A Comparative Study of Two Process Approaches to the Teaching of Writing to Third Grade Students

Anita J. Clark

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A COMPARATIVE STUDY OF TWO PROCESS APPROACHES
to the Teaching of Writing
to Third Grade Students

THESIS

Submitted to the Graduate Committee of the
Department of Curriculum and Instruction
Faculty of Education
State University College at Brockport
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Education

by
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Abstract

The purpose of this study was to determine if the quality of writing of third grade students instructed in a structured method of writing would vary from that of a similar group instructed in an unstructured method. The element of learning style that depicted a preference for structure or lack of preference for structure was considered to determine any significant relationship with writing achievement.

This study was conducted over a ten-week period with twenty-four third-grade students. Pre-treatment and post-treatment writing samples were collected. One group of students, (Group I) was instructed using a structured approach to writing. The other group (Group II) was instructed in an unstructured approach to writing. The element of the Learning Styles Inventory: Primary Version that pertained to structure was administered to all subjects.

Data comparing pre-treatment and post-treatment scores of Group I and Group II were analyzed using a dependent $t$ test. Data comparing post-treatment scores of Group I and II were analyzed using an independent $t$ test. Chi-square was used to determine any relationship between writing achievement and learning style.
The analysis of the data revealed that Group I, the group using the structured method, showed a significant gain from pre-treatment to post-treatment samples. There was no significant difference between pre-treatment and post-treatment samples of Group II, but there was some gain. There was no significant difference between the post-treatment scores of Group I and Group II. There was no significant relationship between writing scores and learning style for Group I or Group II.

Based on analysis of the data, the conclusion can be drawn that both groups improved using a process-based writing approach. The structured group demonstrated significant gains. Learning style did not seem to have any relationship to the writing achievement of this group of students over the ten-week treatment period.

Interest in the writing process and the interrelatedness of learning style and writing achievement reveals numerous areas for further research. This supports awareness of learning styles and use of a process approach to writing in the classroom.
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Chapter I

Statement of the Problem

Purpose

The purpose of this study was to determine if the quality of writing of third grade students instructed in an structured method of writing would vary from that of a similar group instructed in an unstructured method. The element of learning style that denoted a preference for or lack of preference for structure was considered to determine any significant relationship with writing achievement.

Questions to be Answered

1. Is there a statistically significant difference between the writing scores on post-treatment samples of two groups of third grade students, one instructed in a structured method of writing and the other instructed in an unstructured method?

2. Is there a statistically significant difference between the writing scores on pre-treatment and post-treatment writing samples for the structured group, Group I?

3. Is there a statistically significant difference between the writing scores on pre-treatment and post-treatment writing samples for the unstructured group, Group II?
4. To what extent does a subject's preference or lack of preference for structure, as measured by the Learning Styles Inventory: Primary Version (LSI: P) developed by Perrin (1983) predict writing scores for Group I?

5. To what extent does a subject's preference or lack of preference for structure, as measured by the Learning Styles Inventory: Primary Version, (LSI: P) developed by Perrin (1983) predict writing scores for Group II?

Need for the Study

In recent years writing has become a major focus of language education. This is due to the increasing interest in literacy embodying the interrelation of reading, writing, speaking, and thinking, as well as current trends in education emphasizing a need for writing competency. Graves (1982), in emphasizing the importance of writing, stated "Writing is a marvelous unifier. We teachers have yet to make proper use of its power in securing the deepest kinds of learning, in improving children's critical thinking and in integrating the curriculum" (p. 15).

As researchers investigated the complexities of writing, they focused on the process rather than the
product of composition. No longer is writing considered to be a hierarchy of skills which can be taught to a whole class at once with the expectation that these skills will carry over into composition.

An increasing number of educators have gained more understanding of the process of writing and are using this knowledge directly in the teaching of writing (Calkins, 1978; Graves, 1981a; Turbill, 1982). Various models of the writing process have been proposed and several stages in the process have been identified. Although researchers vary in the exact numbers and titles of stages, three general categories are identified consistently, including pre-writing (choosing a topic, brainstorming, drawing a picture, getting ready to write); writing (getting ideas on paper); and re-writing (editing, expanding, improving).

With the increased awareness of the process of writing, many factors have been evaluated regarding their effect on this process. Individual learning styles, the child's developmental level, environmental influences, the impact of reading and oral language on writing, and the role of the teacher have all been considered. While most researchers in recent years agree that many factors need to be
weighed, there is still some question as to what is the most effective approach to teaching writing.

Debate continues about whether writing should first address the creative voice of the child with attention given to mechanics later, or if indeed the child needs a framework of established structures and techniques within which to display his creativity. Holdaway (1979) maintains that setting a pattern through literature best enhances a child's ability to function in the writing process, thus, providing a model so that the child is not faced with a blank page and no direction.

Researchers of the Individualized Language Arts (ILA) program (Ezor, 1974), found that specific structures and techniques could be taught and used as a framework enabling students to better express themselves in written composition. This program includes many procedures for sentence manipulation and sentence expansion and provides checklists to guide students in their writing efforts.

While conducting research in New Hampshire, Graves (1983) focused not so much on the teaching of writing but on what the writer does during the composing process. His findings reflect that
children first need to record their story or voice on paper. Then with the help of a proficient instructor they can be guided toward necessary form and transcription. It is Graves' contention that the essence of writing is the creative idea that a child has to share with his audience. If form is stressed prior to creative content, that content may lose its meaning and impact.

Because of the importance of writing skill in society today, it is essential that educators become aware of the most effective means to improve students' writing ability. Graves (1978) noted in a review of research in writing that there is a need for research in writing that can be utilized in the classroom. While some researchers have indicated that students need structures within which to create based on instruction in form and practice in sentence manipulation (Ezor, 1974; Mellon, 1969; O'Hare, 1973), other researchers have found that structure and practice exercises may interfere with the author's creative expression of ideas (Calkins, 1978; Graves, 1983; Turbill, 1982). Research has also shown that learning styles can effect students' achievement (Dunn, K., & Dunn, R., 1978). Previous research study suggests a need for research based on
classroom observation correlating a process-
approach to writing and learning style.

**Definition of Terms**

**Structured method of writing** - refers in this study to the Individualized Language Arts (1974) program developed in Weehawken, NJ, which is based on establishing structures and techniques as a framework to aid in developing children's writing.

**Unstructured method of writing** - refers to the conference approach to writing, emphasizing content first and form second. This represents the approach suggested by Graves' (1983) research in New Hampshire.

**Process approach to writing** - refers to the approach to teaching written composition based on the theory that writing is a developmental process, wherein, children actively develop their own written language system through various stages.

**Learning style** - refers to the conditions under which a child learns best with consideration to the immediate environment, emotionality (including need for or lack of need for structure), sociological needs and physical needs (Dunn & Dunn, 1978).
Limitations

Since the sample used in this study was limited to twenty-four students in a rural-suburban school district, the conclusions drawn from this study cannot generally apply to all third grade students, but pertain only to this group. It is important to note that this study was conducted over a ten-week period, from March to June, a relatively short span in a child's developmental growth.

Summary

Researchers are applying knowledge of child development, learning style, and the writing process in examining effective approaches to improving writing. Turbill (1982) summarized the importance of writing as follows:

A powerful case can be made for the importance - even centrality - of writing in school learning. An era is ending in which writing was mostly treated as handwriting plus rather mechanical composition. Now writing is increasingly seen as thinking itself. It is a specifically careful kind of thinking: thinking made visible on the page, where the ideas can be subjected to a process of revision and so clarified (p. 93).

This study attempted to compare two approaches to teaching writing to determine if one actually was more effective than the other. It also addressed the possible effect of learning style on writing achievement.
Chapter II

Review of the Literature

**Purpose**

The purpose of this study was to compare the writing achievement of two groups of third grade students instructed in two different process approaches to writing. One group was instructed in a structured method as used in the Individualized Language Arts Program and the other by an unstructured method, based on Graves' (1983) research in the conference approach. Learning style was considered to determine any relationship to the writing approaches used. This chapter has divided the recent research relevant to this study into four main sections. These areas are process approach to writing; structured approach to writing; unstructured approach to writing; and learning styles.

**Process Approach to Writing**

Writing instruction has become an important and engaging field of inquiry in the past few years. A review of the literature regarding research in written compositions revealed that until 1972 only 156 studies on writing in the elementary grades had been conducted in the United States. Of these only
twelve percent of the studies dealt with the process of writing. In the past fifteen years, however, increased attention has been given to the writing process because more has been learned about cognitive development (Sylwester, 1981) and also about how writers compose (Graves, 1981a).

With the increased knowledge of what happens in the writing process, research has investigated the most effective ways for writing to be facilitated in the classroom. According to Murray (1982):

One of the greatest impediments to effective writing is the way writing has been taught by English teachers. Language is alive. It changes with the seasons. Grammarians try to contain it, but they cannot. Language can't be imprisoned in any rule book. There is, in fact, little agreement between some of the principal rulebooks and between the teachers who use them. The writer should not follow rules, but follow language towards meaning, always seeking to understand what is appearing on the page, to see it clearly, to evaluate it clearly, for clear thinking will produce clear writing. (p. 767)

Recent research supports Murray's contention that the emphasis needs to be placed on the process involved in writing rather than the rules. Focus needs to be shifted from the text to the stages in the writing process (Gray and Myers, 1983). Children need to be encouraged to think of themselves as authors and aspire to do what authors do, solve problems, revise - to know that writing is not
easy, and that it is a process (Plapinger, 1984). This process according to most researchers incorporates prewriting or thinking about a topic (this can include all those experiences a student has before he writes, including; reading aloud, films, experiments, art, and personal experiences), writing - getting the thoughts on paper, and rewriting - revising and editing (Calkins, 1978; Graves, 1978; Gray and Myers, 1983). While writers go through the same process in writing, each accomplishes this in his own way. According to Amarel (1980):

No child is typical. Each child is an unfolding story, written with style, recurrent themes, and strong patterns. The teacher's job, then, is to transform general goals for the class into personalized plans, and to select and provide the best means of supporting the development of individuals. (p. 3)

This attempt by researchers to determine the most effective means to assist students in the writing process has initiated much of the recent research. Results have been varied with some researchers finding that form should be taught prior to content in writing, a structured approach, and others stating that form can interfere with creativity and thus should be taught after content has been expressed, an unstructured approach.
Structured Approach to Writing

Research studies indicate that the manipulation of syntax, or sentence-building activities such as sentence combining can influence writing performance. In his research, Ney (1974) found that in contrast to the ability to speak, the ability to read and write generally develops through formal instruction and most often does not develop when there is no formal instruction. Thus, the skill of writing is affected by exercises and practice in structures such as transformational sentence combining.

Sentence combining has its roots in the work of Noam Chomsky (1957). This approach supports the assumption that one can learn a skill through imitation of structures and that students can help edit each other's work. Supporters of the sentence combining approach believe that asking a beginning student to write a complete essay is equivalent to assigning all the problems of composition at once (Myers, 1978). Based on Chomsky's research, several other major studies were conducted to determine the value of sentence manipulation exercises.

Hunt's (1965) research indicated that special lessons in adding, deleting and embedding could
accelerate the growth of students' syntactic sentence development. Mellon (1969) in research with a seventh grade experimental group provided practice in sentence combining and instruction in transformational grammar. From this study he concluded that syntactic fluency resulted only when instruction was given in sentence combining and transformations. When O'Hare (1973) modified Mellon's exercises in his study, he also found evidence that:

The group that had instruction and practice in sentence combining had much more detail and "meat" in their compositions. These compositions were judged to be significantly better in overall quality than those written by students who did not have the practice. (p. 72)

He concluded that students had more to say possibly because they had a wider set of syntactic alternatives. He surmised that perhaps a student who knows how to combine sentences actually creates better compositions (p. 72).

Dominic (1983) reiterated O'Hare's support of the value of sentence combining. He found that by helping children realize that a primary function of a single sentence is to provide clues to what has preceded it and what is to follow, teachers can help in clarifying the concept of "local coherence." Even though there has been considerable discussion among researchers about the limitations of the sentence as a focus for children's learning about
language, a good case has been made for sentence-level instruction. By helping children focus on various ways of connecting sentences, they can become more critical of their writing as "text", not simply as their experience.

Strong (1976) stated that sentence combining may be effective because it is teaching more about processing strategies than sentence types. He found that:

> The mental activities in sentence combining are what make it such a powerful approach. If sentence combining works because it trains a kid to hold longer and longer discourse in his head - to embed and subordinate at greater depth as a means of expressing thought...it is a means to intervene in cognitive development and perhaps to enhance it. (p. 60)

In agreement with Strong, Ausubel (1968) comments as a cognitive psychologist on the beneficial effects of practice in sentence manipulation: "The effects of practice both reflect the influence of existing cognitive structure and also modify that structure, and hence enhances their dissociability strength and retention" (p. 160).

Another concern of writing research regarded not just practice in sentence manipulation but also vocabulary development. Applegate (cited in Lehr, 1982) noted that even children who are motivated to write cannot be successful unless they have the
words. Based on this, this author developed exercises to be taught and practiced, which were designed to increase vocabulary as well as the appreciation of the richness of language.

At the Young Writers' Workshop, Epstein (cited in Lehr, 1982) worked on writing form with twenty-two fourth to sixth grade students from an inner city school. She was convinced of the need for instruction in form to improve children's writing. Consequently, she developed methods to teach within certain structures. The workshop emphasized the techniques and structures of descriptive writing, characterization, adventure stories and tall tales, plays, autobiographies, and reporting.

Each workshop followed the same basic procedures: First one literary structure or technique was introduced; next, passages from children's literature were read to the group as examples of the type of writing to be studied; then the group dictated a chart story using the structure or technique, each student wrote an example; finally those who wished to do so were allowed to read their work aloud. Some positive results of this workshop were an increased willingness of the children to use language creatively, more types of literature were read and children exhibited greater ease in writing.
Another program, developed because of concern over the level of writing competency displayed at secondary schools and the need for improved writing skills at earlier grades was the Right to Write Project. This project began in 1980 in the Burlington City Schools in Burlington, North Carolina, with two basic purposes: (1) to develop a structured, sequential writing program to be articulated across grade levels, and (2) to improve the knowledge and use of writing skills of students in Grades 4-9 (Coop, Lee, Tapscott and White, 1983). To implement the program, both classroom teachers and resource teachers participated in staff development sessions which involved the participants in the process of writing so that they would develop an understanding of the act of writing.

In the classroom, the resource teacher either instructed or teamed with the classroom teacher for a writing lesson demonstrating a particular skill or structure for writing. Students then wrote with assistance from both teachers. Their writing was evaluated and follow-up activities to reinforce necessary skills were provided. Results of the Right to Write Project indicated that this writing program had a significant effect on the writing
performance of students in Grades 4-9 and, in addition, the program had a significant effect on the knowledge that these students possessed about the recognition of correctly written prose.

In 1970-71 third and sixth grade students in Weehawken, New Jersey, participated in a research study with similar students from a nearby community. The Weehawken students were instructed with the Individualized Language Arts program (Ezor, 1974) based on the rationale that certain insights provided by the study of language could be translated into a framework of strategies for improving certain aspects of writing instruction. Students in the control group were instructed by traditional methods of teaching composition which included grammar exercises from textbooks.

Statistics from this study showed that the Weehawken students were writing longer, richer and more varied sentences at the end of the year of treatment. T-units (a simple or complex sentence, or an independent clause inside a compound sentence) were used as a means of comparison of the two groups. The average number of words per T-unit was determined to be a highly significant score in correlating children's writing ability with grade level. Based on this score, Weehawken sixth-graders
gained 45 percent in one year, much more than the control group. The Weehawken children were also using more series of words and word-groups and were moving parts of their sentences to vary their writing style.

A follow-up evaluation in 1971-72 indicated the same Weehawken children were continuing to show improvement. Another study conducted in 1974-75 involving three New Jersey school districts used different criteria for evaluation. The end of the year findings showed the students using the Individually Language Arts program performed better than comparison groups. In 1976-77 an identical program showed significant results over a period of less than five months. Experimental classes in grades 1-7 scored higher than control groups and the gain for every criterion was significant at the .01 or .001 level (Ezor, 1974).

Research conducted by Fadiman and Howard (1979) supports the teaching of rules and strategies to young writers. They found that writers need to deal with the constraints of precision and form in order to develop their own skills and talents. Merely increasing the writing that children did would not teach them how to write.
Unstructured Approach to Writing

In contrast to the view that merely increasing the writing that children did would not teach them to write, Lickteig (1981) stated:

Many authorities believe that actual growth and development in writing occur through the experience of writing - growth that occurs separate from teacher instruction and evaluation. While instruction and evaluation may prove helpful, the more valuable opportunity is the actual writing practice, the expression of ideas. (p. 47)

Graves (1975) indicates that children do indeed learn to write by writing. He stated: "Our preoccupation with the correct stimulus for writing, correcting, and grading final products or with exercises to increase sentence complexity need to be abandoned" (p. 240). Based on his study conducted with seven-year-old children, Graves (1975) found that children writing in an informal environment demonstrated that they did not need teacher motivation or supervision in order to write. Plapinger (1984) relates the description one kindergartner in PS 230, Brooklyn gave of her writing process: "First I find a pencil. Then I find a piece of paper. Then I get an idea. Then I sit down and think" (p.22). Nothing is mentioned here of practice exercises or teacher stimulation. Teachers in this Brooklyn School District have
espoused the theory that writing is natural for children — as long as adults do not interfere. They found that the mere idea that five and six year old students asked for more writing time instead of playtime demonstrated the success of an unstructured program, and illustrated the fact that children can and do take responsibility for their own learning.

Strong (1976) agreed with the idea that children can take responsibility for their own learning when he stated what he considers to be two basic facts of language:

Very young children invent for themselves (without drill or instruction in the conventional sense) an encoding/decoding system; and that syntactical growth (in terms of increased sentence length, depth of modification, and subordination) is a natural and inexorable feature of normal language development, just as is growth in conceptualizing. (p. 56)

A study of two children, conducted by Dyson and Genishi (1982) also found that young children were capable of taking responsibility for their own learning. They could find necessary information and contribute positively to another’s learning. Sometimes children could serve to teach one another through questioning, modeling, and providing support for each other.

Graves’ (1981b) research in New Hampshire indicated that peer conferences not only enabled the
students to help each other but also provided a unique chance to learn more about language by helping another person. The conference aided students in using language to talk about writing more specifically.

In an effort to dispel some myths of writing, Smith (1981a) explained that while writing may take years of practice to become fluent and facile, the fluency and facility come with actual writing, not with repetitions of separate drills and exercises. He emphasizes that even transcription skills such as spelling, punctuation, and capitalization cannot be effectively learned from lectures and exercises.

Calkins (1982) also documented this in her research in New Hampshire. When comparing two third grade classes, one with formal instruction in punctuation and the other without, she found that the third grade "writers" who had not had formal instruction in punctuation could explain an average of 8.66 kinds of punctuation. The children who had studied punctuation through classwork drills and tests, but had rarely written, could only explain 3.85 kinds of punctuation.

If the theory of learn now, write later is followed, Smith (1981b) finds that transcription
aspects of writing are emphasized first before the learner has a chance to experience or understand the composition aspect of being a writer. Undue concern with transcription can actually interfere with the creative, exploratory aspect of being a writer which is the essence of composition.

The conference approach to writing has been developed to make use of the child's innate desire and ability to write and to alleviate teacher interference without omitting teacher guidance. Graves (cited in Walshe, 1982) describes the conference approach:

At the core of the conference is a teacher asking a child to teach her about the subject. The aim is to foster a bursting desire to inform. So the teacher never implies a greater knowledge of this topic than the child possesses, nor treats the child as an inferior learner. We are in the business of helping children to value what they know. Ideally, the poorer the writing the greater the interest the teacher will show in it - or rather in what it might become. (p. 11)

Turbill (1982) researched the conference approach in the St. George Project during a three-month period from September through November with an experimental group (using the conference approach) and a control group (using traditional grammar instruction). Three writing samples were taken from each student and judged on the basis of quality of
sentence structure, orderliness of thought, and clarity of expression. The experimental group exhibited notably positive scores and astonishingly rapid improvement. Not only did the clarity and style of writing improve, but also handwriting, spelling, punctuation, word interest, and sentence flexibility. Reading improved as did behavior, students' confidence, and learning in content areas. Turbill credits the conference approach with "improvement in thinking/learning power with effects that not surprisingly are extending beyond writing to the whole curriculum" (p. 94).

Another researcher, using the conference approach, Calkins (1982), experienced similar results in her case-study of one third-grade girl in New Hampshire. Although the teacher did not sit children down and teach them about qualities of good writing, she helped the children "become aware of what works in a piece of writing" (p. 67).

In her study, Calkins observed both content conferences and process conferences. The content conference dealt with what the child was writing and the process conference with where the child was in the writing process. Calkins' research showed that both types of conferences resulted in improved
writing because students were allowed time to encounter their own problems, to ask their own questions. Since the work was their own and self-directed, students demonstrated greater understanding of all areas of writing including content, process, and mechanics. The value of the child maintaining control of his own writing is exemplified in this statement by Arnheim (cited in Calkins, 1982).

The artist is constantly faced with the problem of how to develop the part in terms of the whole... The artist works out positive entities, acting upon each other dialectically. An interplay of inferences, modifications, restrictions, and compensations lends gradually to the unity of and complexity of the total composition. The total result, obtained through successive operations presents itself as a marvel of organized complexity. (p. 151)

Dillon and Searle (1980) in their study with fourth, fifth, and sixth-grade students discovered that all children are not at the same developmental point in their learning of language mechanics and form. They will therefore need different responses and guidance at different times. Teachers that focus on form rather than content, separate language learning from its purpose to help individuals communicate effectively. Graves (1982) emphasizes that, "all the surface mechanics (handwriting, spelling, punctuation and all the grammar children
need to know in primary school can be adequately taught in the conference at the point of each child's need instead of through wearisome whole class exercises" (p. 12).

Creative writing seeks to develop standards of usage within a framework that gives first priority to children's spontaneous communication. The teacher's role should be to help youngsters experiment in new ways of expressing themselves (Langer, 1982). "After children have ample opportunity to write freely, unhindered by the necessity to conform to adult standards, vaguely understood, there will be sufficient time 'and incentives to learn the appropriate standards and conventions of writing" (Cramer, 1978, p. 1).

Graves (1982) states that developing writers do not need instruction in form before actually writing. He finds the learning process to include times of "losing balance, regaining it, and going on" (p. 173). The teacher's role should be to help the child to solve his problem in order to regain that balance and continue.

Haley-James' (cited in Winkeljohann, 1981) observations of children's writing lend support to the preceding ideas. She found that: "Students
master conventions most readily when teachers see their task not as teaching conventions, but as supporting students' use of them" (p. 863).

Students were able to master conventions best when teachers did not answer questions students had not asked. Encouraging writing and being there with information when students discover a need for it exemplified more effective writing instruction.

Clay (1982) found that some teachers assume automatically that children will need help putting their ideas into writing. Consequently, children begin to perceive writing as something that must come from an outside source, that the correct form is not within them.

Graves (1983) points out that teachers need to be aware of their function in the writing process of students. Wells (cited in Dyson, 1982) notes that "the teachers' role is to support and extend the strategies a child had begun to use" (p. 674). They must realize that they can be most effective helping the student when he is at a point of needing a solution to some problem during his writing. Graves emphasizes that it is not the teacher's responsibility to teach strategies or rules that the student does not need in a particular phase of his writing.
Children grow as writers because they wrestle with unbalance between their intentions and the problem at hand (Graves, 1983). With the conference approach, rather than tight teacher control of the what, when and how of writing, the child is given control of the writing. This is a significant shift of focus, from teaching to learning and it changes the writing program in these important ways:

1. The program is completely individualized.
2. The child makes responsible decisions about what to write.
3. There is daily time to learn to "write by writing."
4. The child can discover his or her unique process of writing.
5. There is time to conference individually with his teacher.
6. This conference attends to making the writing better. (Turbill, 1982)

Graves' (1982) conclusion, "Every child can write," based both on writing improvement and attitude toward writing, after studying students for two years was that the "conference approach is easily the most successful approach to writing I have tried" (p. 178).

Learning Styles

Many aspects need to be considered when determining a successful writing program for children.
One such consideration is the particular learning style of a child. Children come to the classroom with varying levels of intelligence, diversified cultural backgrounds, various emotional and psychological experience as well as physical differences, therefore, any effective teaching method will need to take these differences into account if productive learning is to take place. Recognizing the importance of adapting curriculum and instructions to learners' aptitudes, Keefe (1979) states:

"Learning style diagnosis opens the door to placing individualized instruction on a more rational basis. It gives the most powerful leverage yet available to educators to analyze, motivate, and assist students in school. As such, it is the foundation of a truly modern approach to education." (p. 372)

While widespread agreement supports the existence of learning styles, researchers define the concept differently. Gregorc (cited in Davis & Schwimmer, 1981) emphasized distinctive behavior and dualities. He describes learning style as: "Distinctive behaviors which serve as indicators of how a person learns from and adapts to his environment. Learning style also gives clues as to how a person's mind operates" (Gregorc, 1979, p. 235).

Canfield and Lafferty (1970) discuss conditions, content, modes and expectations; Kolb (cited

Dunn and Dunn (1978) first became involved with learning style as an outgrowth of helping slow learners narrow the gap between their ability to read and the grade level expectations held for them. Over a three-year period, approximately 600 teachers-in training, eight college professors, more than twenty classroom teachers and at least five public school administrators worked together to facilitate learning for children who had not responded well to traditional teaching. It became apparent that selected methods often were highly effective with some children, but produced only minor gains in others.

Research showed that at least eighteen categories, when classified, suggested that learners are affected by their: (1) immediate environment (sound, light, temperature, and design); (2) own emotionality (motivation, persistence, responsibility and need for structure or flexibility); (3) sociological needs (self, pair, peers, team, adult, or varied); and (4) physical needs (perceptual, strengths, intake, time and mobility) Dunn and Dunn, 1978, p. 3).
From 1968-69, Dunn and Dunn (1978) developed and experimented with the first series of questions designed to elicit student preferences for learning style elements from youngsters themselves. Several studies demonstrated that (1) students can identify their own learning style; (2) when exposed to a teaching style consistent with the ways they believe they learn, students score higher on tests, fact knowledge, attitude, and efficiency than do those taught in a manner inconsistent with their style; and (3) it is advantageous to teach and test students in their preferred modality.

During the next five years, the questions were listed and revised and by 1974 reliability and consensual validity had been established. The outgrowth of this research and revision was the Learning Style Inventory (LSI).

Instruments such as the LSI which reveal the accuracy with which individuals are able to answer its questions, aid teachers and researchers in determining individual learning styles. This information indicates how a person learns from and adapts to his environment and gives clues to how a person's processing system operates. With these details in mind, teachers can adjust the learning
situation, either in physical arrangement or teaching methods, to best meet individual needs. Teachers must recognize the importance of adapting curriculum and instructions to learners’ aptitudes (DeBello and Dunn, 1981).

**Summary**

Writing, is a process, regarded as a significant act of self-expression and needs to be treated as part of integrated language. Researchers agree that a process approach to teaching writing enables students to write effectively, integrating much of their experience of life.

While there is general consensus within recent research that the process approach to writing is effective, there is some debate concerning how to best facilitate this process.

Several researchers (Coop, Lee, Tapscott & White, 1983; O’Hare, 1973; Strong, 1976) found that instruction in form before content gave students more structure to work with and enabled them to produce more interesting and well-developed compositions. Other researchers (Calkins, 1982; Graves, 1983; Turbill, 1982) found that students were able to write more creatively and with more enjoyment if they were allowed to create the content without interference and later attend to form.
Research in learning styles has illustrated the importance of utilizing instructional environments and methods most conducive to individual learning needs. In this way students' maximum potential can be realized. With increased knowledge of the writing process and awareness of learning styles, teachers have the information available to design effective writing instruction. How to best utilize this information is the question examined by this study.
Chapter III

Design

Purpose

The purpose of this study was to determine if the quality of writing of third grade students instructed in a structured method of writing would vary from that of a similar group instructed in an unstructured method. The element of learning style that denoted a preference for structure or lack of preference for structure was considered to determine any significant relationship with writing achievement.

Questions

1. Is there a statistically significant difference between the writing scores on post-treatment samples of two groups of third grade students, one instructed in a structured method of writing and the other instructed in an unstructured method?

2. Is there a statistically significant difference between the writing scores on pre-treatment and post-treatment writing samples for the structured group, Group I?

3. Is there a statistically significant difference between the writing scores on pre-treatment and post-treatment writing samples for the unstructured group, Group II?
4. To what extent does a subject's preference or lack of preference for structure, as measured by the Learning Styles Inventory: Primary Version, predict writing scores for Group I?

5. To what extent does a subject's preference or lack of preference for structure, as measured by the Learning Styles Inventory: Primary Version, predict writing scores for Group II?

Methodology

Subjects

Twenty-four third grade students, 12 boys and 12 girls, attending a rural-suburban school in western New York State were the subjects of this study.

Subjects' reading abilities ranged from below average to high average. All of the subjects were members of one classroom during the study, but had been instructed in a variety of writing procedures in the past three years of schooling.

Instruments

The section of the Learning Styles Inventory: Primary Version (LSI: P) which tested structure was administered to determine individual preference or lack of preference for structured learning situations (See Appendix A).
Writing samples were obtained before treatment and at the end of the study. Each sample was evaluated using a Diederich Rating Scale (1974) modified for this study. Modifications included revising definitions of the seven categories rated to apply to elementary age students. Those areas included: ideas, organization, wording, flavor, usage, punctuation, and capitalization and spelling. Handwriting was not considered (see Appendix B for descriptions). Two teachers were trained in the use of this scale and an interrater reliability of .97 was established.

Procedure

One third grade class of 24 students was divided by random selection into two groups, each with six boys and six girls. One group was instructed in writing based on the Individualized Language Arts (ILA) program developed in Weehawken, New Jersey, 1974. The second group was instructed according to the conference approach as suggested in Graves' book, Writing: Teachers and Children at Work 1983.

The researcher was instructor for both writing groups. Both groups were taught in one classroom. Seating was arranged so that members of each group sat together. To eliminate contamination
during instruction, a divider was used to separate the instruction area from the rest of the classroom. While one group was working with the teacher in the back of the room, the second group was working on independent reading assignments in the front of the room. Guidelines were established and followed to minimize interruptions during writing time and writing was not to be discussed between groups.

Students using the Individualized Language Arts (ILA) program, Group I, received specific instruction and practice in the use of ILA structures. Structures demonstrated included techniques of sentence synthesis, expansion by paragraphing, outlining, slotting (substitution), embedding, sentence-combining, and sentence expansion. Checklists were developed for each structure taught and for capitalization, punctuation and spelling. These were kept in each student's folder for reference.

Instruction included discussion of a common experience, planning (demonstration of structures to be used), writing as a group, writing individually, oral reading of compositions, discussion and evaluation. The total process usually took several days as it included both group discussion and individual teacher-student and peer conferencing. Finished works were published, motivating students to start the process again.
During teacher-directed lessons, structure was introduced as needed. Students were encouraged to continue using previously taught skills also. Charts made during group discussion were copied and kept in each student’s folder for reference. If a student could not generate his own topic for writing, the instructor offered suggestions for story starters.

Group II students using the conference approach had no initial instruction in form or structure for writing. The instructor explained that they would be writing about subjects of their choice at their own speed. An initial group meeting was used to help children set up their folders and to decide on at least four possible topics for writing. Topics were to include anything with which they were familiar enough to write: personal experiences, hobbies, family, et cetera.

Each student kept four papers in his folder entitled: Stories I Have Written, Topics I Would Like to Write About, Words I Need to Learn to Spell, and Skills I Have Learned. These lists served as reminders and were continually updated by the student.

For the first few days of this study, the Group II subjects met together with the instructor.
After setting up the folders and establishing procedures for writing time, everyone in the group, including the instructor, chose a topic and began writing. After fifteen minutes, various students were offered the opportunity to share their writing. Other members of the group were asked to respond to what they liked about each selection. The instructor kept a record of which students had shared so that each would have an opportunity to share if he so desired.

After the procedure was established, the Group II subjects were not generally instructed as a whole group. Writing instruction was provided through small group conferences, individual teacher-student conferences and peer conferences.

Both writing groups were exposed to a variety of literature in the classroom, and both groups were able to share their writing orally with their own group. Writing from both groups was kept in individual folders which could be used only during writing time.

**Statistical Analysis**

An independent two-tailed t test was used to evaluate differences between post-treatment scores of Group I and Group II. A dependent two-tailed
A t-test was used to evaluate differences between scores on pre-treatment and post-treatment writing samples of each group.

Learning styles and writing scores were compared using Chi-square.

Summary

This study compared the effect of two different writing approaches on the writing of third grade students. Of the twenty-four students, 12 participated in a structured writing class based on the ILA program. The other 12 students were instructed in a conference approach based on Graves' research.

Writing samples from both groups were collected before and after the treatment. Scores were obtained based on a modified Deiderich scale. Pre and post-treatment scores were compared for each individual and between groups. Writing scores were also compared with learning style preference for structure based on the LSI: P subtest for structure.
Chapter IV

Analysis of Data

Purpose

The purpose of this study was to determine if the quality of writing of third grade students instructed in a structured method of writing would vary from that of a similar group instructed in an unstructured method. The aspect of learning style that denoted a preference for structure or lack of preference for structure was considered to determine any significant relationship with writing achievement.

Findings and Interpretations

The null hypotheses investigated in this study were as follows:

1. There is no statistically significant difference in the scores on post-treatment writing samples between two groups of third grade students, one instructed in a structured method of writing (Group I) and the other instructed in an unstructured method (Group II).

2. There is no statistically significant difference between the scores on pre-treatment and post-treatment writing samples of Group I.
3. There is no statistically significant difference between the scores on pre-treatment and post-treatment writing samples of Group II.

4. There is no significant relationship between a learning style with preference for structure or lack of structure and writing scores of Group I.

5. There is no significant relationship between a learning style with preference for structure or lack of structure and writing scores of Group II.

A two-tailed independent t test was used to analyze the scores from the pre-treatment writing samples to determine if means were equivalent for Group I and Group II at the beginning of the study. The data used to compare the two writing groups are listed in Table 1.

Table 1
Pretreatment Comparison of Group I and Group II

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>12</td>
<td>19.00</td>
<td>3.7899</td>
</tr>
<tr>
<td>Group II</td>
<td>12</td>
<td>19.75</td>
<td>3.4935</td>
</tr>
</tbody>
</table>

\[ t \text{ value} = 0.504 \quad df = 22 \quad \text{crit } t = 2.07 \]
The $t$ value of .504 revealed that there was no significant difference between the mean scores of Group I and Group II. Therefore these groups could be considered equivalent before treatment.

Null hypothesis number one stated that there was no statistically significant difference in the scores on post-treatment writing samples between two groups of third grade students, one instructed in a structured method of writing (Group I) and the other instructed in an unstructured method (Group II). A two-tailed independent $t$ test was applied to the data to determine any significant difference in the post-treatment scores. The data used to compare the two writing groups are listed in Table 2.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>12</td>
<td>21.42</td>
<td>2.75</td>
</tr>
<tr>
<td>Group II</td>
<td>12</td>
<td>21.67</td>
<td>4.31</td>
</tr>
</tbody>
</table>

$t$ value = .17     df = 22     crit $t$ = 2.07

Since the $t$ value required was 2.07 and the $t$ value obtained was .17, the data failed to reject
the null hypothesis. There was no significant difference between the post-treatment writing scores of Group I and Group II.

Null hypothesis number two stated that there was no statistically significant difference between the scores on pre-treatment and post-treatment writing samples of Group I. A two-tailed dependent t test was applied to the data to determine any significant difference between the pre-treatment and post-treatment scores of Group I. The data used to compare the pre-treatment and post-treatment scores are listed in Table 3. Raw scores are presented in Appendix C.

Table 3

<table>
<thead>
<tr>
<th>Analysis of Scores of Pre-Treatment and Post-Treatment Writing Samples of Group I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Treatment</strong></td>
</tr>
<tr>
<td>Scores</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>sd</td>
</tr>
<tr>
<td>Difference in means</td>
</tr>
<tr>
<td>crit t</td>
</tr>
</tbody>
</table>

Since the t value required was 2.07 and the t value obtained was 2.37, the data rejected the null hypothesis. There was a significant difference
between scores on the pre-treatment and post-treatment samples of Group I. This means that a significant gain was made by this group that cannot be attributed merely to chance.

Null hypothesis number three stated that there was no statistically significant difference between scores on pre-treatment and post-treatment samples of Group II. A two-tailed dependent t test was applied to the data to determine any significant difference between the pre-treatment and post-treatment scores of Group II. The data used to compare the pre-treatment and post-treatment scores are listed in Table 4. Raw scores are listed in Appendix C.

### Table 4

Analysis of Scores of Pre-Treatment and Post-Treatment Writing Samples of Group II

<table>
<thead>
<tr>
<th></th>
<th>Pre-Treatment Scores</th>
<th>Post-Treatment Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>19.75</td>
<td>21.67</td>
</tr>
<tr>
<td>sd</td>
<td>3.49</td>
<td>4.31</td>
</tr>
<tr>
<td>Difference in means</td>
<td>1.92</td>
<td>t value = 1.58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>crit t = 2.07</td>
</tr>
</tbody>
</table>

Since the t value required was 2.07 and the t value obtained was 1.58, the data failed to reject
the third null hypothesis. There was no significant difference between scores on the pre-treatment and post-treatment writing samples of Group II. Although the difference in mean of 1.92 did show improvement from pre-treatment scores to post-treatment scores, it was not enough to be statistically significant.

Null hypothesis number four stated that there was no statistically significant relationship between learning style with preference for structure or lack of preference for structure and writing scores of Group I. A Chi-square was applied to the data to determine any relationship. The data used to compare learning style and writing scores are listed in Appendix D. The Chi-square relationship was 0.3429.

The data failed to reject the fourth null hypothesis. A Chi-square of .3429 did not indicate a statistically significant relationship between learning style and writing scores from Group I.

Null hypothesis number five stated that there was no significant relationship between a learning style with a preference for structure or lack of structure and writing scores of Group II. A Chi-square was applied to the data to determine any relationship. The data used to compare learning
style and writing scores are listed in Appendix D. The Chi-square relationship was .0000.

The data failed to reject the fifth null hypothesis. The Chi-square of .0000 did not indicate a significant relationship between learning style and writing scores for Group II.

Summary

The results of the analysis of the data indicated no statistically significant difference between the scores on post-treatment writing samples of Group I and II. No significant difference was noted on scores of pre-treatment and post-treatment writing samples of Group II. A statistically significant difference was indicated between scores on pre-treatment and post-treatment writing samples of Group I. It can be concluded therefore, that Group I improved its writing scores as a result of the structured method of writing and not merely because of chance. No significant relationship was found between learning styles with a preference for structure or lack of preference for structure and writing sample scores.
Chapter V

Conclusions and Implications

Purpose
The purpose of this study was to determine if the quality of writing of third grade students instructed in a structured method of writing, based on the ILA program would vary from that of a similar group instructed in an unstructured method based on a conference approach. The element of learning style regarding preference for structure or lack of preference for structure was considered to determine any significant relationship with writing achievement.

Conclusions
The following conclusions can be drawn from analysis of the data of subjects studied.

The first null hypothesis was not rejected. There was no statistically significant difference in scores on post-treatment writing samples between Group I and Group II.

The second null hypothesis was rejected. There was a statistically significant difference between scores on the pre-treatment and post-treatment writing samples of Group I.
The third null hypothesis was not rejected. There was no statistically significant difference between scores on the pre-treatment and post-treatment writing samples of Group II.

The fourth null hypothesis was not rejected. There was no significant relationship between learning style, preference for or lack of preference for structure, and writing scores of Group I.

The fifth null hypothesis was not rejected. There was no significant relationship between learning style, preference or lack of preference for structure, and writing scores of Group II.

The results of the t-test analysis showed there was no significant difference between the post-treatment scores of Group I and Group II. It might be concluded from these data, that both approaches were equally effective. This could be due to the fact that though the methods were different, they both were based on a process approach. Another possible reason for no significant difference is the fact that this study was conducted over a ten-week period, a relatively short time in a child's developmental growth.

The data did reveal a statistically significant difference in the scores of pre-treatment and post-
treatment scores of Group I. This could imply that over a ten-week period, this group of third grade students made significant gains in writing achievement. This supports research by Coop, Lee, Tapscott & White, 1983; Ezor, 1974; and O'Hare, 1973, that demonstrated significant gains in writing when a structured approach including sentence manipulation was used.

Group II did not demonstrate a significant difference between scores on pre-treatment and post-treatment writing samples, but they did exhibit a gain of 1.58. From these data it might be concluded that although the unstructured method of writing did not produce as much improvement in the ten-week period, writing did improve. Although results from this study did not show significant gains, it tended to support research of Calkins, 1982; Graves, 1983; and Turbill, 1982, which revealed the conference approach as an effective method for teaching writing.

In an attempt to analyze possible reasons for no significant gains in Group II, elements such as length of time of the study and the approach itself need to be examined. Previous research was conducted over a longer period of time, from one to two years (Calkins, 1982; Graves, 1983; Turbill, 1982).
In a conference approach each child is taught strategies as they are needed. This study covered a ten-week period, and it is therefore possible that individual students were not taught a significant number of strategies in this length of time. Students in the structured group were all taught the same number of strategies in group lessons.

Based on the results of the chi-square analysis there was no significant relationship between learning style with a preference or lack of preference for structure and writing scores. This does not support research by Dunn & Dunn (1978) that indicated a significant relationship between learning style and achievement.

Implications for Further Research

The results of this study suggest the further examination of the effects of a structured method of writing such as the ILA program and an unstructured method such as the conference approach. This research could study groups of children or concentrate on individual case studies. There is a need for more research with a larger population at various grade and ability levels comparing these two approaches to writing. Studies need to be conducted over a longer period time and in a setting in which
only one approach is being used at a time. A study of this type initiated at an earlier grade level could reveal the effect of the method being applied without interference of writing methods taught previously.

The question of the student's attitude toward writing needs further investigation. In this study, the attitude of students in Group II was more positive in regard to writing. Students in Group I made comments such as: "Do we have to meet in a group?" "Can't we just write?" Do the students who enjoy an unstructured approach more, therefore have a more positive attitude toward writing using this approach? If so, will writing skills improve as a result?

Instruments used to evaluate writing warrant further investigation. An aspect of writing that was not considered in this study but which was considered important in other studies (Turbill, 1982) is the length of the composition. One observation made during this study was that with two exceptions, all post-treatment samples were longer compositions than pre-treatment samples. This observation suggests a possibility for further study.
More research correlating learning style and writing approach could be conducted. Rather than randomly selecting groups, groups could be established on the basis of a student's learning style, preference for structure or lack of structure and compared. Other elements of learning style including environmental, emotional, sociological, physical, and psychological could be compared with writing scores to determine any relationship.

There is a need for more detailed analysis of the writing process. The results of such research could improve the designing of instructional methods to best facilitate this process.

A study combining ILA and the conference approach could reveal valuable insights into writing achievement. Elements from each method might combine to make an even more effective approach to writing instruction.

**Implications for Classroom Practice**

Sufficient research has shown the process approach to writing to be effective at various grade levels. Both the structured ILA approach and the unstructured approach, based on conferences, have proved to be more effective than a textbook-oriented skills approach to writing.
Previous studies have suggested that the ILA approach has successfully increased sentence length and complexity in composition. The conference approach has improved attitude toward writing and allowed students to express their voice without fear of mechanical errors interfering.

Process approaches such as ILA and the conference approach incorporate the procedures of pre-writing, writing and re-writing. It was observed in this study that all of these steps were essential to optimum writing performance. The quality of composition in a student’s first draft usually varied considerably from the final draft. This emphasizes the fact that if the teacher requires a student to write only one draft, it is likely that the teacher will not be observing the best quality of writing. Students appear to need the opportunity to discuss their writing with the instructor or with their peers, and then make revisions.

Another observation made during this study was the amount of enthusiasm students showed when they were able to choose their own topics. When they were in charge of their writing they were more willing to invest themselves in their work.

A possibility for classroom practice might include combining aspects of the two approaches used
in this study, that is, a conference that included specific instructions and practice with sentence manipulation.

Another area to be applied in the classroom, might be to determine students' learning styles and adapt methods to most enhance those individual styles.

Summary

Based on the analysis of the data no significant difference was found between post-treatment scores of Group I and Group II. A statistically significant difference was found between pre-treatment and post-treatment scores of Group I. No significant difference was found between pre-treatment and post-treatment scores of Group II. No significant relationship was observed between learning style, preference for or lack of preference for structure, and writing scores.

While only the structured approach produced significant gains during the treatment period, both approaches exhibited growth. As there was no significant difference between post-treatment scores of Group I and Group II, it can be concluded that neither treatment was more effective overall than the other.
No significant relationship between learning style, preference for structure or lack of preference for structure, and writing achievement was observed. Groups, however, were not divided according to preference for structure or lack of preference for structure; in which case different results might have occurred.

There is still a need for further study comparing structured and unstructured approaches. These studies should be carried out over longer time periods in order to follow students through various grade levels and developmental stages. More research needs to be conducted in regard to learning style and its effect on writing.

Teachers may improve student writing by using both structured and unstructured approaches to writing. Students need opportunities for pre-writing, writing and re-writing. There may be some benefit in considering learning styles when planning for writing experiences. Integrating the best of the structured and unstructured approaches appears to be a positive outgrowth of this study.
References
References


Myers, M. (1978). *Five approaches to the teaching of writing.* Learning, 6(8), 38-41.


ELEMENT: Structure

Introduction

Display the picture.

(Point to picture 1) The little boy in this picture likes to have his teacher show him exactly what to do and when to do it.

(Point to picture 2) The little boy in this picture likes to decide for himself what to do and when to do it.

I am going to ask you a few questions about how you like to do your schoolwork.

Questions

1. When do you do your schoolwork:
   
   1 - do you like your teacher to tell you what to do next?
   or
   2 - do you like to decide yourself what to do next?

2. 1 - Do you like your teacher to tell you exactly how to do something?
   or
   2 - Do you like to do things your own way?

3. In school do you like your teacher to:
   
   1 - check each part of your work as you are working?
   or
   2 - check all of your work at the end of the day?

4. In school do you like to get:
   
   1 - one page of your work at a time?
   or
   2 - many pages of your work at one time?

5. Let's look at the picture again. Remember, in this picture (point to 1) the little boy likes his teacher to show him exactly what to do and when to do it. In this picture, (point to 2) the little boy likes to decide for himself what to do and when to do it. Which picture shows the way you like to do your schoolwork? (Have the child point to the picture or respond verbally.)
APPENDIX B

Modified
Diederich Rating Scale

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL MERIT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideas</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Organization</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Wording</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Flavor</td>
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<td>MECHANICS</td>
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<td>Punctuation</td>
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</tr>
<tr>
<td>Spelling</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

I. GENERAL MERIT

1. Ideas

**High.** The student has given some thought to the topic. He expands his story by adding details to each idea presented.

**Middle.** The student has given some thought to the topic. He provides some detail, but not to support each idea.

**Low.** The student states only ideas with no supporting details.
2. Organization

**High.** The paper starts at a good point, moves in a straight line, gets somewhere and stops at a good point. The paper has a plan that the reader can follow.

**Middle.** The paper has some sense of order, but one or two points may be out of sequence or irrelevant.

**Low.** The paper has no starting point or ending point. Ideas are not in sequence, they come in random order as though the student had not given any thought to them.

3. Wording

**High.** The writer uses several uncommon or interesting words. He uses words correctly, but with imagination. There are interesting adjectives and/or adverbs.

**Middle.** The writer uses few uncommon or interesting words. He uses most words correctly, but with little imagination.

**Low.** The writer uses only common words. He uses words carelessly or inaccurately.

4. Flavor

**High.** The writer exhibits originality by using unusual ideas, incorporating humor or conversation.

**Middle.** The student writes about a common subject or relates an experience with some originality.
Low. The student demonstrates no originality or special literary devices.

II. MECHANICS

5. Usage, sentence structure

High. The writer uses correct and varied sentence structure. He uses the proper word form (singular, plural, possessive) and the proper tense.

Middle. The writer does not vary his sentence structure, (too many sentences begin with then or and). Sometimes words are used incorrectly, lack of proper form or tense.

Low. The student uses incorrect sentence structure. He has no variety. There is no agreement in tense or form.

6. Punctuation and Capitalization

High. There are no more than two errors.

Middle. There are several violations of rules.

Low. There are more than six errors in basic punctuation and capitalization.

7. Spelling

High. There are less than four misspellings, and these occur in words that are hard to spell. The spelling is consistent.

Middle. There are more than four spelling errors in hard words and a few violations of spelling rules.

Low. There are more than eight or more spelling errors. These interfere with comprehension.

(Diederich, 1974, p. 54-58)
APPENDIX C

Raw Scores of Pre-Treatment and Post-Treatment Writing Samples of Group I

<table>
<thead>
<tr>
<th>Case</th>
<th>Pre-Treatment Score</th>
<th>Post-Treatment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
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Raw Scores of Pre-Treatment and Post-Treatment Writing Samples of Group II

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APPENDIX D
### APPENDIX D

Scores of Learning Style and Post-Treatment Writing Samples of Group I*

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Chi-Square = 0.3429

*Code 1 in Learning Style denotes a preference for structure, Code 2 denotes a lack of preference for structure. The writing scores in parentheses are raw scores on the post-treatment writing sample. The scores were divided into two groups, High (22 and above) = 1 and Low (21 and below) = 2, in order to compare them with the Learning Style.
Scores of Learning Style and Post-Treatment Writing Samples of Group II*

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Chi-Square = .0000

*Code 1 in Learning Style denotes a preference for structure, Code 2 denotes a lack of preference for structure. The writing scores in parentheses are raw scores on the post-treatment writing sample. The scores were divided into two groups, High (23 and above) = 1 and Low (22 and below) = 2, in order to compare them with the Learning Style.