posttest \bar{X}^2 s		Diff $\bar{X}^2 - \bar{X}^1$
Exp/All	13	94.7	17.3	93.4	18.2	-1.3
Con/All	17	90.8	14.8	90.2	15.9	-0.6
Exp/Girls	6	96.2	12.7	93.7	15.2	-2.5
Con/Girls	7	95.9	9.7	94.6	14.3	-1.3
Exp/Boys	7	93.4	21.5	93.1	21.6	-0.3
Con/Boys	10	87.2	17.1	87.2	17.0	0.0

attitude measure indicate losses for all students except for the control group boys who show no change. Both the experimental and control groups have lower scores on the posttest than they do on the pretest, but differences are small. The experimental group lost 1.3 points overall whereas the control group lost .6 overall. Considering that the standard deviations range from 14 to 18, such differences are extremely small. However, even the small differences that were found favour the control group and the boys.

iii) Growth on Subscores: the Attitude Measure

As Table 5 indicates, when the responses to the attitude questionnaire were grouped into four sub-categories (source, audience, response and purpose--definitions are located in Appendix N) minor differences emerged. Both experimental and control groups remained relatively stable over the duration of the experiment on the purpose sub-category (items 2, 3, 4, 5, 9, 10, 11, 15, 16, 22, 24, 25, 26, 27, and 29) and the sense of audience sub-category (items 7 and 12). The experimental group (essentially the experimental boys) showed large gains (almost one standard deviation) on the source sub-category (items 1, 6, 8, 14, 19 and 20) but these changes may be the result of inordinately low scores on the pretest. Both groups showed losses in the response category (items 13, 17, 18, and 23). Since both groups (experimental and control) and both subgroups (girls and boys) showed large losses, these losses could be attributed to a condition shared by both groups. Perhaps the fact that all journals in all four groups,

Table 5. Attitude measure: means, standard deviations and pretest/posttest differences for sub-categories

=====							
Variable Treatment		N	Pretest		Posttest		Post/Pre
			\bar{x}^1	s	\bar{x}^2	s	Diff. $\bar{x}^2 - \bar{x}^1$
<hr/>							
SOURCE*	Exp/All	13	18.23	3.70	19.92	3.47	1.69
	Cont/All	17	18.65	2.74	18.29	2.11	-0.36
	Exp/Girls	6	20.00	2.83	20.67	4.68	0.67
	Cont/Girls	7	18.00	2.45	18.43	2.76	0.43
	Exp/Boys	7	16.71	3.86	19.29	2.21	2.58
	Cont/Boys	10	19.10	2.96	18.20	1.69	-0.90
AUDIENCE*	Exp/All	13	6.92	1.04	6.69	1.55	-0.23
	Cont/All	17	6.12	1.32	6.53	1.18	0.41
	Exp/Girls	6	6.83	0.41	7.00	2.10	0.17
	Cont/Girls	7	6.29	1.11	6.14	1.46	-0.15
	Exp/Boys	7	7.00	1.41	6.43	0.98	-0.57
	Cont/Boys	10	6.00	1.49	6.80	0.92	0.80
RESPONSE*	Exp/All	13	14.92	2.36	12.77	2.05	-2.15
	Cont/All	17	14.47	2.24	12.94	2.22	-1.53
	Exp/Girls	6	14.67	2.73	12.50	2.25	-2.17
	Cont/Girls	7	14.86	1.21	13.43	1.90	-1.43
	Exp/Boys	7	15.14	2.19	13.00	2.00	-2.14
	Cont/Boys	10	14.20	2.78	12.60	2.46	-1.60
PURPOSE*	Exp/All	13	49.46	5.91	48.77	5.07	-0.69
	Cont/All	17	50.00	5.01	50.62	4.16	0.62
	Exp/Girls	6	50.00	6.63	50.00	5.62	0.00
	Cont/Girls	6	49.33	4.50	52.00	4.94	2.67
	Exp/Boys	7	49.00	5.71	47.71	4.72	-1.29
	Cont/Boys	10	50.44	5.55	49.80	3.64	-0.64
<hr/>							

* On the questionnaire Source was comprised of items 1, 6, 8, 14, 19, and 20; Audience--7 and 12; Response--13, 17, 18, and 23; Purpose--2, 3, 4, 5, 9, 10, 11, 15, 16, 22, 24, 25, 26, 27, and 29.

regardless of treatment, received a mark worth twenty percent toward that term's letter grade affected both groups negatively. Because the experimental group lost more than the control group (both treatments equally by sex), the

Table 6. Essays: means, standard deviations and pretest/posttest differences per treatment condition

Treatment	N	Pretest		Posttest		Post/Pre
		\bar{x}^1	s	\bar{x}^2	s	Diff. $\bar{x}^2 - \bar{x}^1$
<hr/>						
a) Content						
Exp/All	13	8.70	2.70	8.70	3.60	0.00
Con/All	17	8.90	2.40	9.60	2.40	0.70
Exp/Girls	6	7.90	3.10	9.00	2.60	1.10
Con/Girls	7	9.30	1.20	11.20	2.20	1.90
Exp/Boys	7	9.40	2.30	8.40	4.50	-1.00
Con/Boys	10	8.70	3.00	8.50	2.00	-0.20
b) Mechanics						
Exp/All	13	9.00	2.50	8.70	2.60	-0.30
Con/All	17	8.70	2.20	9.60	2.10	0.90
Exp/Girls	6	8.40	2.70	8.40	2.10	0.00
Con/Girls	7	9.40	2.10	10.40	2.70	1.00
Exp/Boys	7	9.60	2.50	8.90	3.20	-0.70
Con/Boys	10	8.25	2.25	9.00	1.50	0.75

treatment (response journals) might have had some non-significant influence.

iv) Growth on Subscores: the English Essays

As Table 6 illustrates, posttest scores were similar to pretest scores on essay-content for the experimental group. The small differences in growth for the experimental girls (+1.10) was offset by the negative growth of the experimental boys (-1.00) resulting in zero difference. In terms of standard deviations generally over 2.0 these differences are indeed small. The control group displayed marginally greater growth by .7 as indicated by the pre-/posttest difference. The negative growth of the control group boys (-0.20) did not completely negate the +1.9 pre-/posttest difference achieved

by the control group girls.

The essay-mechanics subscores reveal a slight loss (-0.30) for the experimental group and slight positive growth for the control group (+0.90). The experimental group's loss is attributed to the negative growth of the boys (-0.70) with no growth indicated by the girls in this category whereas both the control boys and girls indicate positive growth on this subscore.

Overall, the control group gained about one-quarter of one standard deviation in content and almost one-half a standard deviation in mechanics while the experimental group showed no growth or marginal losses. The differences on mechanics may be interesting because the control students' journals had mechanics errors indicated by their teacher.

Part B: Student Response Journals and the Effect of Treatment

Part B of the study was informed by the following research question.

Do students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show more positive attitudes overall and/or toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group)?

Students in both the experimental and control groups were required to maintain journals for ten weeks of the experiment in which they recorded their impressions and asked questions about what they were reading/learning in their English classes.

i) Overall Growth: Response Journals--the fifteen modes and formal features--results between conditions

As Table 7 indicates, the F-ratio shows a significant difference ($p=.001$) between the experimental and control students on the journal entries written over the first three weeks so analysis of covariance was conducted to discover which factor(s) was (were) responsible for the difference. The results for the posttest (journal entries written during the last three weeks) were statistically nonsignificant, but they did approach significance ($p=.07$).

The results presented in the composite constructed to test the success of randomization procedures (Table 2) in Chapter Three conflict with the data presented here. The multivariate analysis of variance suggests that there were statistically significant initial differences between the two groups whereas the composite built to test for the success of the randomization procedures did not. However, the pre-journal analysis (Table 2) revealed close to significant results (.08). When MANOVA was conducted, the individual

TABLE 7. The response journals: multivariate analysis of variance (pretest=first 3 weeks of treatment, mid-test=next four weeks, posttest=last 3 weeks)

	Wilks Lambda	Mult. F	D. F.	Sig. of F
Pretest:				
treatment	0.43	6.36	10,19	0.001*
Mid-/Posttest:				
time	0.98	0.04	10,19	1.00
treatment by time	0.46	2.21	10,19	0.07

facets had more influence on the statistical outcome resulting in Facet Five (Frequency) reaching significance at two points, on the pretest (.05) and on the posttest (.01). This may suggest initial differences between the two groups (experimental and control).

ii) Analysis of Covariance: Response Journals

As Table 8 shows, two facets accounted for the significant F-ratio ($p=.001$) reported in Table 7, facets 2
TABLE 8. Response journals (the 5 facets combined from the 12 original features and modes): analysis of covariance

	coefficient	t-value	D.F.	Sig. of t
Facet 1:*				
pre	-3.34	-1.20	10,19	0.24
mid	1.38	1.20	10,19	0.24
post	-0.05	-0.05	10,19	0.96
Facet 2:*				
pre	-3.64	-1.61	10,19	0.12
mid	2.96	2.13	10,19	0.04**
post	-2.55	-1.61	10,19	0.12
Facet 3:*				
pre	0.66	0.25	10,19	0.80
mid	-0.38	-0.26	10,19	0.80
post	-0.04	-0.03	10,19	0.98
Facet 5:*				
pre	4.22	2.08	10,19	0.05**
mid	2.50	1.87	10,19	0.07
post	-4.57	-2.63	10,19	0.01**
Facet 6:*				
pre	2.61	0.98	10,19	0.33
mid	1.50	1.29	10,19	0.21
post	-1.64	-1.23	10,19	0.23

*Facet 1 is made up of Observations, Insights and Understanding and Information. Facet 2 is made up of Creative Expressions, Speculations and Digressions. Facet 3 is made up of Confidences, Frustrations, Questions and Desire to Know More. Facet 5 is the single variable Frequency and Facet 6 is Length.

** $p \geq .05$

and 5. On the pretest, Facet 5 (Length of Entry) was significant at the .05 level of confidence. It also approached significance on the mid-test ($p=.07$) and reached significance on the posttest. As will be noted in Table 9, these differences favour the control group. Although Facet 2 (a composite of Creative Expressions, Speculations and Digressions) did not reach statistical significance on the pre- and posttest multivariate analysis of variance, it approached significance on both the pre- and posttest ($p=.12$) and reached significance on the mid-test ($p=.04$). Facet 5 (Frequency), however, did reach significance on both the pretest ($p=.05$) and the posttest ($p=.01$). The differences on the pretest favoured the experimental group but favoured the control group on the posttest.

iii) Growth on Subscores: Response Journals

The variables Creative Expressions, Speculations and Digressions were combined to form Facet 2. As Table 9 shows the experimental group showed losses on two of the variables that make up this facet. It lost .23 on the pre-/mid-test and .16 on the pre-/posttest for Creative Expression; 3.77 on the pre-/mid-test and 2.23 on the pre-/posttest for Speculations. The control group however, with the exception of zero growth on the mid-test for Speculations, and -0.12 on the mid-test for Creative Expressions, showed positive growth overall on this facet. The only test it did not exceed the experimental group's growth on was the pre-/posttest difference for Digressions. The experimental group indicated positive growth

for Digressions only, showing an increase on the pre-/mid-test of 1.30 and 3.40 on the pre-/posttest. However, most differences in Table 9 are random and attributable to one or two individual students. For example, most of the increase on the mid-test for Digressions can be accounted for by one student who wanted to discuss other books he was reading and rarely made reference to When the Legends Die by Hal Borland.

Table 9. Response journals: means, standard deviations and pretest/mid-test ; pretest/posttest differences on final subscores

Variable	Facet #	Treatment	N	Pretest		Mid-test		Posttest		Pre/Mid Diff.	Pre/Post Diff.
				\bar{x}^1	s	\bar{x}^2	s	\bar{x}^3	s	$\bar{x}^2 - \bar{x}^1$	$\bar{x}^3 - \bar{x}^1$
Observation	1	E	13	8.00	6.22	11.77	10.26	17.69	11.65	3.77	9.69
		C	17	11.76	6.98	16.53	12.21	25.23	18.70	4.77	13.47
Understanding	1	E	13	2.00	2.89	2.38	2.75	4.08	4.33	0.38	2.08
		C	17	2.12	2.87	4.53	5.43	6.18	8.40	2.41	4.06
Information	1	E	13	4.46	3.20	6.92	4.82	7.77	3.83	2.46	3.31
		C	17	3.94	3.82	8.23	8.44	15.65	12.20	4.29	11.71
Revisions	2	E	13	.85	.99	1.00	.91	2.00	2.24	0.15	1.15
		C	17	.71	1.49	.94	1.14	1.59	2.06	0.23	.88
Creative Expression	2	E	13	.31	.63	.08	.28	.15	.38	-0.23	-0.16
		C	17	.35	.79	.23	.56	.71	.98	-0.12	0.36
Questions	3	E	13	1.23	1.92	3.38	2.33	6.85	8.53	2.15	5.62
		C	17	1.47	1.84	1.65	2.09	6.00	4.20	0.18	4.53
Digressions	2	E	13	.20	.63	1.50	2.80	3.60	7.01	1.30	3.40
		C	17	.88	1.73	5.12	11.37	3.29	7.03	4.24	2.41
Confidences	3	E	13	.61	1.19	.23	.44	1.23	2.24	-0.38	0.62
		C	17	1.06	2.49	1.06	2.30	3.59	8.37	0.00	2.53
Frustrations	3	E	13	1.92	1.66	2.46	1.90	3.08	2.96	0.54	1.16
		C	17	1.12	.93	2.29	2.23	1.82	2.13	1.17	0.70
Speculations	2	E	13	5.54	4.14	1.77	2.31	3.31	3.64	-3.77	-2.23
		C	17	4.23	2.82	4.23	3.90	4.53	4.80	0.00	0.30
Desire to know More	3	E	13	1.00	1.35	2.00	1.73	5.69	6.92	1.00	4.69
		C	17	1.35	2.34	2.41	3.00	5.35	4.39	1.06	4.00
Frequency	5	E	13	3.08	.28	3.46	1.13	6.61	1.56	0.38	3.53
		C	17	1.94	.97	3.88	1.93	5.59	2.26	1.94	3.65
Length	6	E	13	231.54	110.42	386.46	325.11	563.54	191.01	154.92	332.00
		C	17	160.71	101.32	375.94	332.44	495.23	374.33	215.23	334.52

It is interesting to note that the experimental group showed more positive growth than the control group on three variables only, all of which are components of Facet 3. The experimental group exceeded the control group on both the pre-/mid-test and pre-/posttest on Questions but on the posttest only on Frustrations and Desire to Know More.

A single variable, Frequency, constitutes Facet 5. Both the experimental and control groups exhibited positive growth on this variable with the control group exceeding the experimental group on both the pre-/mid-test and pre-/posttest. The differences were quite large initially favouring the experimental group but very small over the entire experiment.

Facet 6, like Facet 5, is one variable only--Length. The students in the experimental group wrote, on the average, seventy more words than the students in the control group on the pretest measure. Therefore, because the experimental students wrote seventy words per entry more on the pretest, they had to keep writing more to maintain their initial superiority. They did, for the most part. On the mid-test and posttest they also made longer entries but, in terms of growth, the control group exceeded the experimental group both at the mid-point in the experiment and at the end of the experiment. The final differences of two points when the standard deviations are as much as 375 points, are trivial. Although the experimental group wrote more over time, and for each time period, the differences in growth were essentially

the same thus accounting for no significant differences on the MANOVA.

Part C: Qualitative Analysis of Teacher Interviews and Logs

In order to keep a record of behavioural changes in students that could be a reflection of changes in attitude and their own changes in attitude toward the use of response journals as part of their instruction, participating teachers were asked to maintain personal logs throughout the duration of the experiment. As well, both a pre- and post-experiment interview was conducted with the individual teachers.

Although his personal log and both the interviews conducted with the science teacher indicated that he was carrying out the experiment as directed, in the final analysis this proved to be untrue. He said he was doing what he was asked to do (he even appeared to be 'enthusiastic') and his personal log stated he was, but he simply did not have his students do the assigned work. The science journals, without exception, had no entries recorded in them from week 5 through and including week 7 of the experiment nor in weeks 9 and 10. Consequently, any attempt at analysis of either his interviews or personal logs would be misleading.

The English teacher's post-interview (Appendix T) reveals an increasing willingness to use and enthusiasm toward the use of response journals in his subject area. In response to the

question,

Do you use or will you use more writing activities to help your students learn content in your subject area?

he replied,

I certainly will. It's been a valuable lesson for me and something, as I said before, something I've been a bit afraid of. Now it's really encouraged me to take a lot more risks and I think it's well worth it.

Both his personal log and his post-interview reveal a positive attitude toward the use of response journals as an aid to understanding his students and as a source for lesson planning.

Excerpts from Personal Log

I am very delighted that some students used their journals to discuss other topics of concern. For example, one young lady used Tom's being the victim of what she viewed as racism to discuss how she was the victim of stereotyping. Her response showed real insight into the problem and I thoroughly enjoyed her sensitivity.

I am really amazed at the type of questions students ask. Firstly, they are far more naive than I thought.

Excerpt from Post-interview

Interviewer: Would writing to express emotions concerning the course--for example, anxiety, confusion, discontent--be appropriate in your class?

English Teacher: I find that to be a very good indicator of how kids feel about what's happening with the assignments I'm giving them through journals. Also I'm able to get a lot better sort of finger on the pulse of what kids are feeling from doing the assignments and encouraging them to respond with what they're doing. That way I get a better idea of what they're learning and what they're not learning.

However, the English teacher's personal log provides evidence that his teaching style and interpretation of open-process response may indeed have been a contaminating factor influencing the non-significant outcomes of the experiment. One of his entries during the seventh week of the experiment states,

One student commented, "Why are you being so critical?" i.e., red pen, circle mistakes etc.(student was in experimental group). I think he feels afraid to make mistakes therefore I am stymieing him.

Furthermore, throughout his journal he indicates a decided preference for the control group over the experimental group. "I have trouble not directly re-inforcing the control group. I really enjoy reading some excellent responses..."

Summary

Chapter Four has presented the findings of the study categorized primarily according to the research questions posed. As explained previously in this chapter, the research questions involving the science data and the sub-group of Native Indian students could not be addressed. The hypothesized gains for the treatment condition on all remaining research questions were not confirmed. Furthermore, any statistical significance that was discovered was not in the hypothesized direction.

Results on the first measure, the attitude questionnaire, revealed no significant differences overall or on the sub-categories (source, audience, response and/or purpose). The small differences that were found generally favoured the

control group and the boys. On the sub-categories, both groups (experimental and control) remained relatively stable on the purpose and sense of audience categories but showed losses on the response category. The changes on the sub-category source were the only ones that showed growth in the hypothesized direction on this measure and were largely due to gains made by the experimental boys (almost one standard deviation). However, because the results for this measure and those of the writing measure were statistically nonsignificant, they are uninterpretable.

Results based on the writing measure (two in-class essays pre and post) again favoured the control group over the experimental group. Overall the control group gained about one-quarter of one standard deviation in content and almost one-half a standard deviation in mechanics while the experimental group showed no growth or marginal losses.

The student response journals consisted of fifteen modes and formal features (reduced to five facets for the MANOVA). Because a significant difference was found between the experimental and control students on the pretest for the multivariate analysis of variance ($p=.001$), analysis of covariance was conducted. Two facets accounted for the significant F-ratio: Facet 2 (Creative Expressions, Speculations and Digressions) and Facet 5 (Frequency). On all three variables that make up Facet 2, the control group exhibited more positive growth than did the experimental on both the pre-mid and pre-post comparisons. Facet 5 was

significant at the .05 level of confidence both initially and on the pre-post comparison and approached significance on the mid-test (.07) with the changes observed favouring the control group. When the raw scores were examined, the experimental group showed more positive growth than the control group on three variables only, all of which are components of Facet 3 (Confidences, Frustrations, Questions and Desire to know more).

The qualitative analysis of the English teacher's personal log and his interviews reinforced the conclusions arrived at in Chapter Five of this study. The teacher's role in this study and his interpretation of open-process response as well as the perceived initial inequalities of the experimental and control groups may have influenced the non-significant differences found between the two groups.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary

The primary purpose of the study was to examine the effects of the treatment, an open-process mode of response to students' writing in response journals versus a traditional mode of response, on grade-nine science and English students' attitudes toward writing. Secondary and tertiary concerns asked about the effects of treatment on these students' writing abilities and the effects of administering the treatment on the attitudes of participating teachers.

The study was a controlled experiment with two teachers (science and English) instructing four classes, divided into two experimental and two control groups, to which students had been randomly assigned. Over a twelve-week term eight measures were administered: a pre- and posttest attitude, a pre- and posttest writing measure (English essays), a pre- and posttest science experiment, and pre- and post-teacher interviews. Students in all four groups were required to maintain response journals throughout the experiment. The participating teachers were asked to maintain personal logs in order to keep a record of the following:

a) observations of behavioural changes in students that could indicate attitude changes toward: i. writing, ii. writing in their journals, and iii. the teacher,

b) personal reactions to the use of response journals as vehicles for writing to learn in their subject areas, and

c) insights regarding the effects that the nature of their responses have on student attitudes toward: i. writing, ii. writing in their journals, and iii. the teacher.

Prior to the experiment, three pilot studies were conducted. Two were performed on the attitude measure in order to test the adequacy of this instrument. The third pilot study was conducted in order to give participating teachers practice in both modes of response prior to the treatment period.

A posthoc test for item reliability was performed on the attitude measure that resulted in a Hoyt Estimate of Reliability of .94 after the two items found to be unreliable by the LERTAP program were removed. Three raters scored the compositions using a holistic marking scale. After making adjustments suggested by Diederich (1974), rater reliability on the essay ratings was .94.

Discussion

In answer to the fourteen research questions asked in Chapter One, the following findings are provided.

Attitudes toward Writing

Because the results for this measure were statistically nonsignificant, they are uninterpretable. Very small, negative changes were registered on the attitude measure by

both the experimental and control groups with the experimental group showing slightly more negative changes than the control. When examined by gender, the girls in both groups showed more negative change than did the boys. The greatest difference, -2.5 demonstrated by the experimental girls, is only one-sixth of a standard deviation indicating that the changes were extremely small. Such small differences would not have been significant had the sample size been larger. Furthermore, the treatment could not be considered potentially successful because even these small differences favoured the control group.

Examination of the changes in raw scores for the four sub-categories on the attitude measure revealed primarily negative growth in all sub-categories. Experimental and control groups showed no changes over the course of the experiment on two sub-categories, purpose and sense of audience. The experimental group showed a large positive change (almost one standard deviation) on the source sub-category. However, these changes appear to be attributable to the extremely low scores of the experimental boys on the pretest. Both groups showed substantial losses in the sub-category response but the experimental group showed greater losses than the control group did.

Growth in Writing

Comparison of pre- and post- essay scores revealed that, contrary to expected outcomes, the control group showed gains

in both content and mechanics whereas the experimental group showed no gains or marginal losses. The differences on mechanics for the control students (about one-half a standard deviation) might be accounted for, in part, by the fact that control students' journals were marked for mechanics. This may have made students more aware of errors in written usage even though there is no previous research evidence to substantiate this claim. Indeed, research indicates the opposite (Hillocks, 1986).

Investigation of the response journals, however, revealed an anomaly directly related to the writing of compositions. Prior to the posttest the teacher of English encouraged both groups to use their response journals as a source for the content of their essays. Seventeen out of twenty students in the experimental group used their journals as a source for content as opposed to seven out of nineteen students from the control group. Nonetheless, content scores for the experimental group were lower on average than those in the control group.

Student Response Journals and the Effects of Treatment

Over the twelve weeks of the treatment, students who had been taught using the open-process mode of response by their teacher did not show greater growth on the five facets tabulated for response journals (reduced from the fifteen modes and features used to categorize the response journals) when multivariate analysis of variance was performed on them.

However, due to a significant difference indicated on the pretest, a stepdown analysis was conducted to discover which factors were responsible for the significance. Also, although the results for the posttest were nonsignificant, they did approach significance (.07).

On the pretest, two facets--Facet 2 (a composite of the variables Creative Expressions, Speculations and Digressions) and Facet 5 (the single variable, Frequency)--were responsible for the significant F-ratio (.001). On all three variables that make up Facet 2, the control group showed more positive growth than did the experimental group at both points during the experiment. On the pretest Facet 5 was significant at the .05 level of confidence in favour of the experimental group. It also approached significance on the mid-test (.07) and reached significance on the posttest. Again the changes observed were not in the hypothesized direction with the control group exhibiting greater positive change than the experimental group.

Conclusions

Statistical analyses performed in the current study did not reveal evidence to support the hypothesis that an open-process mode of written response by a teacher to students' writing in response journals would result in measurable changes in attitude and/or growth in writing ability. Under the conditions described in the current experiment, statistically significant changes were not produced on either the attitude or writing measure. Only two

of the five facets in the journals reached statistical significance at the .05 level of confidence. All three of the points on the two facets favoured the control group indicating, for the most part, that the changes observed were not in the hypothesized direction.

The following discussion, therefore, addresses the research problem by attempting an analysis of its failure to reject the null hypotheses. Analysis of the key design features of the study and procedural methods used are the two perspectives adopted in an attempt to draw the four strands of the study (changes in student attitudes toward writing, growth in writing ability, the effects of treatment on student response journals and qualitative analysis of student journals and teacher responses) into a more cohesive and revealing portrait that accounts for the unpredicted outcomes of the experiment.

Design Features

General threats to the reliability of the conclusions are found in the sample size, the success of randomization, and the measures used. None, however, seems to offer a satisfactory explanation of the results.

i) Sample Size

The small final number of subjects (thirteen experimental and seventeen control) for the MANOVA created a problem for the statistical analysis, reducing its power greatly. Attrition, both after randomization procedures had been carried out before the onset of the experiment and throughout

its duration, is primarily accountable for the loss in sample size which began with fifty and ended with thirty students. However, the differences found were not only statistically non-significant but also frequently in the wrong direction, suggesting that the increased statistical power of a larger sample size would not have altered the results significantly.

ii) Initial Differences

A contaminating factor to the experiment may have been the initial differences between the two groups (experimental and control) even though stratified random procedures were used. Although the two groups exhibited no statistically significant differences in the beginning, on the pre-essay and attitude measures, they were not exactly the same. Indeed, on the pre-journal, the experimental group had significantly higher scores on facets 2 and 5. Even though objective measures favoured the experimental group at the onset, according to the perception of the English teacher, class chemistry favoured the control group (i.e. as a class, he found them more willing to learn and more enjoyable to teach than the experimental group).

iii) Duration

Hillocks (1986) states that "... many experimental treatments show no significant change in comparison to their control groups because their duration is too short" (p. 191). In his analysis of 2000 studies on written composition, he tested this hypothesis by grouping experiments according to their duration--those under thirteen weeks in duration were

compared to those over thirteen weeks. His findings were inconclusive.

Apparently some short treatments are effective, while some are ineffective. The same is true of treatments of longer duration. The problem is to discover what characteristics of treatments, aside from duration, appear to be responsible for differences in the effect sizes (p. 192).

Perhaps twelve weeks, the duration of the treatment for this study, is not ample time to expect significant changes on such a complex and intangible variable as attitude regardless of how effectively the treatment is carried out. However, since the changes that did occur were not in the hypothesized direction, to assume that maintaining the treatment for a longer period of time would have resulted in significant changes favouring the experimental group would be unsupported.

Measures Used

One possible explanation for results that turned out contrary to those hypothesized is the power of the measures. The essay and the attitude measures used in this study were based on measures used in previous research that proved them effective. The source for the journal measure was The Journal Book by Toby Fulwiler (1987), a compilation of case studies centered around the use of response journals.

i) The Attitude Measure

Based on "The P & R Writing Attitude Form" (Appendix M), the attitude measure used in this study was adjusted and refined through the course of two pilot studies before being administered as part of the experiment.

First, to adapt the college level vocabulary of the original form, words representing opposite poles on the scale were adjusted to a grade-nine readability level while still maintaining the integrity of their initial categories. The revised attitude measure was pilot tested with an intact grade-nine class in June 1990. Students were asked to make note of any words they had difficulty in understanding. Their suggestions were incorporated in the adapted version.

In August 1990, the opposing, single-word choices on the scale were changed to statements in the belief that this format is more clearly understood by grade-nine subjects. The original form is also lengthy, comprised of fifty-two items. These items were reduced to twenty-nine statements in the final form because many of the items appeared to be redundant. In addition to the above changes, two practise questions were included to facilitate subjects' understanding of the form during administration of the attitude measure.

A second pilot test of the measure was conducted in September 1990. Six grade-nine students, who were not participants in the experiment, were asked to complete the measure using a think-aloud protocol that was tape recorded. Difficulties students had in understanding particular words were used to guide a subsequent adaptation of the measure. Furthermore, the internal reliability of the measure was checked by the LERTAP program; the Hoyt Reliability (.94) was very high on the twenty-seven items used in the statistical analysis.

What the above precautions (use of the form in previous research, pilot tests and testing for internal reliability) do not show is how sensitive the final measure is to changes in attitude. Because it is believed that the measure maintains the integrity of the original four sub-categories (source, audience, response and purpose), this suggests the measure has a broad sensitivity to attitude changes. Therefore, the sensitivity of the attitude measure does not appear to be a strong contributor to the failure to reject the null hypothesis.

ii) The Writing Measure

The following precautions were taken to ensure reliability of the scores elicited from the students' formal written products. The compositions were administered and their subsequent ratings scored according to methods and scales used--proposed by Diederich (1974)--in previous studies, both large and small scale.

Using Pearson Product Moment Correlation, rater reliability was found to be very high (.94). The validity is supported by the marking scale used as a guide for the raters for scoring the essays: this scale was adopted from the English 12 scale used by the B.C. Ministry of Education marking teams.

iii) The Response Journals

The fifteen modes and formal features that constitute the categories for analysis of student response journals in this study have been taken from the "Introduction" of The Journal

Book edited by Toby Fulwiler (1987). The list, (said to represent a "core of common features" characteristic of good journals) is based on Fulwiler's own experiences and those of 'the forty or so teachers' who contributed chapters to his book in response to the question, "What, exactly, are good journals?" (p. 2). Although the categories used to analyze response journals in this study have not been tested for validity through experimental research, the model is supported by data from more than forty case studies. As a result, the checklist used to classify features of the student journals appears to be valid.

Procedural Elements

i) Administration of the Treatment

In order to ensure that participating teachers became familiar with the guidelines of two modes of teacher response (open process and traditional), a pilot study was conducted in the fall of 1990 prior to the experiment during which the science and English teachers received coaching in both modes of response. The teacher of English practised on an intact grade-seven literature class and the science teacher practised on an intact grade-eight science class. Each class was divided in half; one-half designated as the control group and the other as the experimental group. Teachers asked students to respond to what they were learning in class following "Guidelines for Student Response" (Appendix C). The pilot study took place over a period of two weeks during which six practise response sessions took place. The two teachers and

the researcher met after the collection of each set of responses in order to formulate responses to what the students had written. An exemplar for each mode of response (Appendix K) was provided and parameters for teacher response to be followed during the experiment (Appendix D) established.

In addition, weekly meetings were established between the participating teachers and the researcher throughout the experiment in order to monitor any discrepancies and discuss problems as they arose in reference to the use of the two modes. Training and monitoring of the teachers, then, should have ensured correct administration of the treatment. Despite these precautionary measures, it appears that the execution of the treatment by the English teacher (the science teacher dropped out of the experiment) was not that envisioned by the researcher. Evidence in student journals and in the researcher's weekly logs attest to the observation that open-process responses made in the experimental groups' response journals were interspersed with traditional, directing responses. Furthermore, analysis of the control groups' response journals revealed open-process responses interwoven with traditional responses. These may, in part, be attributed to the classroom teacher 'liking' the control group better than the experimental group prior to and during the experiment. Therefore, it is believed that the teacher's role in this study (his interpretation of open-process response) coupled with the perceived initial inequality of the groups

contributed to the outcomes of the experiment--no significant differences.

Alternative Interpretations

We are left then with four possible explanations of the results:

1) Extraneous factors unknown to the researcher may have influenced the outcomes of the experiment. Because of the inclusion of the following design features and procedures, this seems an unlikely explanation:

--Comparability was assured through random assignment of students to classes.

--All participating subjects were pretested using direct tests of writing similar to those used as posttests.

--The same instrument was used as a pretest and posttest to measure changes in attitude.

--Classes were assigned randomly to treatments and were taught by the same teacher (both the control and experimental groups) in their subject areas.

2) Failure to reject the null hypothesis supports the conclusion that the method of instruction tested by this experiment has no potential for improving student attitudes toward, and skills in, writing. This also seems an unlikely explanation based on both this study's pilot work and work published by others in the field of composition.

3) Predicted results could be achieved if changes in procedure and design were implemented in a replication of this study. A more rigorous method of ensuring that the

treatment is being carried out as described--that it is actually occurring in the classrooms--is suggested.

4) Extending the duration of the experiment might produce the predicted results. This explanation would be a more tenable one if the procedures were perceived to be unsound or that the results favoured the experimental group on any of the measures.

Recommendations for Further Research

Replication

Because of a solid theoretical base for, and the carefully controlled design of, the present study a replication of the experiment would likely benefit further research. Two alterations in the procedures and one in the design that may have been responsible for the failure to reject the null hypothesis are recommended however. Greater control for teacher response, either through a more prolonged coaching session prior to the administration of the treatment or more careful monitoring during the treatment, should be considered. Extending the duration of the experiment, for example, two terms instead of one, might result in expected outcomes. Finally, the statistical power of the experiment would be greatly enhanced by increasing the sample size through the addition of classes or creating larger initial class sizes. This, however, does not necessitate a change in the design of the study since had the students in science classes been included the sample size would have been adequate.

Administration of the Treatment

As will be elaborated on in the epilogue, despite a training session prior to the experiment and weekly meetings during the experiment, the administration of the treatment did not go as expected. Therefore, the following recommendations are made for future researchers:

1) The researcher should have more effective ways of monitoring the administration of the treatment and the collection of data than those used in the present study. Although the experiment was not destroyed because the science data were not used, this data would have been unavailable because the science teacher did not collect the data even though he said he had. Also, journal entries in both science classes were nonexistent for at least one third of the duration of the experiment. Suggestions for more effective ways of monitoring these aspects of the procedures are class visitations and reading of students' journals.

2) Future research could benefit from the exercising of minimal controls for teacher variables (i.e., attitudes and philosophical orientation) when choosing participating teachers. To administer the treatment effectively, teachers must have a philosophical orientation that is compatible with the goals of the experiment although the generalizability of the findings would be limited to those teachers with the same philosophical orientation.

Untested Hypothesis

The original questions included reference to the subgroup of Native Indian students. These questions were not addressed because the school population did not allow for their inclusion as will be discussed in Chapter Six. Inquiry into the effects of two modes of written response on the attitudes and writing ability of Native Indian students could prove to be promising.

CHAPTER SIX

EPILOGUE

But Mousie, thou art no thy lane,
 In proving foresight may be vain:
 The best-laid schemes o' mice an' men
 Gang aft a-gley,
 An' lea'e us nought but grief an' pain,
 For promised joy (Burns, 1785).

Like Burns' mouse, my 'best laid scheme,' my carefully planned empirical investigation of the effects of two modes of teacher response on students' writing to learn in response journals, has gone 'a-gley'.

The scheme was well laid:

1) I was permitted to conduct an experiment that allowed for true randomization of subjects;

2) I had, not only daily contact with the participating teachers, but was married to one of them (who could ask for better control?); and

3) I conducted three pilot studies on intact classes in the school from which the experimental sample was to be drawn in order to test the measures to be used and to coach teachers in the administration of the treatment.

One would think such a sterling opportunity could not go 'a-gley'. What went 'a-gley'?

Administration of the Treatment

I believed at the onset of the experiment that because both the science and English teachers had consented to participate in the study they would show a willingness to incorporate writing in their classroom instruction. The

opposite proved to be true, completely true in the case of the science teacher. In the case of the English teacher, willingness was not a factor but teaching style combined with interpretation of modes of response was.

The Science Teacher

One qualitative feature of the experiment was that both teachers involved in the research were to carry out dual roles, those of participant and observer. Smith (in Borg and Gall, 1989) observed that individuals participating in case study research often "mask" (p. 392) what is really going on from the researcher. While the experiment was being conducted, I suspected that some 'masking' was taking place on the part of the science teacher. Hesitant to challenge a colleague, who was also a fellow staff member and volunteer participant in the experiment, I did not fully discover this 'masking' until the coding and analysis of the data was initiated. The science journals, without exception, had no entries recorded in them from week 5 through and including week 7 of the experiment nor in weeks 9 and 10.

Weekly meetings with both participating teachers were conducted throughout the experiment. Both teachers were asked to bring their student journals to each meeting so that 'teacher responses' could be discussed. For the weeks that no student responses appeared in the science journals, the science teacher presented a variety of explanations as to why he didn't have his class sets with him.

Excerpts regarding the science teacher recorded in the researcher's log:

Week 3.

"I [the researcher] do not feel that I am running this experiment properly. I have always been and am extremely reticent to tell my peers what to do and how to do things. [The science teacher] seems negative about it [the research] today."

During week 3 of the experiment, the science teacher stated, "... as a method of instruction, this is bullshit."

Week 4

In reference to the journals:

"I'm sorry. I didn't know you expected me to have them here. I'll make sure I have them with me next time."

A week elapsed.

"I'm afraid that they don't have much in them this week because we ran out of time. I'll really concentrate on making time for them."

Week 7

"I forgot them at home. The kids have them because we ran out of time in class for them to finish their entries."

"All the while the science teacher sat, resting his hand on the stack of student journals. I couldn't very well arm-wrestle him for them could I?"

Another week elapsed.

Week 8

"[The science teacher] was reticent to show me student journals at lunch hour today. I managed to peek at a few. Students are not writing much. [The science teacher] is not very enthusiastic about this project and I feel quite defeated and depressed about this. I don't seem to be able to keep him enthusiastic. I think the reason he's sending the journals home now is because the project is almost finished and he hasn't been doing what he said he was going to (pure speculation on my part)."

Unfortunately, due to the nonparticipation of the participating science teacher, all of the science data were 'grief' and could not be used. Constrained by a highly structured and content-laden curriculum, I think he viewed the use of response journals as something 'added on' to an already heavy work load.

The English Teacher

Enthusiasm for the project and a willingness to incorporate response writing in his teaching practices were not issues in the administration of the treatment by this teacher. However, a more complex and nebulous problem was that of his teaching style and philosophical orientation to education which did not appear to be compatible with the guidelines established for open teacher responses to student writing in this experiment.

The teaching style of the English teacher could be termed 'presentational' (Hillocks 1986) and his philosophical orientation to education 'academic' (McNeil 1985). Although instruction was parallel in experimental and control classes, the inclusion of traditional components related to the novel study may have overpowered and negated the effects of the open-process responses isolated in the student response journals. Traditional components such as chapter questions, quizzes and a final comprehensive exam on the novel--all of which suggest one right answer--may have acted as a counterbalance to the teacher's open-process responses to the experimental students in their response journals.

Furthermore, the two modes of response were not administered purely to the designated treatment groups. In addition to the responses they were supposed to receive, the control students frequently received "open praising" responses and the experimental students frequently received corrective responses. As the following excerpts illustrate, not even family coaching helped.

Excerpts from student response journals that illustrate this contamination: Experimental Group

Student #3: Entry 4 (Week 4)

"I have a little difficulty with your sentence structure because if you read the last part of your entry here it is all one sentence."

Student #6: Entry 4 (Week 4)

-spelling error indicated
-capitalization error indicated

Student #8: Entry 4 (Week 4)

"I would enjoy your responses more if I could read them."

Excerpt from the researcher's log:

Kitchen table discussion (Week 4).

R: "You [the English teacher] are not supposed to circle their errors. You're not supposed to even notice them. You're just supposed to be encouraging."

T: "I know. I can't help myself. When I see them doing something wrong, I feel it's my job to point it out."

R: "I know. But, for this experiment, please, please, try not to do it anymore."

T: "Okay. I'll try."

Excerpts from student response journals : Experimental Group

Student #4: Entry 5 (Week 5)

"Try and avoid starting a sentence with and."

Student #6: Entry 12 (Week 10)

-two spelling errors indicated

Student #15: Entry 5 (Week 5)

"Write rough copies first then write out these entries neatly."

One week prior to the experiment, random assignment of treatment groups took place by the flipping of a coin. The English teacher wanted the experimental group to be the control group. As late as week five into the experiment I recorded in my log that he was "...still talking about how he wanted the experimental group to be the other block". I believe this attitude toward the control group accounts for the great number of open process responses he made to them in their journals.

Excerpts from student response journals: Control Group

Student #3: Entry 2

"Great response - you challenge the novel with some excellent ideas. ... Write lots--it's wonderful to read."

Student #21: Entry 6

"You are doing just fine. You are an excellent writer...."

Entry 9

"The quote is a fascinating one. I would like you to try and figure it out.... There is no 'right' interpretation--Try (a good journal entry item!)."

The English teacher, like those teachers in Langer and Applebee's study How Writing Shapes Thinking (1987), took to

his classes a different interpretation of the goals of the experiment than I did. His interpretation, as mine would be, was shaped by his view of what his role as a teacher should be.

Untested Hypothesis

One of the initial reasons that I became interested in response writing was because of the personal experiences I have had in teaching English to Native Indian students. With these students, I have been most effective when room for some kind of private personal interaction is allowed for in the course of a lesson. These students, more often than not, have used their journals to tell me, and ask advice about, problems they are experiencing in their personal lives.

The best example of establishing this kind of trust and rapport with a Native student through the use of journals is an experience recounted to me by a fellow staff member. While I was doing my course work for my Master's Degree, I kept in close contact with my colleagues at the school from which I was on leave. They, of course, were very much interested in what I was studying. One teacher of English, in particular, decided to do journal writing with one of his grade-seven classes. Following is an excerpt from a letter he sent to me while I was doing my course work (used with permission).

I teach one Native girl who has not done any other assignments in class except her journals. She has gone from writing one or two sentences, when we first began, to writing full pages during the short time allotted for this activity. We have discussed everything from her complicated and quite horrible personal life to pop lyrics as poetry.

Her journal is the only place in which I am reaching her. In fact, I think the journal has provided us with a vehicle to defuse potential confrontation situations in the classroom. Her attendance rate has improved over the past few months as well. Whether or not this can in any way be credited to journal writing I cannot say, but it is logical to me to infer that the journal is an important part of a caring atmosphere which is hopefully an inviting atmosphere.

In the year the experiment took place, our school was fortunate enough to receive funding from the Department of Indian Affairs to set up an Alternate Self-Paced Program (ASP) in an attempt to counteract the high drop-out rate of Native Indian students. This program directed enrollment of the majority of Native Indian students away from the regular classrooms to such a degree that their representation in the classrooms under study was virtually non-existent. However, I still believe strongly in the effectiveness of response journals as a means of reaching 'high, at-risk' students--whether Native or otherwise. The untested hypothesis, the original impetus behind this 'best laid scheme', promises 'joy' for future research.

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Appendix A: Letter of Permission

**School District 70 Alberni**

4690 Roger St., Port Alberni, B.C. V9Y 3Z4 Ph. 723-3565

September 24, 1990

UBC Behavioural Sciences
Screening Committee
University of British Columbia
Vancouver, B.C.

Dear Members of Screening Committee:

This letter will provide approval for Mrs. Elaine MacKay, U.B.C. Masters student, to conduct her study entitled "The effects of teacher written response on the attitudes of students toward writing to learn in response journals" in School District #70 (Alberni) and at E.J. Dunn Junior Secondary School specifically.

I know Mrs. MacKay to be a committed teacher of English who has demonstrated the necessary sensitivity to conduct interviews with student subjects on the topic being studied. It is my belief that the results of her study will have the potentiality of improving instruction for students, particularly Native Indians.

I have no hesitation in giving Mrs. MacKay the approval to proceed. Please do not hesitate to call me should more information be required.

Yours truly,

A handwritten signature in dark ink, appearing to be 'N.J. Thiessen', written over a horizontal line.

N.J. Thiessen
Superintendent of Schools

NJT:mc

cc. Mrs. E. MacKay

Excellence in Education

Appendix B: Parental/Guardian Consent Form

TITLE: The Effects of Teacher Written Response on the Attitudes of Students Toward Writing to Learn in Response Journals.

As you probably know, most people tend to remember ideas better after they have written about them. At E.J. Dunn this year we are conducting an experiment to help students learn through writing. We would also like to know if this influences students' attitudes to writing and school.

I am conducting this experiment as a graduate student at UBC under the supervision of Dr. Joe Belanger, a professor in Language Education.

We would like to ask you to give your permission for your son/daughter to participate in this experiment.

Your son/daughter, should you consent to his/her participation, will be asked to do the following:

1. Answer a questionnaire both before the experimental period starts and immediately following. The experiment will take place throughout the course of the second term. The questionnaire invites students to express their attitudes toward writing and what is important to them when they write.

Appendix B continued

2. In English, provide three writing samples, before, during and at the end of the experiment that will be rated both for the purposes of the experiment and separately as part of their English course work.

3. In science, students will be given two science problems to solve: one at the beginning of the experimental period and one at the end. The science problems will be alternate versions of each other but at the same level of difficulty. These will be rated for the experiment only.

4. All students will be expected to maintain journals that express their responses to what they are learning in class. These journals will be rated for the experiment and separately as part of a student's English or science mark.

Students will not be required to dedicate any time to this project beyond the regular subject area demands.

Student writing assignments and response journals will be collected at the end of the instructional period, photocopied, coded to ensure anonymity and returned to the students.

Of course, when I report our results, names of individual students will not be used. Only your son/daughter, you, his/her teacher and I will know these individual results.

Appendix B continued

Students are not required to participate in this project and may withdraw at any time without harming their school grades. Of course, since the writing is part of the school curriculum, your son/daughter will be required to do it in any case. However, should you choose not to allow your son/daughter to become part of the experiment, I will not include his/her ratings in my calculations.

I would be happy to answer any questions regarding this project. Please feel free to contact me at E.J. Dunn, Monday to Friday, 8 a.m. to 5 p.m. at 723-7522 or at my home in the evenings between 7 p.m. and 10 p.m. at 724-2926.

Please place a check mark in the appropriate boxes.

I acknowledge receiving this consent form.

I consent do not consent to my child's
participation in this project.

(student's name)

(Parent/Guardian signature)

(Date)

Sincerely,

Elaine MacKay
Department Head-English

Appendix C: Guidelines for Student Response Journals

Literature:

Getting Started; Tell students they may choose to respond to the Literature, the text or the task/activity by telling you whatever they want you to know about how they are thinking or feeling about what they are doing. If they seem hesitant or unsure, offer these suggestions to get them started.

The character seems...

The story is realistic/unrealistic...

The message of the story is...

I like/dislike...because

This reminds me of...

I don't understand...

The next thing that is going to happen is...

This story is/ is not well written because...

I don't know why the author did...

Why...

The story is about...

Appendix C continued

Science:

Getting Started: Tell students they may choose to respond to the text or the task/activity by telling you whatever they want you to know about how they are thinking or feeling about what they are doing. If they seem hesitant or unsure, offer these suggestions to get them started.

I found this topic interesting because...

I had trouble understanding...

Am I right in thinking...

I like/dislike because...

Something that I didn't know before...

I don't know why...

Is it true that...

I knew about this before because...

Does this have anything to do with...

Appendix D: Two modes of teacher written response

EXAMPLES:

OPEN PROCESS RESPONSES:

1. Use a pencil

USE PERSONAL PRONOUNS

2. I agree...
3. I like this...
4. I hadn't thought of that
5. So do I.../So am I...
6. I hadn't thought of that...
7. You have taught me...
8. That reminds me of...
9. I had fun too!
10. I love your openness
11. Maybe next time you could spot something that was special to you and you could let me know. Share it with me.
12. Tell me more!
13. I enjoy hearing what you think.

14. Good answer
15. Wow! You have a great...
16. A good...
17. Good insight
18. Good
19. Imaginative
20. This makes sense
21. Yes
22. Keep up the good work!
23. Super!

24. OPEN ENDED QUESTIONS THAT ENCOURAGE FURTHER THOUGHT.
25. STATEMENTS AND QUESTIONS THAT EXHIBIT PERSONAL INTEREST.

EXCLUDE:

1. Comments on brevity--e.g. too short.
2. Positive comments that are disguised as negative comments. e.g. You can do better.
3. Half hearted responses. e.g. Possible.

Appendix D continued

EXAMPLES:

TRADITIONAL PARADIGM RESPONSES:

1. Use red pen.
2. Sentence errors are indicated.
3. References to punctuation/capitalization errors.
e.g. red circling errors and comments like, "Why capitalized?"
4. Check marks.
5. Satisfactory.
6. Slow down and try to write more clearly.
7. I don't understand what you are saying.
8. Explain.
9. Vague!
10. You need to provide more evidence here.
11. Don't use slang.
12. Don't...
13. This probably couldn't happen.
14. Use a dictionary.
15. What makes you think this?
16. Too general.
17. Messy--hard to read!
18. You have already said this.
19. Stick to the topic.
20. It seems you aren't getting much out of this class.
You only get out what you put in.
21. Listen more carefully.
22. You need to apply the theory from one day to the next.
23. Practise makes perfect.
24. Please watch how your time is used.
25. Why was it just okay?
26. Brief.
27. There must be something you could describe.
28. Look up words you don't know the meaning of.
29. Remember, field trips are only part of the year's work.
30. Interest is generated through getting involved.
31. There will always be those who "sit around and twiddle their thumbs".
32. Remember what your goal for the class period is.
33. I think you should...
34. Why don't you...
35. Have you read (reference to text)...
36. Try to...
37. Your journal would be better if you...
38. If you...then...
39. Make sure you...
40. Always/Never...
41. Read (page #)...

Appendix E: English--course content outline

NOVEL STUDY When the Legends Die by Hal Borland

- WEEK 1: Administration of Attitude Measure--Elaine.
Preparation for in-class essay.
Write in-class essay.
Distribute texts.
Discuss course evaluation - quizzes, tests, chapter questions, response journals (20%).
Guidelines for journal writing--discuss.
- WEEK 2: First response--students respond to quote at the beginning of the novel--"When the legends die, the dreams end."
Begin comprehension questions --section one (28 pages).
In-class reading.
- WEEK 3: Quiz on first section.
Begin section 2.
Responses ongoing.
Return first section questions - discuss.
In-class reading.
- WEEK 4: Start work on Part II.
Continuous journal writing.
In-class reading.
- WEEK 5: Mark and discuss Part II questions.
Directed responses--journal entries.
Part III.
Bonus vocabulary assignment.
Prepare for multiple choice quiz.
Journals.
In-class reading.
- WEEK 6: Quiz--pages 146-173.
Part III questions.
In-class reading.
Journals.
- WEEK 7: Go over Part III questions.
Distribute 40 mark word search package - character identification.
In-class reading.
Journals.

Appendix E continued

- WEEK 8: Start Part IV questions.
In-class reading.
Journals.
Work on word search package.
Directed responses--journals.
- WEEK 9: In-class reading.
Journals.
Complete questions to Part IV and word search.
Mark and review answers for final novel study exam.
- WEEK 10: In-class reading.
Journals.
Final exam.
- WEEK 11: Prepare for in-class essay.
Final journal entry.
- WEEK 12: View the movie.
Multi-paragraph composition--compare movie with novel.
Administer attitude measure--Elaine

Appendix F: In-class essays--composition topics

PRETEST:

Choose one topic and write on it.

1. Discuss prejudice. (e.g. What is it? What causes it? Give examples of it. How does it affect the people who are being discriminated against? How can prejudice be stopped?)

OR

2. Each person is the sum total of all his experiences. In order to find his true self, a person must accept his past, strive to understand it, and then build upon it. Provide examples.

POSTTEST:

Choose one topic and write on it.

3. Discuss how events in one's life can lead to self-knowledge. Provide examples.

OR

4. We become what we are partially due to the influences of others. Provide examples.

Appendix G: In-class essays--prewriting instruction

LESSON PLAN

Both pre and post essay format requirements were essentially the same although the second essay lesson varied slightly as students were already familiar with the format.

1. What is an essay? Discuss how it is different from a report.
2. Model essay --format. On blackboard, breakdown of what an essay looks like (i.e. a. Introduction, b.c.& d. body of the essay, e. Conclusion).
3. Discuss purposes of an introduction and conclusion.
4. Model good topic sentences.
5. Providing evidence--discuss what this means and how to.
6. Students are allowed to bring to class one 4 x 5 file card of notes while writing the essay.

Appendix H: Science--course content outline

SCIENCE JOURNALSINTRODUCTION

Give an experimental problem that each student can work with for one class period (35 min). At the end of the activity give them time to write in their journals. To start with have guiding questions on the board for which they can respond.

TEST EXPERIMENTSTOPICSAt the beginning of the term.

Goal - Using the supplies given you; how many ways can you make this candle change?

Task - A. When a change is made describe the change to the candle

B. What did you do to make the change?

C. Which changes were physical changes where no new products were formed?

D. Which changes were chemical changes where new products were formed?

At the end of the term.

Goal - Using the supplies given you; how many ways can you make the chemicals change?

Task - A. When a change is noticed describe the change.

B. What did you do to cause the change?

C. How could you tell the changes were chemical changes?

D. Write out the chemical equations for two (2) of the chemical changes that you did?

Responses	TRADITIONAL (closed)	EXPERIMENTAL (open)
1.		1. I'm glad you liked the exp. I enjoyed it too. Please tell me more.
2.		2.
3.		3.
4.		4.
5.		5.
6.		6.

Appendix H continued

A random toss of a coin was used to determine the experimental group.

RESULT	A (closed)	E (open)
--------	------------	----------

RESULT A (closed)

E (open)

STUDENT ORGANIZATION

- make notes on how they react.
- instill a care for their journal.
- if a class is missed they should note it.

- instill a care for their journal.

- if a class is missed they should note it.

- Getting Started - Give specific questions to start with. The questions should direct their thoughts on to important points of the class.
- State clearly what is going to happen during the class time and give expectations.

The questions should direct their thoughts on to important points of the class.

- State clearly what is going to happen during the class time and give expectations.

- Helpful Phrases -- I found this topic interesting because.....

- 1 I had trouble understanding.....

- It was difficult because.....

- It was easy because.....

- I was able to help my neighbour because.....

- Am I right in thinking.....

- I like/dislike this because.....

- I still don't know why.....

- Is it true that.....

- I knew about this before because.....

- Does this have anything to do with.....

NOTES

MEETINGS ARE TO BE HELD ON WEDNESDAYS. 3:40 ish

[illegible]

Appendix I: Science experiment--pretest

THE CANDLE:

Goal--Using the supplies given you; how many ways can you make this candle change?

- Task--A. When a change is made describe the change to the candle.
- B. What did you do to make the change?
- C. Which changes were physical changes where no new products were formed?
- D. Which changes were physical changes where new products were formed?

Appendix J: Science experiment--posttest

SCIENCE JOURNALS

NAMES _____

INTRODUCTION

At the start of this term you were given a task to try out. It was your job to take a candle and change it as many ways as possible. With each change you were to write down what the change was. Today you will be given materials which can be mixed, dissolved, and reacted together.

PURPOSE

It is your job for this class, to thoughtfully combine the materials provided for you. Do it such that you will have a good idea what caused the resulting change in the materials.

PREDICTION

What kinds of changes do you expect to see?

- A. _____
- B. _____
- C. _____

APPARATUS AND MATERIALS

- | | |
|------------------------|------------------------------|
| 1. sodium chloride | a. one large test tube |
| 2. copper I sulfate | b. one large test tube block |
| 3. calcium chloride | c. six small test tubes |
| 4. sodium hydroxide | d. one small test tube block |
| 5. hydrogen chloride | e. one 50 mL beaker |
| 6. magnesium | f. 2 wood splints (sticks) |
| 7. magnesium carbonate | g. a book of matches |

PROCEDURE

1. WORK with a PARTNER.
2. Get your materials and apparatus that are listed above.
3. Try as many combinations as you have time for.
4. REMEMBER - Each time you combine chemicals, you must record the reactions that take place. (IF YOU GOT A REACTION.)
8. If a gas is given off, (fizzing) test it with a burning wood splint and record your results.

OBSERVATIONS

AT THE START What did they look like?	AT THE END What did they look like?
Trial #1	Trial #1
A. _____	A. _____
B. _____	B. _____
Trial #2	Trial #2
A. _____	A. _____
B. _____	B. _____
Trial #3	Trial #3
A. _____	A. _____
B. _____	B. _____

PLEASE TURN THIS PAGE OVER AND CONTINUE

Appendix J continued

page 2

On this side I have given you more room to write. Please feel free to include as much as possible. REMEMBER - we always looked for observations before they reacted, during the reaction, and then after it quit reacting.

Trial #4BEFORE _____
_____DURING _____
_____AFTER _____

Trial #5BEFORE _____
_____DURING _____
_____AFTER _____

Trial #6BEFORE _____
_____DURING _____
_____AFTER _____

CONCLUSIONS

A. What did you do to cause the reactions during this activity?

1. _____

2. _____

3. _____

B. How were you able to help your partner? _____

Appendix K: Student writing samples--Two modes of teacher response

SAMPLE ONE: TRADITIONAL RESPONSE

JOURNAL ENTRY #1

Oct. 29

Is this a
logical
idea in what
terms we know
the story
so far?

I think the story is about a race car driver
entering a contest to see who's fastest driver in
the world. When he got the start line he put the
gas in drive and put the pedal to the floor.
When he's coming around the corner
the car flips over and lands in a
deep hole. He couldn't get out of the
car so he kept driving and driving through
the hole. There was no light his headlights
wouldn't come on he drove for
years and then he stopped because
he was out of gas. ~~He~~ ^{he} the car
door open and then something happened.

I think ~~the~~ ^{#2} Madge will find out
the other girl is but when she is driving
she will see a girl sitting in the car?

✓ The next thing ^{#3} going to happen is Madge and
Cunice will find out who killed Mrs. Baker
and the other girl.

This is so messy- it is practically impossible
to read. Please try to be conscious of the
fact (in the future) that I cannot mark
what I cannot read.

Appendix K continued

SAMPLE ONE: OPEN-PROCESS RESPONSE

JOURNAL ENTRY #1

Oct. 29

Be imaginative
thoughts →

I think the story is about a race car driver entering a contest to see who's fastest driver in the world. When he at the start line he put the gear in drive and put the pedal to the floor. When he's coming around the corner he the car flips over and lands in a deep hole. He couldn't get out of the car so he kept driving and driving through the hole. There was no light his head-lights wouldn't come on he drove for hours and then he stopped because he was out of gas. ~~He stopped~~ the car door open and then something happened.

I think ~~the girl~~ ^{#2} Madge will find out the other girl is but when she is driving she will see a girl sitting in the car.

Good prediction!

^{#3} The next thing going to happen is Madge and Eunice will find out who killed Mrs. Zeller and the other girl.

I think your last two predictions are specially good. They are logical and could possibly happen.

Appendix K continued

SAMPLE TWO: TRADITIONAL RESPONSE

Journal Entry 1st Oct 24.

^{F05}
 I have story about a night
 drive and the driver was being ^{up}
 chased by a zombi and 5 other William
 and she drove until she got
 to a ^{gas station} she filled her gas tank
 and left again she picked up
 her husband and then kept going and
 he asked her ~~was~~ where they were
 going and ~~was~~ why she was going
 so fast so she told him about the
 zombies and ghosts and William and
 he suggest to her to go to a
Dynasties so she killed him and
 a zombi jumped up and killed
 her.]

all one
sentence

Try not to use more than
 one 'and' in a single sentence.
 Take them out and rewrite
 each part as a new sentence.

Although your idea is imaginative,
 it does not fit with the realistic
 intention of the author.

Appendix K continued

SAMPLE TWO: OPEN-PROCESS RESPONSE

Journal Entry 1st Oct 24.

A horror story about a night
 dupe and the driver was being
 chased by a zombi and 5 other vilans
 and she drove until she got
 to a gas station she filled her gas tank
 and left again she picked up
 her husband and then kept going and
 he asked her ~~was~~ where they were
 going and ~~was~~ why she was going
 so fast so she told him about the
 zombies and ghost and vilans and
 he suggest to her to go to a
 Psychiatrist so she killed him and
 a zombi jumped up and killed
 her.

Yes - it is
 a horror
 story.
 Is that
 your
 favourite
 kind of
 story?

Wow! You have a very vivid
 imagination. Keep reading to
 find out if your predictions
 come true.

ND

Appendix L: Attitude Questionnaire

THE EFFECTS OF TEACHER WRITTEN RESPONSE ON THE ATTITUDES OF STUDENTS TOWARD WRITING TO LEARN IN RESPONSE JOURNALS.

As you probably know, most people tend to remember ideas better after they have written about them. In E.J. Dunn this year we're conducting an experiment to help students learn through writing. We would also like to know if this influences students' attitudes to writing and school.

I am conducting this experiment as a graduate student at UBC under the supervision of Dr. Joe Belanger, a professor in Language Education.

We would like to ask you to take part in this experiment. Of course, when I report our results, names of individuals will not be used. Only you, your teacher and I will know these individual results.

I would be happy to answer any questions regarding the project. Please ask me in person while I am discussing the project with your class or see me in my classroom - Room 800

You are not required to participate in this project and may withdraw at any time without harming your school grades. Of course, since this writing is part of the school curriculum,

Appendix L continued

you will be required to do it in any case. However, if you choose not to become part of the experiment, I will not include your marks in my calculations.

Sincerely,

Mrs. MacKay

I acknowledge receiving this consent form. I consent to participate in this project.

Signed: _____ Date: _____

Appendix L continued

The following form is designed to find out how you feel about writing and what is important to you when you write. Opposite ideas about writing are presented in each statement. If you strongly agree with the statement, fill in answer circle A on the computer bubble sheet. If you agree somewhat, fill in circle B. If both ideas are of equal importance to you or there is no difference in your mind between the two ideas, fill in circle C. Should you disagree somewhat with the statement, fill in circle D. If you disagree strongly with the statement, fill in circle E. The ideas expressed in each statement are neither positive nor negative. No value judgement is attached to either idea. There is no right or wrong answer.

A - Strongly agree B - Agree somewhat C - No difference
D - Disagree somewhat E - Strongly Disagree

PRACTISE SAMPLES:

Having a good breakfast is more important than having a good lunch.

A B C D E

Being able to express myself in my own words is more important than having rules provided that tell me how to write something.

A B C D E

Appendix L continued

QUESTIONNAIRE

1. Writing tasks assigned for school are more important than choosing what I want to write about.
2. I would rather write when it is required of me than write when I feel like it.
3. It is more important to write for a teacher or a course than to write for myself.
4. I would rather decide whether or not what I write has value than have a teacher tell me whether what I write is any good or not.
5. I would rather decide how much I want to write than have the teacher assign what I have to write.
A - Strongly Agree B - Agree Somewhat C - No difference
D - Disagree Somewhat E - Strongly Disagree

6. I would rather have the teacher tell me what to write than make up what I am going to write about.
7. It is more important to write what I am thinking than to write what I am told to write.
8. Writing for personal pleasure is of more value to me than writing for a teacher.
9. I would rather have choices or make up my own writing assignment than be told what I am to write about.
10. Writing for a test has greater value than writing creatively.
11. Writing to help me understand or learn something new is more important than writing for an assignment.
12. Writing for my teacher is more important than writing for others or for publication.
13. Writing to show what I know is more important than writing that helps me learn while I am doing it.
14. It is more important to write for a grade than it is to simply write.

Appendix L continued

15. It has greater value for me to write what I honestly think or feel than to write for a grade.
16. It has greater value to write something for my friends and classmates to read than it does to write something for my teacher to read.
17. It is more important to write without fear of evaluation than it is to write for evaluation.
18. I would rather write about something that personally interests me than to report about what I have learned.
19. It is more important to write for a grade than it is to write in order to help me understand myself better.
20. It is more important to write what I think than to write what I think the teacher wants me to write.
21. I would rather have my work marked carefully than just have it checked to make sure my ideas are on the right track.
22. Writing is more creative than practical.
23. I would rather have the teacher respond to my ideas than to have the teacher tell me what is right or wrong about what I have written.
24. Writing about factual matters is more important than writing about how I feel.
25. I need to learn to write so that I am better prepared for a career rather than to be better able to express myself well.
26. Writing is more work than fun.
27. The writing I do outside of school is more important than the writing I do for school.
28. I would rather write about imaginary events than actual events.
29. I would rather write about something I am involved in rather than about what I observe and am not involved in.

Appendix M: "The P & R Writing Attitude Form"

ORIGINAL FORM

THE P & R WRITING ATTITUDE FORM

The following form is designed to find out how you feel about writing and what is important to you when you write. It is made up of opposite concepts about writing. Each pair of opposite concepts is divided by a five point scale. You have to decide which one is important or very important to you or if there is no difference in your mind between the two. They are not positive or negative. There is no value judgment attached to any of them. There is no right or wrong answer. Please place an "X" in the space that indicates your feelings.

	VERY IMP.	IMP.	NO DIFF.	IMP.	VERY IMP.	
1. ASSIGNMENT, SCHOOL						PERSONAL PREFERENCE, CHOICE
2. FORCED.						INVOLVED, EXPERIENCED
3. FOR ACADEMICS, TEACHERS						FOR PERSONAL PLEASURE
4. TEACHER-DIRECTED						SPONTANEOUS
5. PERSONAL JUDGMENT						AUTHORITY
6. GENERATIVE, PRODUCTIVE						ASSIGNED, TEACHER DIRECTED
7. ASSIGNED, STRUCTURED						CREATIVE, IMAGINATIVE
8. EXCHANGE OF IDEAS						ASSIGNMENT
9. SELF SATISFACTION						TEACHER
10. FLEXIBLE						RIGID, ASSIGNED
11. FREEDOM						COERCION, TEACHER
12. TEACHER DIRECTED						ENLIGHTENING, STIMULATING
13. PERSONAL						COLD, DRY
14. CONDENSED						FREER, BROADER
15. PERSONAL EXPRESSION						CONCERN FOR RULES, FORMAL STRUCTURE
16. FORCED, IMPOSED						PERSONAL EXPRESSION
17. TEST						FREE WRITING
18. LITERACY						ACADEMIC, SCHOOL
19. FOR SELF-INFORMAL						FOR OTHERS TO JUDGE-PUBLICATION
20. PERSONAL CAPABILITY						PERFECTION
21. FOR SCHOOL, TEACHER						FOR PUBLICATION, WIDE AUDIENCE
22. TO RELAY INFORMATION						TO HAVE A LEARNING EXPERIENCE
23. GRADE, TEACHER						FREEDOM
24. TEACHER EVALUATED						SELF-GENERATED
25. TASK ORIENTED						NON-PRESSURIZED, CASUAL
26. HONESTY						GRADE
27. FOR PEERS-CONTEMPORARY						FOR AUTHORITY FIGURES

Appendix M continued

	VERY IMP.	IMP.	NO DIFF.	IMP.	VERY IMP.	
28. PERSONAL RELATIONSHIP	___	___	___	___	___	IMPERSONAL SCRUTINY
29. RELAXED	___	___	___	___	___	JUDGMENTAL
30. PERSONAL DIMENSION	___	___	___	___	___	LACK OF INTEREST, IMPERSONALITY
31. FREEDOM	___	___	___	___	___	APPROVAL
32. FREEDOM OF EXPRESSION	___	___	___	___	___	ADHERENCE TO A PARTICULAR SYSTEM-FORMALITY
33. FOR GRADE, REQUIREMENT	___	___	___	___	___	FOR SELF-UNDERSTANDING
34. PERSONAL EXPRESSION	___	___	___	___	___	PLEASING THE TEACHER
35. CLOSE SCRUTINY, EVALUA.	___	___	___	___	___	GENERALIZED, VAGUE EXAMINATION
36. OFFICIAL EVALUATION	___	___	___	___	___	NO OFFICIAL EVALUATION
37. EVALUATION	___	___	___	___	___	SUGGESTIONS FOR CHANGE, GUIDANCE
38. EVALUATION	___	___	___	___	___	RESPONSIVENESS, FLEXIBILITY
39. FOR SELF	___	___	___	___	___	FOR GRADE
40. GRADE	___	___	___	___	___	FEEDBACK
41. ART FORM, CREATIVE ART	___	___	___	___	___	LANGUAGE ART
42. PRACTICAL	___	___	___	___	___	ARTISTIC
43. STATIC	___	___	___	___	___	CREATIVE
44. FACTUAL MATTER	___	___	___	___	___	EXPRESSION OF EMOTIONS AND IDEAS
45. PREPARES FOR CAREER	___	___	___	___	___	PROVIDES FORM OF LANGUAGE
46. WORK	___	___	___	___	___	ENTERTAINMENT, ENJOYMENT
47. CREATIVITY	___	___	___	___	___	LEARNING SKILLS, CAREER
48. THEORETICAL	___	___	___	___	___	PRACTICAL
49. OUTSIDE ACTIVITY	___	___	___	___	___	SCHOOL ACTIVITY
50. RESPONSIBILITY, THINKING	___	___	___	___	___	ENTERTAINMENT, EXCITEMENT
51. ACTUAL OCCURRENCE	___	___	___	___	___	PRODUCT OF THE IMAGINATION
52. PARTICIPANT	___	___	___	___	___	SPECTATOR

Appendix N: Definitions of categories--attitude questionnaire7

1. Source:
 - a. Teacher assigned topic
 - b. Class discussion
 - c. Personal Experience
 - d. Textbook topic
 - e. Teacher assigned reading
 - f. Personal reading
 - g. Conversation with peers
 - h. Conversation with a teacher
2. Audience:
 - a. Self
 - b. Trusted adult
 - c. Teacher--general relationship
 - d. Trusted teacher
 - e. Examiner
 - f. Peer Group
 - g. Members of a working group within a class
 - h. Unknown public audience
 - i. Trusted friend
 - j. No discernable audience
3. Response:
 - a. Letter or number grade
 - b. Teacher symbols as corrections
 - c. General comments such as good, fair, poor
 - d. Suggestions for revision or rewriting
 - e. Verbal discussion for improvement of paper
 - f. Check mark
 - g. No grade
 - h. No comment
 - i. Peer evaluation
4. Purpose :
 - a. For the teacher
 - b. For a grade
 - c. For self-understanding
 - d. To give information
 - e. To express your ideas
 - f. To express your feelings
 - g. To clarify your thoughts
 - h. To record experiences
 - i. To share experiences with others
 - j. To share your feelings with others
 - k. To persuade others
 - l. To advise others
 - m. To define
 - n. To instruct others
 - o. To interpret a piece of literature
 - p. To elaborate or apply a theory
 - q. For a class assignment

Appendix D: Attitude Questionnaire--categories

Positive values are given to those answers showing a preference for free choice and personal expression.

Negative values are given to those answers showing a preference for teacher directed and school assignments.

SOURCE CATEGORY:

Items: 1, 6, 8, 14, 19, 20.

AUDIENCE CATEGORY:

Items: 7, 12.

RESPONSE CATEGORY:

Items: 13 ,17, 18.

PURPOSE CATEGORY:

Items: 2, 3, 4, 5, 9, 10, 11, 15, 16, 21, 22, 24, 27, 28,
29.

Appendix Q: Definitions--categories, modes and formal features:8

Categories:

A. Depth, Growth of Insight: increasing frequency in the use of these modes reflects value for writing as a tool for learning.

B. Valuing Response Journals: the formal features of response journals reflect the value that the actual journal has for its owner.

C. Valuing Mentor/Learner Relationship: modes that reflect trust in the respondent or require a measure of risk taking on the part of the student reflect the value the journal owner has for his mentor.

Modes:

A. Depth, Growth of Insight:

1. Observations, interpretations, evaluations: writers see something of interest and attempt to capture it in language. This activity is primary to scientists, who must witness in order to test, as well as to literary scholars, who must read in order to interpret.

2. Insights, understanding: writers putting together ideas, finding relationships, connecting one course or topic with another.

8. With the exception of numbers 5, 8, 9 and 11, the definitions for modes and formal features are those of Toby Fulwiler in his "Introduction" to The Journal Book (1987;3).

Appendix Q continued

3. Information: Does the journal contain evidence that reading has been done, lectures listened to, facts and theories understood? Journals that read like class notebooks will be dull, but journals should give evidence that attention is being paid to course materials.

4. Revisions: writers looking back at prior entries, realizing they have changed their minds, and using the journal to update and record their later thoughts. Ann E. Berthoff recommends this as a systematic practice and calls such endeavors "double-entry notebooks"(1978).

5. Creative Expressions: the use of metaphor or simile for example.

B. Valuing Mentor/Learner Relationship

6. Questions: writers use journals to formulate and record questions: personal doubts, academic queries questions of fact, administration, and theory. It is more important, here, that there be questions than that yet there be answers.

7. Digressions: writers departing as they write from what they intend to say, sometimes to think of personal matters and sometimes to connect apparently disparate pieces of thought.

8. Confidences: writers make personal disclosures or statements that reflect trust in the respondent.

Appendix Q continued

9. Frustrations: for example, writers reveal their lack of understanding about the subject matter.

10. Speculations: writers wonder aloud, on paper, about the meaning of events, issues, facts, readings, patterns, interpretations, problems, and solutions. The journal is the place to try out without fear of penalty; the evidence of the attempt is the value here.

11. Desire to know more: writers show confidence in the knowledge of the respondent and an engagement with the subject matter.

C. Valuing Response Journals

Formal Features:

12. Frequent entries: the more often a journal is written in the greater the chance to catch one's thoughts.

13. Length of entries: the more writing one does at a single sitting the greater the chance of developing a thought or finding a new one.

14. Self-sponsored entries: how often a student writer initiates writing without teacher prompts.

15. Evidence of increasing attention paid to organization and neatness: good journals have systematic and complete chronological documentation.

Appendix R: Writing scale--essays

PART E: Multi-Paragraph Writing (30 marks)

SUGGESTED SCALE:

Markers are to put a double grade on each paper: 12/11;
13/9; 4/7; and so on.

	CATEGORY 1: (15 marks)		CATEGORY 2: (15 marks)
	<ul style="list-style-type: none"> - Development of ideas - Organization of paragraphs - Coherence (transition) between the parts 		<ul style="list-style-type: none"> - Suitability of word choice - Correctness and maturity of sentence patterns - Spelling, punctuation, mechanics
15 14	Ideas fully developed with some illustrations Individual paragraphs clearly organized Precise transition between sections of essay	15 14	Exact and sophisticated word choice Varied and correct sentences No (or only few and minor) errors in spelling, punctuation, mechanics
13 12 11	Fairly full development with limited illustrations Clear evidence of good paragraph organization Sustained transition	13 12 11	Correct but not distinguished choice of words Few (and these minor) errors in sentence structure Mechanical errors are minor
10 9 8	Thinnish development with no illustrations Overly-simple paragraph structure Overly-obvious transition	10 9 8	Some errors in word choice; slangy informal diction Some lack of sentence variety; some awkward and/or incorrect sentences Several errors in spelling and/or punctuation
7 6 5 4	Development very sketchy Ideas badly sorted in paragraphs Overall structure not clear to reader	7 6 5 4	Various errors in word choice; flat, trite vocabulary Many simple sentences; numerous sentence problems An abundance of spelling errors
3 2 1	No development; note-form only Garbled paragraphs Relationship between parts not indicated	3 2 1	Uncontrolled vocabulary Many confused sentences Wild spelling
0	Part E not attempted	0	Part E not attempted

Appendix S: Teacher Interview Guide

TEACHER INTERVIEW GUIDE⁹

1. What place has writing in teaching your subject?
2. Does the opinion of your colleagues influence how much writing you use in your classes (i.e. department members, principal)?
3. Do you write yourself?
4. What kinds?
5. How often?
6. Where did you learn how to write well (i.e. high school, university)?
7. Do you remember anyone in particular who influenced your ability to write? Please describe.
- 8.. Is it important for your students to learn to write well?
9. Will the need to cover the curriculum cause you to restrict the amount of writing you assign?
10. Do you think teachers should read all the writing they assign in their classes?
11. Which do you think is more important for a teacher to do- respond to the content in student writing or correct the spelling and grammar errors in student writing?
12. Do you think teachers should grade all the writing they assign to their students?

⁹. This teacher interview guide is based on a questionnaire made up by Dr. Marion Crowhurst--UBC.

Appendix S continued

13. Would imaginative writing (e.g. poems, dialogues, imaginary stories) be appropriate in your class?

14. Would writing to express emotions concerning the course (e.g. anxiety, confusion, discontent) be appropriate in your class?

15. Do you use writing activities to help your students learn content in your subject area?

16. Would factual writing (e.g. lab reports, research essays, business letters, written descriptions) be appropriate in your subject area?

17. Do you use writing to evaluate students' knowledge?

18. Is there anything you would like to add to any of your comments?

19. Is there anything else you would like to discuss about writing in your classroom or writing in general?

Appendix T: Teacher interviews--transcripts

Pre-Experiment Interview

English Teacher: Darcy Mackay

Interviewer: What place has writing in teaching your subject?

ET: Very important place. It is a tool to teach students to absorb what is being taught and to apply it directly or indirectly to their experiences both in being able to write about what they have learned and to apply it to their own experiences as individuals.

Int: Does the opinion of your colleagues influence how much writing you use in your classes ex. department members, principal?

ET: They can be very encouraging. My English department head is very encouraging to me as a teacher to use writing as a vehicle to allow children (who are not extroverted type individuals who get to voice their opinions alot) get to do it in a non-threatening fashion by putting pen to paper.

Int: Do you write yourself?

ET: Not as much as I should. I certainly enjoy expressing myself that way.

Int: What kind of writing do you do?

ET: Letters, certainly department memo type communication with other staff, writing up minutes for meetings as I chair a couple of committees here at the school, letters to parents, community agencies in my role as a counsellor.

Int: How often do you write?

ET: On the average probably at least two or three times a day, in the form of memos and other communicaes to other members of my profession.

Int: Where did you learn to write well? At high school? University?

ET: Definitely not Highshool although my grade 11 and 12 teachers made me more aware of writing--university where you are forced to communicate in a fashion that is acceptable.

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Int: Do you remember anyone in particular who influenced your ability to write?

ET: My grade 11 English teacher made writing seem more important.

Int: Can you describe that a little more?

ET: Well she's a lady that did a lot of writing. We did a lot of writing in our class in the forms of letters, because of the nature of the subject matter had to be subjective. We were forced to answer questions in more detail than we were in previous grades.

Int: Is it important for you students to learn to write well?

ET: Absolutely. Writing is a very very important form of communication. If you want to be clearly understood by people you must learn to write well.

Int: Does the need to cover the curriculum cause you to restrict the amount of writing you assign?

ET: Yes it does. I find the time lines on covering certain aspects of what we have to do on the curriculum definitely restricts it. You have more flexibility with grade sevens because you have them twice in one day which allows you to do more writing but certainly for grade nines I would like to do a lot more writing than I am able to.

Int: Do you think teachers should read all the writing they assign in their classes?

ET: It'd be nice but for most of us we don't have that kind of time. We learn to skim well and be able to look for key things or more specific things are perhaps more important-- depending on the writing they are doing.

Int: Which do you think is more important for a teachers to do-- respond to the content in student writing or correct the spelling and grammar errors in student writing?

ET: Definitely respond to the students' writing. We can be marking for mechanics that can be done on a selective basis but we can't spend all of our time correcting mechanical mistakes. We've got to be able to respond so the kids know they are going in the right direction or if they are responding correctly to what is being asked.

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Int: Do you think teachers should grade all the writing they give to their students?

ET: No, I think that sometimes you can read over a number of articles of the students work and perhaps feed back to them selective ones you thought were good or teach a point you're trying to make through them having the experience of you reading back their writing rather than just always marking for mechanical things. I think they learn from your being able to respond in a positive or sometimes a negative fashion.

Int: Would imaginative writing ex. poems, dialogues, imaginary stories be appropriate in your class?

ET: Yes, I think it allows them an open ended creativity that alot of young people I think inately have. It gives a chance for those kids to share experiences or fantasies or write personal thoughts. It tells you about the individuals.

Int: Do you do that?

ET: Do I do that? Poetry is certainly one vehicle you can do it with.

Int: Do you?

ET: Do I personally do it? Do you mean in a sense do I write?

Int: No, do you have your students do these kinds of things? You're telling me you think it's right to do these kinds of things but do you do this?

ET: I started doing it last year in certain situations allowing them to express their opinions on certain aspects of a novel or whatever.

Int: But imaginative writing. Having them write poems, or stories, or dialogues.

ET: I haven't done it. I've done it with poetry but not with dialogues or stories.

Int: The next one I think you've already answered. Would writing to express emotions concerning the course ex. anxiety, confusion, discontent be appropriate in your class?

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ET: Absolutely.

Int: And that's what you were talking about when you said you started doing that last year.

ET: Yup. Those kinds of things. Journal writing allows that to happen alot too.

Int: Do you use writing activities to help your students learn content in your subject area?

ET: No.

Int: Would factual writing for example lab reports, research essays, business letters, written descriptions be appropriate in your subject area?

ET: Yeah I think it would, yes. Not lab reports because I don't deal with that but letters, business letters, learning how to write a proper business letter would be a useful skill.

Int: Research essays.

ET: Research essays that's certainly a skill we need to teach kids in preparation for the high school years, especially when they're forced into it.

Int: Written descriptions.

ET: I think students have to be able to use writing as a means of expressing. The spoken word is not good enough in some cases where you need to describe something in detail. I think it's important for kids to write descriptively.

Int: Do you use writing to evaluate students' knowledge?

ET: What do you mean by that?

Int: Well do you have them write as a test to tell you what they know?

ET: I've never tried that.

Int: Is there anything you would like to add to any of your comments?

ET: No. I find that it's an area I don't know alot about and I'm eager to learn.

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Int: Is there anything else you would like to discuss about writing in you classroom or writing in general?

ET: I think writing in general is becoming a lost art. We live in a world of t.v.ized children and they don't do a lot of written expression. I think we're missing out on a lot of creative energy that's not being utilized.

Post-Experiment Interview

Int: Post interview English teacher Darcy Mackay. March 19th. The interview questions I'm going to ask you are the same as I asked you prior to the experimental period but I'm not going to ask them all because some of them your answers won't have changed. But I would like to ask is number one again. What place has writing in teaching your subject? That is any thoughts you might have about how your opinion has changed now that we have finished the experiment.

ET: Well I think that it's certainly encouraged me to do alot more writing. The students are very receptive to writing and it's a process I haven't done alot of it but I will certainly utilize it alot more in the future English courses I teach. I find kids really really enjoy writing in a properly guided and teach them properly and do the right thing. They are very receptive. Writing is a good tool.

Int: Is there any change in how you feel about the opinion of your colleagues influencing how much writing you do in classes? Department members, principals, other teachers.

ET: You mean in terms of me-.

Int: How much you do.

ET: I'm sorry. Maybe I misunderstand the question.

Int: Does what your colleagues have to say influence how much writing you do in class?

ET: Yes it does. Certainly the people in my English department. If I know they are doing alot of writing or working on specific units in English that they have been successful with using a writing approach then certainly I'll listen to it. It influences me.

Int: Is that more influence now though than before?

ET: Right now I'm a lot more... Like before it was like a risk. Now I'm willing to take all kinds of risks with writing. I was a little scared off and reluctant to do it before simply because I wasn't to sure of the process but

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now that I've seen the very good results that I have had with these kids that reticence is gone.

Int: So you're convinced that writing is of value and no matter what someone else said. I don't want to put words into your mouth but is that what you are saying? They would influence you less?

ET: Yeah, if they said, that you know, that writing wouldn't work or that you shouldn't use a writing approach in some of these things, I would disagree with them. It's even influenced me from the science and socials point of view because I think that I see some successful things happening in those areas in their writing. This encourages me to do more writing of my own.

Int: Will the need to cover the curriculum cause you to restrict the amount of writing you assign?

ET: Unfortunately it does in order to cover some of the essential parts of the curriculum. Although it does open up different approaches to covering those parts of the curriculum and perhaps could be handled easily through writing.

Int: Do you think teachers should read all the writing they assign to their classes?

ET: No, I think that it depends on what it is assigned for. If it is assigned for something they should read all of it. I imagine that obviously they should. But if it's you're just looking specifically for introductions or conclusions or topic sentences but then you would have told the kids that prior to them doing the assignment.

Int: What do you think it's more important for a teacher to do- respond to student writing or correct the spelling and grammar errors of the student writing?

ET: Respond to the content. The mechanics can be handled better otherwise which makes it a lot easier to mark, to do more writing because if you don't have specific pieces of writing may be designed for those things but you don't have to do it for all of them in my opinion.

Int: Do you think teachers should grade all of the writing they assign to their students?

ET: No. It could be writing for enjoyment. It could be writing that you tell the kids you are going to just read or read out to them or read out examples of whether or not kids

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are on the topic or just straight creativity as perhaps poetry. Perhaps it's a good descriptive paragraph; you want to simply have the kids writing logs etc.

Int: You just answered my next question about the place for imaginative writing in your classroom. Poems, dialogues, imaginary stories.

ET: Absolutely.

Int: Would writing to express emotions concerning the course ex. anxiety, confusion, discontent be appropriate in your class?

ET: I find that to be a very good indicator of how kids feel about what's happening with the assignments I'm giving them through journals also I'm able to get alot better sort of finger on the pulse of what kids are feeling from doing the assignments and encouraging them to respond with an open mind and an open feelings with what they're doing. That way I get a better idea of what they're learning and what they're not learning.

Int: Do you use or will you use more writing activities to help your students learn content in your subject area?

ET: I certainly will. It's been a valuable lesson for me and something as I said before something I've been a bit afraid of. Now it's really encouraged me to take alot more risks and I think it's well worth it.

Int: Would factual writing ex. business letters, lab reports, written descriptions, research essays be appropriate in you subject area?

ET: Yes, critical essays, book reports, synopsis, critiques are valuable tools.

Int: Can you see a way that writing logs and non-graded writing would help students do a better job on these kinds of writing?

ET: Well they're non-threatening for the first. Essentially you get those introverted kids to correspond to you through their writing journals and writing logs that enables you to in a non-threatening fashion to advise them whether they are on the right track or not. For alot of kids that don't like to speak up in class it gives them an opportunity to do that.

Int: Do you use writing to evaluate students' knowledge?

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ET: Yes, I do.

Int: Is there anything you would like to add to any of your comments or is there anything else you would like to discuss about writing in your classroom or writing in general?

ET: I would encourage anybody that's not done journal writing or writing of logs to, especially at the junior secondary level, to make it a big part of your English program. For any of my colleagues I would say get out there and do it. You'll learn alot. I did.

Int: Thank-you very much.

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Pre-Experiment Interview

Science Teacher: Ron Frolic

Interviewer: Imaginative writing.

Science Teacher: There are certain situations you can ask them to look into the future and write about about what they think it's going to be like. Or what was it like many years ago before there certain pieces of technology were brought along or medical advances or certain situations, yes. You can do it. It's not that often.

Int: Would writing to express emotions concerning the course ex. anxiety, confusion, discontent be appropriate in your class?

ST: I think the value on that would be that I can understand and get to feel where the pressures are coming on the student. Where they are feeling the pressure. With that in mind, yes it would be valuable but if it's students that generally waste their time, don't know how to use their time efficiently and then they complain, I don't have to many sympathies for them or too much. I don't have too much sympathy for kids that waste their time. Then they complain. Or they feel confused or upset that I'm pushing them because they wasted their time. But the answers yes. They can voice themselves, voice their opinions and I can get the feed back. But their concern may not be resolved by me changing my attitude or my method. I think they have to buckle down and work.

Int: Ok. Do you use writing activities to help your students learn content in your subject area?

ST: Oh sure, yeah. I put on notes, even traditionally on the note board. And I get them these are the concepts we covered last day. I put review, point, point, point. So certainly there's writing going on there. Rather than just lecture directly to them. Then I go over those points. So that's writing and content to emphasize it.

Int: Any other kinds?

ST: Well they may have to if we have some theory on chemicals they would do a lab in use of those chemicals and they would have to write it up.

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Int: Would factual writing ex. lab reports, research essays, business letters, written descriptions be appropriate in your subject area?

ST: Oh very much so. Easy question.

Int: Do you use writing to evaluate students' knowledge?

ST: Yes, I do. Unfortunately the answer to that is the textbook does it for you and if you use a textbook, there are questions that are directly in line after content and they will say explain such and such and they will have to look back and find it. Straight content.

Int: Is there anything you would like to add to any of your comments? And the last one is is there anything else you would like to discuss about writing in your classroom or writing in general?

ST: Yeah, I find there is a lot of joy from kids when they can discuss what they have on their mind and find that other kids share the similar opinions. So that it's group work writing, rather than one individual having to crack the whip and produce. It's less scary. They've gained their confidence. They've gained the acceptance of their ideas by others in the group or else they've come up with an idea that's slightly modified through discussion in a group. Then the group deals with the writing. So we're re-wording. Again, some of my own philosophies and background like I felt very insecure about writing and expressing myself and so through checking with others, "How do you like this? What do you think of this?" idea and so group work is really important in writing. Another thing that I find students enjoy and it also pertains to one of the questions you asked about fantasies or fiction and that is that if you give them time to write something and then to draw it. If they can draw a picture of it. You just wrote a story of this, draw me a picture of it. They like doing that. It breaks them away from the monotony of rigid English structure and into a fantasy world that they can then put something on paper. At this grade level I like if you get some pencil crayons, add some color to your picture. Now this seems like Mickey Mouse stuff but it's a time for them to hash through and think color and bring points together and meld their memories that are good. Rather than moments that are frustrating. And burn it into their brain that this is a fun activity. And there are kids that don't like to draw either so you're not going to win them all but you've gotta make options that may be extremely difficult through varying your methods.

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Int: Ok. March 4, 1991 end of experiment interview with science teacher.

ST: The only thing I find now is that I'm involved in a couple of committees around the school so I'm ending up having to do a lot more. Taking notes and that sort of thing. But that's related to school work, not anything on my own.

Int: Are there any changes in your opinion as to what place writing has in teaching your subject?

ST: Ok. I've always felt writing was really important with the students giving descriptions and sequences of events that take place and the results of these sequences. In writing the labs, yes.

Int: In reports and research you said before too.

ST: Yeah in research. What I see now, what I do, what I got probably from this activity is I see that, and I put it down in my journal when I wrote things out, is that there is an importance for kids to be able to communicate privately to the teacher. And that is sometimes they're too shy to raise their hand. Sometimes later on at a later date they come up with an idea that hey I didn't really understand a certain thing, so they talk about that in the journals. And the answer is yes. I think there is a point where journals do become a good method of communicating for things that they just weren't quite up on at the time.

Int: Is it important for your students to learn to write well? And as I recall you said yes it is very important. Is there anything you want to add to that?

ST: I think that the freedom of writing and their expression of how they see it is important. The more I get involved in things that are happening for the year 2000, I think the more I'm inclined to think that education isn't just black and white and there aren't any just right and wrong answers. I think a students has to have time to say it the way they think it is. If it isn't exactly the way it's supposed to be then it gives you a chance to talk that over. To agree or disagree.

Int: Will the need to cover the curriculum cause you to restrict the amount of writing you assign? Or that plus the other thing I want to ask you is the need to cover the curriculum restrict the amount of journal writing you had

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the kids do and how did you feel about that? And maybe in the future as well.

ST: What I find really restricting is my, just my physically being the number of hours in a day, like how much energy I really have to read everything and reply to everything. Doing a journal for me, and I wrote it down, involved what was really precious. There were really precious minutes there and they weren't just minutes, they were hours going through journals and making some kind of appropriate comment experimentally, positively, or on a regular basis, or a neutral comment, and appraisal, an appraising comment. I'd like to say some here just on curriculum. A curriculum nowadays, we're still stuck on following the curriculum, step by step. Nowadays, we're expected to alter it somehow so it fits each individual in the classroom. These journals now, are even the kids themselves, the students themselves within the journal is even asking for their attention on certain things. So do you realize that what you've got there is that you have to customize your curriculum towards the kids the way you see it and then you're getting replies through the journals on how they see it. So it's even opening up more avenues sure to teach, to get across points, but more avenues or time and time consumption.

Int: If I could just go back to what you said earlier that it was a restriction of time and it added on time, you do see, correct me if I'm wrong, the curriculum is restricting your time because doing the journals has added on top of what you already have. You don't see a way of it being a valid substitute for some of the other things you do. Like when I do it in my class I see it as, I've taken away things and put it there instead, not added it on.

ST: Yeah, what I was forced to do with the journal is to do my class, cut off the last ten minutes and give them time to go through it, hand them back, and give them time the next day or a couple of days later and take the beginning of class and say look here are some of the responses, respond back to me immediately or whatever. So again you're cutting time out of the classtime to do it and our courses are fairly full. I see that course work and streamlining to integrate a student is going to become more and more flexible and I can see that curriculum work is going to be less and less important.

Int: Do you see that as a good thing or a bad thing?

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ST: I think it's very good. The unfortunate result that is possibly going to come from it though is that kids that aren't prepared for certain stages of a later process and in order for them to become prepared they may have to spend more time, another year later on, even a part of a year later on to be able to do, to cover some materials to get themselves prepared. Like if they don't complete certain concepts in chemistry they won't be able to go onto another step.

Int: Do you think teachers should read all the writing they assign in their classes?

ST: If you want to know what's going on in the class you take time. Whether you take class time and go around and sit down with them and see what they've written and do a spot check and say today I'm going to cover five of them and the next day another five. There's only one way to find out how a child is really coping and that is to be with them and to assess what they put down or talk to them and find out how they are coming along.

Int: Did you find journals helpful that way? To let you know what they are thinking?

ST: Yeah, I found the journals really useful when there was specific problems and the student would say I can't understand what is going on here so they would write me a note, can I see you about such and such, or else I would see from their writings and I would write I'll see you next day. I'd go down and sit with them and deal with that problem. It's useful, it's definitely useful. There's a spot for it in the class. To read all-

Int: To add in on top of what you already do, I think that is, that's asking too much, to do too much. So what do you think is more important for a teacher to do? To respond to the content of the students writing or to correct the spelling and grammar errors?

ST: Oh to respond for sure. If I was an English teacher perhaps I'd be saying the opposite, grammar is first and how they write and punctuation and spelling. As far as I'm concerned I think that the highest priority in any educational system for me would be getting levels of thinking and if you can turn aside, put aside for a moment, the spelling, punctuation, sentence structure and start looking for thought processes, applications of things and creative thought that leads into new experiments and new ways of looking at the problem, that to me is the most

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important. The spelling and writing and stuff certainly I go through it and I pick out whatever I can pick out and say you certainly could have developed this thought further and please be a little tidier. I'm having difficulty reading this. That becomes a communication problem. If the person just writes blue down for a statement rather than writing an explanation what turned blue or what changed to blue, it becomes a problem of communication.

Int: In a sense it might not have that much value to the students either. Do you think teachers should grade all the writing they assign to their students?

ST: You know, it drives you nuts all the marking. Maybe it sounds like this coming across on the tape you'll listen to it later and think all he does is mark? Yeah, I mark hours and it drives me bloody nuts. I think that you've got to be able to stream line that marking otherwise you'll burn out. Things that I do for instance, I'll take something and look through the blanks and very quickly my mind will say whether they seem appropriate. A kid is not going to just put blah blah blah into some of these blanks and I won't be able to recognize it. Most often you can visually look at the sheet and it's gonna make connections whether there are correct answers, logical questions, without reading the whole thing. I can go through a sheet very quickly and I'll put a check mark on it. I don't give any grades. I don't put a G. I don't put an S. I don't put a ten or a nine out of ten or anything of any value. At least I've looked at it. Then I go down through my mark book tick tick tick with check marks and say yes he's handed it in, she's handed it in. And then other times I take a bit more scrutiny in marking it and I'll look for some values in it. How many of these questions were answered in a sentence structure. What kind of effort is shown. Then I'll put a very crude way of marking, a U, an S, or a G. That shortens my marking too but it's a little longer method if it's estimate. Lastly, when you really look for detail, then you might want them out of the number of questions or out of ten. That takes the longest.

Int: What would say if they had three things assigned to them and they were told they could pick what was their best one to be handed in to you?

ST: I think that's excellent. I'd only want that done if the three things they did pertained to similar concepts or the same concept. They did three things on solubility or something like that and neither has a greater value than the other. The concept is followed through. Then I would say

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you just did three labs, I don't want to see the other two. Just hand in one of the best. Then I would only have one mark out of three. I don't think it's relevant if I have them all.

(*** Tape Three ***)

Int: The question was would imaginative writing ex. poems, dialogues, imaginary stories be appropriate in you class?

ST: It's not that appropriate but I imagine you could sometime include abstract ideas. We do in science be dealt in a level of if you could imagine little people carrying on these electrical motions-.

Int: Two molecules talking to each other.

ST: Two molecules talking to each other sure. To a compound pulling apart and forming a new compound. I think that anything in education that helps a learning situation making it more enjoyable to the kids is worth trying. And for some it's not going to mean anything for others they are really going to get into it and feel successful.

Int: How do you feel about writing to express emotions in your course ex. anxiety, confusion, discontent? Do you think that appropriate?

ST: Well it's appropriate on a journal. On a lab report ok I think there might even be a place for it there. The students have gone through the experiment and find it isn't working and they could just leave a note there saying I really felt frustrated doing this because I expected such and such and couldn't get that result. Everyone else got this result how come... There are points of difficulty and there probably are points of normal feeling that could be expressed.

Int: So is there anything you would like to add to you comments? One of the questions I haven't asked again are do you use writing activities to help your students learn content. You answered that one before with factual writing. Do you use writing to evaluate students knowledge. Is there anything you want to talk about writing in you classroom or writing in general?

ST: I didn't carry on a type of structure with these two classes we were testing. The kind of thing I am starting to generate new ideas for and that is I like to, I'm starting to work now in my mind of opening the topics up. Integration of the social studies aspect, English, math, you

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know. So far the science area, chemistry, was the most difficult. I think I've got a long way to go with that-.

Int: It might be alot easier if it had been a different unit rather than chemistry.

ST: That's right. This is a very structured unit and I would like to you know when I come back in this world and I have Mr. Time and all kinds of time I would like to get into restructuring alot of the jargon and all routine things so that they can open up. You get a routine subject like chemistry... Maybe I've lost the creative thought in it but it become boring. They are less ready and more reluctant to open themselves up with it and to say wow look what I did. Look at this display. I look across the room and see some really nice art work on there. Well you know there is a place for that in chemistry too. There really isn't much time in a term to get through some of the stuff and yet I know with my experiences with grade sevens and grade eight classes you can integrate the topic and allow them all kinds of freedom of choice within-.

Int: I think something that suits journal writing so much more and readily as well that might have been an unfortunate experience that it was chemistry.

ST: Yeah and flexibility. Certain subjects, maybe I'm wrong, do lend themselves, are a little more flexible do to choices and what they can find-.

Int: But you just did one of those choice things on environment.

ST: I did yeah. It was a terrific learning situation for the kids and for me to see how they can integrate their diverse thought within the class and the materials that were generated from it made me super happy to see it and made me really proud to see that the kids were doing things that they were having fun with.

Int: So anything else?

ST: Yeah.

GRADE 3 NARRATIVE EXERCISE

WHAT'S THE STORY?

Problems are a part of life. Everyone faces them almost every day. Sometimes problems are large but often they are small: something we need or would like to have, something we don't want to do, or something we forget to do. Sometimes it is another person who is making us sad or we are making them angry! Whatever the problem is, it makes a story.

ASSIGNMENT: Look at the people in the photographs. Each of them has a problem. Choose the one person you want to write about and decide what the problem is. Now write a story telling about this person, the problem, and the solution. You may add any other characters you need.

Try to make your characters and story as realistic as possible.



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GRADE 8 SCALE FOR NARRATIVE WRITING

- Scale Point 1:** Either incomprehensible OR no attempt to address the topic.
- Scale Point 2:** Minimal attempt to tell a story. Mechanical problems are excessive. Serious problems with coherence and unity. Comprehension difficult.
- Scale Point 3:** Either attempts to tell a story, but style is ineffective and mechanical problems excessive rendering comprehension difficult OR mechanically satisfactory but fails to tell a story.
- Scale Point 4:** Attempts to tell a story. Reasonably clear, but no evidence of originality. Lapses in unity and coherence.
- Scale Point 5:** Content is fairly thin although there is some attempt at originality. A story is told with evidence of coherence, unity and reasonable command of the language. Style tends to be conversational. Some problems with mechanics most often in spelling and sentence structure. Sentences lack control and variety. Often wordy and repetitious.
- Scale Point 6:** Evidence of originality. Good use of detail. Some attempt at characterization. However, contain problems with unity, coherence and mechanics.
- Scale Point 7:** Workmanlike. Written with clarity and organization but not a great deal of originality. No serious errors. Use of mechanics and writing style acceptable. Character(s) may be realistic, but problem and its development and resolution pedestrian.
- Scale Point 8:** Well developed narrative. Generally, the introduction is effective although the resolution may not be strong. Some attempt at characterization. Vocabulary, style and mechanics above average for grade level.
- Scale Point 9:** Establishes a realistic character with an interesting problem. Evidence of originality. The conclusion is effective, and may have an interesting twist. The ending is 'honest' in terms of development. Good paragraph structure and organization. Precision in use of language. No serious mechanical flaws. Shows a great deal of promise as a writer.

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GRADE 8 NARRATIVE WRITING
SCALE POINT 2.

Scale Point 2: Minimal attempt to tell a story. Mechanical problems are excessive. Serious problems with coherence and unity. Comprehension difficult.

Narr. Hello my name is Lisa.
Kraeker I am 6 years old.
I have a problem and
this is how it goes."

Lisa: Hi mom I am home.
Mom: Lisa honey will you get
change you have a doctors
appoint so hurry up now.

Lisa: Oh Mom!!

Mom: Lisa I don't want to tell
you again.

Lisa: Alright mom.

Narr. You see Lisa hated
needles that was one
thing she hate and to-
day she was going to
get up. This is all
that hospital at the
needle room.

Lisa: Is this were you get
your needles.

Mom: Yes and try not to
cry ok.

Lisa: OK

Narr. Do you think ~~Lisa~~ cried?

Lisa

8-GL-1

The End

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GRADE 8 NARRATIVE WRITING

SCALE POINT 5

Scale Point 5: Content is fairly thin although there is some attempt at originality. A story is told with evidence of coherence, unity and reasonable command of the language. Style tends to be conversational. Some problems with mechanics most often in spelling and sentence structure. Sentences lack control and variety. Often wordy and repetitious.

This little girl at the age of 8 has a problem with her baby kitten. She has three friends Margie, Tom, Bobby, and her name is Tara. In this story I will tell about the problems she goes through with her cat.

It was ~~wed~~ Wednesday night and Tara was giving her cat some milk and bread. After she finished she went to bed.

In the morning Tara woke up with the sound of her mother yelling. Tara didn't want to see her mother right now. Soon Tara regained some courage and began down the stairs. When she saw her

mother her mother started yelling "That cat has got to go! It tore up my best chair and scratched the carpet to pieces!"

Tara didn't say anything, she just walked to school. When she got to school she told her friends what happened at home and Bill made a suggestion "Why don't we tell your mom you're sorry."

Tara knew it wouldn't work and nothing else was said. That same night the cat was sent to the pound. Tara knew she had to

do something so she decided she would steal the cat back tonight. Tara phoned her friends and they all agreed. They all met a block from Tara's house and started walking to the pound.

When they all got there, which was about a half an hour later they all broke through the window and started searching for Tara's cat. They all walked through the dog side and into the cat section. Right away Bill spotted Tara's cat and reached for the bars.

and grabbed the kitten. While they were walking out the dogs began to bark and they all started to run, but before long the police came and turned up phoned up their parents and ~~everybody~~ everyone of Tara's friends got off the hook. Tara was given a good talking to and got the cat back.

The end.

Appendix W: Table 10.--facets; student response journals.
Means and standard deviations for z scores and transformed t
scores

How facets were made:

Facet 1: Observations, Understanding and Information were combined.

Facet 2: Creative Expressions, Speculations and Digressions were combined.

Facet 3: Questions, Confidences, Frustrations and Desire to Know More.

Facet 5: Frequency.

Facet 6: Length.

(Revisions were dropped)

Appendix W: Table 10 continued

Table 10.--facets; student response journals. Means and standard deviations for z scores and transformed
 ONUMBER OF VALID OBSERVATIONS (LISTWISE) = 30.00
 OVARIABLE MEAN STD DEV MINIMUM MAXIMUM VALID N

JFAC1T1Z	-.001	.795	-1.13	2.38	30
JFAC1T2Z	.000	.911	-1.05	2.28	30
JFAC1T3Z	.000	.891	-.97	3.37	30
JFAC2T1Z	.002	.760	-.93	1.93	30
JFAC2T2Z	-.004	.628	-.64	1.82	30
JFAC2T3Z	-.002	.760	-.75	2.01	30
JFAC3T1Z	-.001	.714	-.72	2.54	30
JFAC3T2Z	.000	.698	-.87	2.43	30
JFAC3T3Z	-.001	.609	-.83	1.69	30
JFAC4T1Z	-.003	.998	-.60	3.30	30
JFAC4T2Z	-.003	1.003	-.94	1.97	30
JFAC4T3Z	-.002	1.001	-.84	2.48	30
JFAC5T1Z	.004	.995	-2.59	1.67	30
JFAC5T2Z	.000	1.001	-2.28	2.04	30
JFAC6T1Z	.000	1.000	-1.75	2.22	30
JFAC6T2Z	.000	1.000	-1.18	3.13	30
JFAC6T3Z	.000	1.000	-1.55	2.98	30
JFAC5T3Z	.002	.998	-2.97	1.46	30
EFAC1T1Z	.000	1.000	-1.97	2.09	30
EFAC1T2Z	-.001	1.000	-1.92	1.60	30
EFAC2T1Z	.000	.999	-1.67	2.01	30
EFAC2T2Z	.001	1.000	-1.78	2.05	30
AFAC1T1Z	.000	1.000	-1.93	1.75	30
AFAC1T2Z	.000	1.000	-1.83	1.94	30
TJF1T1	50.006	9.997	35.74	79.90	30
TJF1T2	49.997	10.003	38.49	75.01	30
TJF1T3	49.999	10.001	39.12	87.81	30
TJF2T1	50.005	10.003	37.76	75.36	30
TJF2T2	49.998	10.006	39.89	79.07	30
TJF2T3	50.000	9.997	40.15	76.43	30
TJF3T1	49.993	9.999	39.89	85.59	30
TJF3T2	49.999	10.005	37.59	84.76	30
TJF3T3	50.007	10.000	36.35	77.82	30
TJF4T1	50.004	10.005	44.00	83.14	30
TJF4T2	49.998	10.003	40.64	69.68	30
TJF4T3	50.004	10.000	41.64	74.78	30
TJF5T1	50.076	10.000	24.06	66.83	30
TJF5T2	50.000	10.003	27.18	70.35	30
TJF5T3	49.996	9.997	20.22	64.64	30
TJF6T1	50.000	10.000	32.52	72.16	30
TJF6T2	50.000	10.000	38.24	81.35	30
TJF6T3	50.000	10.000	34.54	79.78	30
TEF1T1	50.000	10.002	30.28	70.93	30
TEF1T2	49.999	9.996	30.82	66.05	30
TEF2T1	50.000	10.004	33.32	70.15	30
TEF2T2	50.004	10.003	32.20	70.50	30
TAF1T1	49.998	10.002	30.67	67.47	30
TAF1T2	50.000	9.999	31.67	69.41	30

Appendix X: Results of pilot testing of attitude measure

1. The attitude measure used in this research is based on "The P & R Writing Attitude Form".

2. In June of 1990, Pilot Test A (Appendix M) was tested with an intact grade nine class at a junior high school in British Columbia. After meeting with the Thesis Committee, it was decided that the attitude measure would be more readily understood by grade nines if it followed a sentence format. Pilot Test B was designed.

3. In September and October of 1990, six grade-nine students who would not be participants in the actual research, completed the measure (Pilot Test B) using a think aloud protocol. One of the students was "Gifted", another was "Modified" and the remaining four were "Average". These think-alouds were tape recorded. The difficulties these students experienced dictated the following adaptations:

a. Two practise, sample exercises have been included so that instructions can be better understood by grade-nine students;

b. Further redundancies (items 10, 11, 17, and 26) were omitted from Pilot Test B;

c. An answer guide was incorporated at the top of page two of the questionnaire in order to facilitate ease of answering;

d. Items 4, 12, 13, 16, 22, 24, 25, and 28 on Pilot Test C were rewritten from Pilot Test B because these were the items that students participating in the think-alouds had difficulty with.

4. Computer bubble sheets were incorporated as student answer sheets in order to facilitate analysis procedures.

Appendix Y: Operational statement of hypotheses

Operational Statement of Hypotheses

1. H1 : Students who have been responded to in writing by their subject area teacher using the open-process mode of response (the experimental groups) show more positive attitudes toward writing according to a) source, b) audience, c) response, and/or d) purpose than students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control groups) as measured by a pre- and posttest attitude survey.

H0 : Students who have been responded to in writing by their subject area teacher using the open-process mode of response (the experimental groups) do not show more positive attitudes toward writing according to a) source, b) audience, c) response, and/or d) purpose than students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control groups) as measured by a pre- and posttest attitude survey.

2. H1 : Native Indian students who have been responded to in writing by their subject area teacher using the open-process mode of response

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(the experimental groups) show more positive attitudes toward writing according to a) source, b) audience, c) response, and/or d) purpose than do Native Indian students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control groups) as measured by a pre- and posttest attitude survey.

H0 : Native Indian students who have been responded to in writing by their subject area teacher using the open-process mode of response (the experimental groups) do not show more positive attitudes toward writing according to a) source, b) audience, c) response, and/or purpose than Native Indian students who have been responded to in writing by their subject area teacher using the traditional mode of response (the control groups) as measured by a pre- and posttest attitude survey.

3. H1 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in

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response journals than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

H0 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

4. H1 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

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H0 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

5. H1 : Students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

H0 : Students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) do not show more positive attitudes toward

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a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

6. H1 : Native Indian students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than Native Indian students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

H0 : Native Indian students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) show more positive attitudes toward a) writing, b) the response journal itself, and/or c) the subject area teacher as measured by the number of modes and formal features used in response journals than Native

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Indian students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

7. H1 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show greater gains in writing skill as measured in the posttest than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

H0 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show greater gains in writing skill as measured in the posttest than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

8. H1 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show greater gains in a) the content and organization of their writing and b) the mechanics of their writing as measured in the posttest (formal, in-class essay) than students who have

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been responded to in writing by their English teacher using the traditional mode of response (the control group).

8. H0 : Students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show greater gains in a) the content and organization of their writing and b) the mechanics of their writing as measured in the posttest (formal, in-class essay) than students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

9. H1 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show greater gains in writing skill as measured in the posttest than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

H0 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show greater gains

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in writing skill as measured in the posttest than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

10. H1 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) show greater gains in a) the content and organization of their writing and b) the mechanics of their writing as measured in the posttest (formal, in-class essay) than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

H0 : Native Indian students who have been responded to in writing by their English teacher using the open-process mode of response (the experimental group) do not show greater gains in a) the content and organization of their writing and b) the mechanics of their writing as measured in the posttest (formal, in-class essay) than Native Indian students who have been responded to in writing by their English teacher using the traditional mode of response (the control group).

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11. H1 : Students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) show greater gains in their approaches to solving a problem in science as measured in the posttest than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

H0 : Students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) do not show greater gains in their approaches to solving a problem in science as measured in the posttest than students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).

12. H1 : Native Indian students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) show greater gains in their approaches to solving a problem in science as measured in the posttest than Native Indian students who have been responded to in writing by

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their science teacher using the traditional mode of response (the control group).

H0 : Native Indian students who have been responded to in writing by their science teacher using the open-process mode of response (the experimental group) do not show greater gains in their approaches to solving a problem in science as measured in the posttest than Native Indian students who have been responded to in writing by their science teacher using the traditional mode of response (the control group).