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Curry, Inez Weekley

THE FEASIBILITY OF USING AN ORIGINAL GIFTED METHOD, DORM, WITH A HETEROGENEOUS HIGH SCHOOL CLASS IN LANGUAGE ARTS IN A SUBURBAN COMMUNITY

The Ohio State University

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THE FEASIBILITY OF USING AN ORIGINAL GIFTED METHOD, DORM,
WITH A HETEROGENEOUS HIGH SCHOOL CLASS IN LANGUAGE ARTS
IN A SUBURBAN COMMUNITY

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Inez Weekley Curry, B.A., M.A.

The Ohio State University
1986

Dissertation Committee: Approved by:
Dr. Frank Zidonis Dr. Elsie Alberty
Dr. Charles Galloway

Adviser, Department of
Education

Frank Zidonis
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1986
DEDICATION

This study is dedicated

to my grandchildren

Anna Curry       Laurel Peiffer
Matthew Curry    Clinton Curry

who must survive many classrooms;
to all those conscientious teachers who
spend countless hours "to get the
job done;" and
to all those students who participated
in the three studies included in
this report.
ACKNOWLEDGMENTS

Gratitude to my committee: my very patient and capable advisor, Dr. Frank Zidonis; Dr. Elsie Alberty, who so graciously came in at the eleventh hour with encouragement and advice; and Dr. Charles Galloway, who shared not only his expertise but also his office. Thanks to Dr. James Duncan, who so faithfully and carefully corrected my many, early efforts; Dr. Ross Mooney, who was sometimes wisdom in my foolishness; Dr. Ernie Dow, who some days provided me with determination and direction; Dr. Robert Monaghan, who took time to serve at the time of my orals; Dr. Fred Schmeider, for his gentle admonitions; Dr. Virginia Crandall, Wright State University, for permission to use the IAR and the relevant materials; Linda (daughter) and Don Peiffer who were always there when I needed them; Paul, Jr. (son) and Alicia Curry for their moral support; my own parents--William and Lena Weekley, particularly my mother--and my sister, Ethel Weekley Morehead, for instilling in me a love for learning; Garth Grate, who often saw to it I had study time and a "chauffeur" when needed; Dorothy Wildermuth and Mark Hiser who kept the faith for me; Barbara Fincher, typist, for her patience, expertise and promptness; and,
most of all, to my Creator for giving me one morning at three o'clock a.m., the idea for the method, the motivation to try it and the endurance to finish all three studies and the report.
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Evaluation - Drs. Jack Hough, Charles Galloway, James Duncan;
Career Education - Dr. Joseph Quaranta; and
Research-Teaching of English-Independent Studies- Dr. Frank Zidonis
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FOREWORD

Carlyle said some people are noted for "fussy littleness and an infinite deal of nothing." Ward Reeder in How to Write a Thesis (1930) stated that "Research is trying to find out for the hundredth time what everybody knows and then expressing it in language nobody understands" (p. 6). Hopefully, this study will be more than "an infinite deal of nothing," and will contribute something in language that can be read and understood. Such practicality would also delete some of the tension practices "that Michael Scriven believes to be so prevalent in writings of intellectuals for intellectuals" (from an AERA address summarized in Wittrock's Changing Education, 1972).

This report - based on the second of three studies - is about real, live bodies in a classroom, how they change their attitudes so they develop skills, absorb true Brunerian learning ... and enjoy the whole of it. Bruner (1966) also says that children learn how not to learn and so defend themselves against entry of material (p. 4). The teacher's task is to prevent this and instead to motivate students to think, to learn useful skills as well as subject content, by developing in those students
positive attitudes. To find whether or not DORM - an original
gifted method - can help in this process is the real concern of
this study.
CHAPTER I

INTRODUCTION

Americans now live in a time of parenthesis--between two ages: the fading industrial era and the new, developing era--the era of technological information. In stable periods such as the preceding one, everything is properly pigeon-holed, thus producing a classical order for culture. In the transitional period in which we now are, the communications system will feed the new society the way energy fed the old; the style, however, will be somewhat romantic--a time for entrepreneurs--as opposed to the classical style of the more stable period. Now, among the uncatalogued areas, we can find room for extraordinary leverage and influence if we can only look into the future. This "in-between period" is such a great and "yeasty" time filled with opportunity. "What a fantastic time to be alive!" (Naisbitt, 1982).

Examination of parts of our communication system does not exactly promote such optimism. A very important part of this system, public education, has recently been severely criticized. Although America is not alone in educational problems ("Soviets...", USA Today, January 5, 1984), the final report of the National
Committee on Excellency in Education—A Nation at Risk (1983)—states that the American educational system is on the decline, a system fostering a "rising tide of mediocrity." Despite the fact that Dr. Gilbert Austin, Director of the Center of Research and Development, University of Maryland (1983), calls the report "A scandalous piece of research" based on "invalid information," reports from many areas tend to substantiate the conclusions of the Commission. Current media reports tell of 90,000 illiterates in Central Ohio alone. Students in the U.S.A. are being compared unfavorably with top students from other nations: e.g., our top high school students with the best high school students of Japan ("Japanese...," AP, Los Angeles, 1983). Yet, some reports in America continue to affirm that certain American schools are improving (USA Today, January 1, 1984), and that there are reasons for encouragement since for some time there has seemed to be no way to go but up (Holt, 1969; Goodlad, 1984).

Since the 1960's, research has, in part, revolved around "Head Start"; relevance; open-classroom; dichotomies; accountabilities; learning modes; evaluation; competency; affective-directed education; new math; transformational grammar; a new science program; some experimentation relevant to skills and aptitudes; and, most especially, the gifted and the gifted methods. In all of
this mélange, the classroom teacher asks, "What do I do and how do I do it? How do we teach students who do not want to learn?"

**Rationale**

An undecided issue can be considered reason enough for undertaking any study. If that study, however, would indicate some probable solutions to many enigmas, the value of such a study would be much enhanced and the need more evident.

All gifted students were, at first, "academically gifted." Then descriptors such as "divergent thinkers", "talented", "creatively-gifted" and names of groups--over-achievers, honors groups, the talented and geniuses--began to surface. Next, we heard of three groups--"creatively gifted", "able students" and "academically gifted"--being selected on basis of achievement, interviews and teachers' check sheets (Gowan and Torrance, 1971). Today, we also hear of "disadvantaged gifted" and "under-achieving talented students" (Coffin, 1982; Compton, 1982). Yet, no way can educators with their models (Sisk, 1976; Renzulli, 1976; Maker, 1982), taxonomies (Bloom, 1974), and screening procedures claim real education specifically for more than 4% of those "gifted" in the broadest sense, even in systems where extensive screening occurs (Naisbitt, 1982).
Secondly, administration states that little or no money is available for education of the gifted. The exceptional children (special education students) are funded by the federal government; little money, however, has filtered down to those sometimes called the "elite" (Passow and Rehage, 1979).

Thirdly, gifted programs are based on widely differing philosophies (see text). Some schools believe programs for the gifted mean enrichment; others believe unusual experiences provide the extra; still others believe in special classes all or part of the time for the gifted; a few hazard the possibility of a heterogeneous group taught successfully by some kind of combination of "gifted" methods. Still others believe the gifted have real difficulty learning by any other method (Gallagher, 1975; DeHaan and Havighurst, 1961) thus explaining the "underachieving gifted" (Meyers, 1979) who are often among our discipline problems, our school drop-outs, even our suicides and criminals.

Finally, all the students have a right to equal opportunity. Heterogeneous grouping with a gifted method helps provide this. If such a learning climate will encourage the change of many current passive and/or negative attitudes then all students should have the opportunity to experience that change.
Purpose

This study began out of rejection and rebellion on the part of students, a need to motivate students and to change their attitudes toward their learning climates. The report itself is about research on a method, an original, gifted, teaching method, in an attempt to help determine something of what to do and how to do it.

The purpose, then, of this study is to implement a composite, "gifted method"--a participatory-democratic method--and by analyzing the resulting data determine whether the use of this method with a heterogeneous group of high school students is viable or feasible. This study should determine if this method, DORM--a democratic method as opposed to an authoritarian one--can create a climate in which each student will (1) take responsibility for his own action; (2) enjoy learning; (3) individualize his own work and develop his own talent; (4) show motivation; and, (5) learn not only content but also societal and communicative skills as well. Such behaviors would indicate a positive change in attitude which would, in turn, indicate the feasibility of using this participatory method. In short, the purpose is to determine whether, by using DORM, a change in attitude -- resulting from a change in learning climate -- will produce positive results.
Definitions

Definitions of four terms help to clarify the concerns of this study. Research, according to Broudy, is "an activity aimed at increasing our powers to understand, predict and control events of any kind" (Gage, Handbook of Research and Teaching, p. 96). Teaching "refers to influence by a more accomplished, skilled or mature person addressed to one who is less so" (Gage, p. 132). Methods were first addressed by Dionysius of Thrace (166 B.C.) as a teaching act consisting of certain steps:

1. Classroom control;
2. Presentation of learning tasks;
3. Inducement of trial response; and
4. Institution of test trials for evaluation.

Gage defines research on teaching as "research in which at least one variable consists of a behavior or characteristic of (the) teacher(s)." To further clarify, then, this report is about research on teaching, about classroom experimentation using a teaching method as the necessary, independent variable.

For this variable, more specifically, the teacher uses an original, gifted method: original, because it is one person's idea used with a random sampling, a heterogeneous group; and gifted, because the method includes many of the so-called "gifted" methods.
DORM - The Method

DORM is the acronym for democracy, openness, research and mastery. The method itself includes the democracy of Dewey; the openness of many of the gifted models; the talents of Parnes; the inquiry and the approach of Taba; the evaluation of many of the gifted models; the heterogeneity of student groups of Williams; in fact, every facet of the method is borrowed from some educator(s) and/or theorist(s). Nothing is new. Taba introduced her class discussion with an island. This method used a dirty tennis shoe. Both presentations included provocative questions at the outset. With DORM, the questions--teacher-directed at the outset--continued until students seemed free of the rote commitment and a common interest in subject matter was decided. The interest and the freedom allow students to speak out on their preferences and then plan, implement and evaluate. The teacher is never a leader, but a consultant. The entire method is student-oriented.

Procedure

Three actual studies in language arts were done: a pilot, five weeks in length, with a random sampling from the ninth grade in a school of 2000 students; a study, lasting three weeks, with a tenth- and eleventh-grade class in a small school; a study, lasting two weeks, with a ninth grade in a small school. The
study with the second group is the one on which this report is based although narratives of the others are included.

**Design**

The design of the study is naturalistic, using the constant comparative method of qualitative analysis (Glaser and Strauss, 1967; Guba and Lincoln, 1981). The observer is the instrument. Findings are taken from achievement (grades); attitude (tests); attendance; interest ratings; evaluations; and, from a body of materials collected, coded and categorized regularly from twelve sources.

**Specific Objectives**

A listing of the immediate objectives of this research, delineate the purpose further:

a. A search for a way for teachers and students to learn (without boredom) in a democratic situation that changes school climate;

b. An examination of the use of the gifted method, DORM, in a relatively new situation (for a gifted method), a classroom with heterogeneous students;

c. An attempt to record so vividly the events and progressions in the project development that readers will feel exhilaration experienced by the participants, yet realize the rigor and the accuracy of the documentation—results not possible with purely formal scientific research;

d. A written report in ordinary language (Richards, 1943; House, 1976) in keeping with Glaser's grounded theory, a report that is scholarly and trustworthy for those judging research and yet interesting enough for the average teacher to read;
e. An attempt to study according to attitude theory—(Labaw, 1981)—behavior, later describe it and deduce some conclusions about it;  
f. An attempt to interest others in research in methodology, perhaps to further verify this study, find new data, new hypotheses, plans for teacher training—but most of all, to have enthusiastic teachers read this for whatever help and inspiration they may derive from the report; and,  
g. An attempt to change ideas about attitudes in a learning climate thereby promoting interest, attendance, participation—in short, learning and growth.

The first question to be asked, then, is will this method bring positive change in the learning climate? And, secondly, is DORM a viable method in an ordinary school room?

Significance

The significance of this project relates particularly to administration, teacher and students. Administration would no longer have to screen students or provide special teachers and extra funding for certain students. Teachers would shift much of the responsibility to students and all would enjoy a variety of daily plans yet with definite goals. Students could develop their own talents; learn on their own levels, in their own modes; and, acquire additional skills and knowledge useful in the "real" world.

If use of this method affects positive changes, then many questions would be resolved to some degree. Groups could remain heterogeneous thereby eliminating problems of screening;
administrators would have to provide no additional funding and have no scheduling problems peculiar to gifted programs. No special field trips; no criticism for inclusion, exclusion, or formation of an elite group; no confrontations with parents of particular students; no worry as to how special students would adapt to society; no special materials to be bought; no special transportation problems; no special instruction; no charges of partiality--most of these would become irrelevant.

Students would profit (most of all) by certain indirect changes particularly in methods (1, 2, 3, 4, 6):

(1) by allowing each student to use his own learning method;
(2) by allowing each student to plan for digression, to pursue vicarious interests and develop his own talent;
(3) by arranging a built-in method of motivation;
(4) by creating a somewhat democratic, societal situation;
(5) by providing the opportunity for development of individual responsibility and feeling of worth; and,
(6) by arranging opportunity for development of managerial and leadership skills.

In addition, the process of satisfying the learner's curiosity could become fascinating for both teacher and student thereby providing motivation which, in turn, might decrease both student drop-out and teacher burn-out.
Limitations

Certain probable limitations, however, existed in the study. The internalization or assumption of responsibility differs with students of different levels of maturity. Students might not be ready to assume responsibility for their own actions. Library facilities at the school were meager. Since transportation to the town libraries posed a problem, little research could be done.

As to the use of the method in a school system certain conditions need to be met:

1. Administration must be cooperative.
2. Teachers must be sure certain philosophy is compatible with method.
3. Teachers must be enthusiastic and competent.
4. Teachers must have broad background.
5. Teachers must know how to question, observe and analyze.

Too, the observer has to be aware of probable bias and be careful to document as much material as possible, including negative as well as positive data. All of the data must be coded, categorized and the results recorded. Here the observer must be very impersonal, even pretending this is someone else's experiment in this laboratory-classroom.
Summary

The problem, then, to repeat, is to determine the feasibility of using this original, gifted method with a random sampling of high school language arts students.

This report also follows the five guiding principles of research set forth by Martin Shipman (Research Principles, Policies and Practices, 1985):

1. A project that makes a contribution, one people can use;
2. Emphases reflecting the kinds of decisions authorities have to make;
3. Choice of "right" method by the researcher; and,
4. Presentation of results so main conclusions may be associated with the findings.

After a review of literature including relevant theories, these chapters follow sequentially:

Chapter III - Methods and Procedures
Chapter IV - Findings and Interpretations
Chapter V - Summary and Implications

Additional materials are included in the Appendices.
CHAPTER II
REVIEW OF LITERATURE

Introduction

This chapter presents in the first section a brief chronological overview of efforts to establish a practical, functional, educational base, at the same time showing the progression of concerns for methodology. Sometimes from the plethora of background references the researcher took random samplings since during the time prior to 1960 only little space was devoted to the "way" teachers teach. The "recitation" method, as Bloom calls it, had for years been the generally-accepted procedure for teaching in the schools.

The other parts of the research material are more relevant. Since this study uses a combination of gifted methods with heterogeneous groups, research relative to both gifted methods and grouping is used. The third part of the review cites some theories that related to this study.

Overview

Just how deeply rooted is the traditional, teacher-centered, rote-learning, theater seating method? Ulich traces it for three thousand years--citing Plato, Aristotle, Plutarch, Quintillian,
Augustine, Basil, St. Jerome (the church years), Hesiod, Luther, Montaigne, the Jesuits, Descartes, Comenius--to modern times. Many of these, while great teachers in their day, had only occasional consideration for the learner as a person; rather, consideration was usually for order and discipline. Yet, Plato foreshadowed the doctrine of "individual differences" as did Christ with His "talents". Prior to His time, after the Israelites had returned from Babylon, they had already set up formal schools for everyone, age six and up (Knight, p. 41). Even earlier, the schools teaching Sanskrit had teachers, usually priests, apprentices (student teachers), and classrooms with thirty students each. The Chinese, as early as 700 A.D., stressed memorization and discouraged originality (Smith, p. 86). Thus, structured schools with their traditional methodologies began early in our known civilizations.

Our own history records that

Methods in American elementary schools in the colonial period and early part of the national period included ... drill, memory and severe discipline (Knight, 1932, p. 392).

In the first part of the twentieth century, however, people were talking of newer needs in education. John Dewey opposed the traditional method of learning by memory and authoritarian teaching.
He believed education was incomplete if it ignored everyday life. School, then, should be a real society, a democratic society. An educational leader in a movement, eventually called Progressive Education, he spoke to change and to the anticipated results.

Dewey became an experimentalist. He believed education should be continuous and that a school must be active and dynamic. He maintained education is life and growth and that a child will learn only when he is interested in some meaningful activity (Dewey, 1917; Meyer, 1949).

William Smith (1932) also talked of a need for newer methods. Yet, he suggested a project in anecdotal form but failed to come to grips with the problem of methods. He did state that

The process of teaching builds on teaching method, on preconceived discovery of specific procedures which reveal the world to the child (learner) in such a way that he can successfully employ his own powers of learning (p. 426).

and that

Her (the teacher's) task ... is to provide, to understand, and answer the questions of children.... Until the difficulties of the work in the teacher training program begin to approach the difficulty of teaching itself, there can be little hope for substantial improvement in the schools.
Yet, his advice did include that "the subject matter should be analyzed section by section and the student teacher shown where every difficulty could lie" (p. 422).

Of little help also are later books by Amsterdam, 1957; Bany and Johnson, 1964; Carter, 1962; Davis, 1974; and Axelrod, 1977. These books are illustrative--again chosen at random--of that very large group examined which discussed either classroom management designed to prevent disruption of discipline or to rearrange curriculum, both processes indicated as "change"--often as changes in methods.

A very few educators, however, had begun as early as the mid-century to indicate something was amiss in what went on in the classroom. Woodring (1953), in discussing the new progressive education and the philosophy of John Dewey, stated that movements to abolish dogmas had now become dogmas and supporters were insisting on them being accepted as truth. He proceeded to contrast an Ichabod Crane in a traditional climate with a situation using movable chairs, no textbooks and no memorization, citing his Aunt Lena and M. Adler as the emissaries of such "sweetness and light". Then Woodring proceeded to explain that these ideas came from "men of straw." He further commented that methods courses in teacher training programs had all but disappeared (p. 108). He seemed to believe
that the problems in education are further complicated by educators' use of a language all their own, language often meaningless to student teachers or even to teachers (p. 115). No references were found relating to any studies as to why this practice continues.

"The Report of the Panel on Innovation and Experiment in the Educational Program" (1964) listed new curricula; preservice and inservice of teachers; integration of grasp of subject matter with teaching methods; use of films in classroom and on teaching; Project English Curriculum study centers; and, use of teachers' resource rooms. Team teaching and changes in teacher education were listed as innovations.

Attention was being given to some of the prevailing conditions in education. In the Handbook of Research on Teaching edited by Gage (1963), Wallen and Traves expressed need for methods designed in terms of modern knowledge of behavioral sciences. They continued by saying that the vast majority of studies relate to behavior of teachers as authority figures. Gage adds that in a series of studies by Anderson "a technique for observing dominitive, integrative dimensions showed a distinct tendency to assume that authoritarianism and rejection are highly correlated; that they form a syndrome ... and tend to make students reject" (p. 477).
In a study done by Bloom, he played back tapes of a classroom lecture (authoritarian in method) to the group of students who had listened to it; and then, played tapes back to a group of students who had covered the same subject material in a discussion session. He found that those who had discussed had kept their minds more often on target than those who listened to the lecture. Bloom comments that, even so, the "recitation method" (assignment, study, report and/or test) is the most common form of classroom procedure; and, that even the meager reports on the project method (then fairly new) were not favorable.

Washburne in the Winnetka Plan in the thirties had already sown the seeds of change, change that would show in the early sixties in the work of educators such as Thelen. Models to be mentioned later also show this influence although much of the Plan dealt with curricula.

By 1970, many information-processing models of teaching were being tried. Suchman had an inquiry-training model. Joseph Schwab, with his scientific method, aimed to teach social problem-solving (1965). Bruner was placing emphasis on inductive reasoning and concept development (1966). Higher levels of thought, discovery,
open-mindedness, acceptance of attitudes, high mobility, consideration for the development of the child—all of these terms characterized his model of concept attainment. Taba had designed an inductive thinking model and developed a method of questioning (1971). Furthermore, she had developed a teacher training program for those who would use her method.

Meantime, certain personal models were being developed. William Glasser's classroom meeting was directed at developing self-understanding and responsibility to oneself and to one's social group. Carl Rogers, with his non-directive teaching, had put the emphasis on the learner's development of his own self-concept and the autonomy of the learner.

What Dewey had started in 1916—his philosophical idea of democracy in the classroom—and what Thelen had followed in 1960 with his group investigation model were to be used again in later models. Thelen's aim had been to combine in a teaching method a democratic process and academic inquiry in an experience-based learning situation. In 1980, John Michaelis published the eighth edition of his book including his model for teaching social science using a core democratic group.

Hughes and Schultz (1976) also speak of the demand for methods and how teachers, soon after gaining a little experience, become
cognizant of the fact that "everything they have learned has to be turned into methods" (p. 428, Handbook I). Discovery and inductive methods, they believe are closest to meeting the needs of teachers in all fields. "We must ignore sacred practices and consider the individual ... be resourceful" (p. 466, Handbook I).

They also noted that language arts teachers tend to base their teaching on theory and are nonconformists; that they consider the individual and are resourceful in kinds of subject matter they use (p. 446). Shipley and others (1972), Leonard and Fallon (1972) all suggest practices to use with content and even suggest sample lessons, but stop short of a real method to change the ambiance of the classroom climate and/or the attitude of the students.

More recently, A. Harry Passow, in his Cambridge lectures (1976), summarizing many reports on suggested reforms, states that "glaring shortcomings include too few alternative ways to learn an effective education for citizenship in a democratic society" (p. 7). He cites Goodman, Friedenburg, Kozol, Holt and others as concluding that "true learning is sabotaged by authoritarian atmospheres where emphasis is on the teacher rather than on the student's learning" (p. 6). He does quote further, this time from the Educational Facilities Laboratory and the I/D/E/A Conference:
Though youth is no longer the same and the world is no longer the same, high schools are unchanged from where they were at the beginning of the century—youth live in two worlds—one inside of the high school where every phase of their lives is dictated and the other outside where they are involved in decision-making and exercise considerable decision-making (p. 37).

W.F. Connell (1980) of New York Teachers College states that prior to the 1950's research on teacher effectiveness is inconclusive and of little value; he continues to say two views were evolving: "(1) a teacher as modifier of student behavior (behavior modification and programmed instruction); and, (2) teacher as facilitator of intellectual and attitudinal development" (from research based on motivation and learning reinforcement). The processes of problem-solving, probing, pacing, criticizing, structuring, and discussion were being examined.

From his summary of the 1970's, Connell cites the analysis of what the teacher is doing; assessment of the effectiveness of human behavior, and attempts to devise ways of improving experimental programs in teacher education. Connell concludes with a statement of need and hope for more experimental studies concerning teacher behavior and new programs on teacher education (pp. 379-380).

Another method that had originated by accident in Bethel, Maine in 1947, the laboratory method or T-group method, began to
receive considerable attention in the sixties. Schein and Bennis (1965) in discussing this method state that increased awareness may result in changed attitude to effect new behavior and to create a desire and ability to learn as results of using this method. This procedure requires that students work in groups; the primary goals are self-knowledge and use of skills. The teacher takes the role of observer and collects and analyzes information. The teacher, then, is not the group leader and the climate is one of permissiveness. The cycle is one of dilemma, invention, feedback and generalization. Yet, in the process there are activities such as T-group experiences, theory sessions and focused exercises.

Some educators, however, have suggested other antidotes for what has been called an ailing system. Curriculum change, change in materials, in textbooks, in programs and in organizations have been suggested and many of them tried. One of the many attempts is the current Paideia Plan (Adler, 1982) sanctioned by an illustrious group of educators proposing that, in the main, all students be given the same basic curricula presented by lecture, group or Socratic method as the school and/or administration may direct.

Bereiter proposed teaching only those skills useful to all children (1969). Orloff (1979) advised the use of a meta-curriculum with the gifted. Rita and Kenneth Dunn have, in the last ten years, worked consistently toward popularizing individualization.
Former Secretary of Education Bell, in the Columbus Citizen-Journal (Sat., July 20, 1985), summarized what he believes to be the answer to the 1984 findings of the National Committee on Excellence in Education. One notices his competency test, his longer day, his longer year, his foreign language requirement (more rote learning), and his added teacher pay—all perhaps commendable. Nothing, nothing at all, is mentioned about what goes on, really goes on, in the classroom.

That part of the search done for this study, that part relating to the regard for methodology, has shown, as was mentioned earlier, little progress until the sixties. Even when a movement seemed likely to occur, news about the probability seemed rarely to filter down to the teacher in the classroom. Even the Kettering Report, as late as 1976, a report to whom many had attached new hopes and expectations, like others, seemed diverse in its recommendations. It spoke to new goals (p. 30); alternative programs (p. 97) not specifically related to methods; school security (p. 115); students' rights (p. 126); sex stereotypes (p. 146); and a list of thirty-two suggestions for reform. Yet the closest the report comes to methodology is by saying—with no elaboration—that student teachers should be trained in the way students learn.
The Gifted

During the late fifties and the sixties, teachers had often divided classes into levels. There was the modified class (the below average students); the average students; and then the college-bound, called by some "the academic students". This organization of student body was phased out in the early seventies and some new thinking gained popularity; the new movement, however, had been in the thinking of educators much earlier.

As early as 1961, Simpson and Martinson wrote of many of the characteristics of a gifted program. Evaluation by students, enthusiasm of the teacher, motivation extending to other classes were suggested characteristics of a gifted group. The federal government had long ago provided for special education for the mentally retarded. Yet, it was not until the 1960's that a survey was made concerning the gifted. Conant had written in 1958 that providing proper education for the other four-fifths was quite as challenging as those with whom we are wrestling (the gifted). S.P. Marland, Jr. would have the gifted numbered as being only three to five percent of the population. Yet, he said they should have a different curriculum; instruction strategies to accommodate their learning styles; and special groupings. He also reported that in
1969-1970 that 57.6% of schools reporting said they had no gifted pupils. He also stated that the majority felt education for the gifted was not a continuing priority in their communities. He suggested more programs; more research; and, more leadership.

Torrance (1960) believed there is a decided relationship between general ability level and creativity, that creativity in turn hinges on what a person does with talents over a period of time (p. 19). The current Governor's program often separates those academically gifted from those creatively gifted.

Lewis (1960) examined the teaching of gifted as opposed to that of the "average" student. Both gifted and average children profit from leadership development; the gifted, he said, get more from experience than does the average child. The teacher, he believes, has trouble meeting needs and so often slights the gifted; maturation of the two groups is not even; the gifted in a regular class needs to be assured of getting the kinds of experience to benefit the total development of the child. He fails to refer to any responsibility of the student for his own learning, and so concludes with a statement of need for more research.

A publication from Portland Schools (1960) stated that "the greatest opportunity to augment the curriculum of the gifted still remains in the normal method" (p. 86). The method should however,
use a broad topic, a problem-solving approach, pupil planning, and a small class. Again, there is the expression of need for more research; yet, as usual, no suggestions as to how research already completed could be used.

Bereday (1958) of Columbia University had accused people who had pressed for separate education for the gifted of having in mind special advantages only for their own children. He posed the question, "Do we need another caste system?" He failed to address any probability of not being able to avoid it. His answer to the situation was to improve talents and raise the level of the entire educational program, a comment often included in a discussion of this problem.

Lester Crow and Alice Crow addressed the problem of the gifted underachiever (1963). He fails to motivate himself and no one does it for him. He has no challenge and so often becomes a dropout, a disciplinary problem or even a criminal.

Averch and others (1974) noted that socialization, development of creativity and self-reliance are among the most important functions of schooling... Teacher grades and essay exams are relatively poor measures. He continued by saying that students' reactions to schools and classes can be more important than traditional achievement measures (p. 184).
Moos and Moos (1978) studied student absenteeism and average class grade. They found student absences higher in classes with stringent grading (pp. 263-269).

Related studies continued. Gifted organizations--often of parents--and gifted programs became the new movement in education. By 1980, every state had a program for the gifted and one hundred colleges had graduate level programs. With this came egalitarian pressure and charges of elitism at the same time that many other students were working hard at being anti-intellectual (Keating, 1980). Jean Laubenfels, formerly of Ohio State University, published an exhaustive bibliography of materials and some methodology for the gifted (1976). A survey of this and of later (1976-86) materials shows how popular the movement has become.

Such writings have different foci. Some writings are about the gifted in the regular classroom, advice on discipline, types of discussions, inductive procedures and the like. Others are written about a so-called "gifted method"--a term meaning different things to different people. Many writers insist this means enrichment; to others the term means more of the same assignment; still others believe it means a study of the same material but a study in depth; still others believe it means a study in which the
students work through the materials as fast as they can and then advance to new courses. Some believe in a change in learning climate and in method.

Maker speaks to some of these issues and then delineates ten teaching and learning models most commonly used with the gifted. She has done for the gifted what Joyce and Weil (1980) have done for the general classroom situation. Ten models, Maker believes, meet certain criteria necessary for the gifted. The focus, she says, should be on the student and on the student discussion rather than on the teacher and the teacher discussion. There should be independence; the student should have the right to go beyond (open as opposed to closed) the academic area into the non-academic area; acceptance of evaluation rather than judgment—especially the evaluation of the good and the bad (according to someone's criteria); complex versus the simple environment (even in the physical environment); high mobility—even the privilege to move around outside of the room during class time.

She comments on the basic taxonomies saying that they are not restricted to gifted and that there is a "lack of research concerning the effectiveness of the use of the affective and cognitive taxonomies with children, particularly the gifted, and a limited scope in providing a structure for curricular modification with
the gifted" (p. 50). She includes the taxonomies in one chapter at the beginning, however, as basic.

In the area of process modification she emphasizes methods including higher levels of thinking (rather than acquisition of information); openendedness (with no right answers to provocative questions); discovery (inductive procedures--building interest through involvement and curiosity); evidence of reasoning (conclusion); freedom to change (what to investigate and how to study); group interaction activities (small group, social and leadership skills); and, pacing and variety (fast movement for a challenge and variety to maintain interest).

Taylor's multiple approach (also on Maker's list) is mentioned in this review of literature especially because, in the broader sense, he believes everyone is gifted. Many people use "gifted" to mean anyone superior academically; talented, then, says Taylor, refers to those having creative ability--leadership skills--non-intellectual abilities. Taylor's definition of the gifted is those who are "tops" in any area; and his talented is above average. He also believes that eventually teachers would identify ninety percent of all students as being above average (Maker, p. 295).
Parnes, on the other hand, provides a structured method in an imaginative way. He believes creativity can be learned and that the gifted are more creative than are the other students. Students would use the discovery method, inductive reasoning, and group interaction in a climate of high mobility.

Maker's delineation includes Bruner and his Basic Structure of Discipline; Guilford and his Structure of Intellect; Kohlberg and his Discussion of Moral Dilemmas; Parnes and Creative Problem Solving; Renzulli and the Enrichment Triad (the Revolving Door); Taba and the Teaching Strategies Program; Taylor and the Multiple Talent Approach; Treffinger and Self-Directed Learning; and Frank Williams, Teaching Strategies for Thinking and Feeling.

Williams, one Maker designates as having a gifted method, believes in creativity as does Parnes but for all children. He contends that every child should have the same opportunity to become a whole child. He further reminds the educational community that the models often used as bases for new models--Guilford's; Parnes; Piaget's theory of development; Suchman's inquiry training; Roth's higher thinking; and Williams' cognitive-affective interaction model--were initially designed as part of theoretical research studies on child growth and development. "None was conceived as a learning procedure exclusively for gifted children" (Williams, p. 94, Learning, Oct., 1980).
And so the research continues. Phyllis Aldrich believes in heterogeneous grouping. She has published a training manual for educating the gifted with a regular group (1983). C. Arthur Compton (1982) published an essay on teaching able students—a student-directed program but only for the gifted. Cole states that many of the described modes of teaching are effective also for the less talented and that the whole student should be educated—not just the mind or the body (1982). He believes in holistic education.

In the seventies and eighties workshops and inservice became very popular on topics such as analysis of classroom work, evaluation and measurement. Howard Henderson tells how a school may have top-notch directors at those workshops (Phi Delta Kappan, Jan., '86).

Yet even as late as 1976, many teachers, according to Silberman still tended to use this very traditional, noise-less method—teaching the way they were taught. Such a method seems to give many teachers a feeling of security in situations when control may be threatened. Many schools continue to try to educate students in an authoritarian climate as to how to be "good" citizens in a democracy. According to Farralone's Scrapbook (1971), if you learn the game well, you become a good student and do easy time (Keating, 1980). Frymier (1969) warned that, although many teachers may not be able to change, unless they do change methods, the edu-
cational system as we know it may well go down the drain. Mead, as early as 1958, had issued a similar warning. Galloway (1977) believes teachers can be taught behavioral skills that enhance their craft, thus changing conditions that can influence both method and school climate. Stallings (1977), Miller (1980) and Sadker and Sadker (1980) have advanced similar beliefs. Too, Thorndike, as early as 1911, had spoken of signs of reaction against the uniformity of method that "clutches and mechanizes".

Teacher-training programs are now being questioned. Barr of Oregon State University suggests that if a teacher fails, the school that trained that teacher should rescue him—a guaranteed success program (quality assurance) (1984). But, who is to say at what point a teacher fails? Is a teacher a failure in only certain areas or is he a complete failure? What is the test for this designation?

Smith and others of the University of Florida believe that the training programs should include:

- a greater depth of study;
- more clinical and field work;
- more course work in education; and
- more comprehensive evaluation of students.
Clark states that no formal functional program exists for training secondary teachers. He says this is the best kept secret among educators. "Our current system is so inadequate we must stop defending it" (p. 117). He suggests adjusting entrance standards and requiring a commitment from prospective teachers.

Cuban (1984) comments that if government is to control teacher training in any way, the programs will fail; they have always done so in the past. In California, "SB 813 is a garbage can in which to toss every bright idea that private bias non-educators had about school reform ... it is a design for failure" (p. 214).

F.W. Park suggests that the University of Texas help develop teaching staffs that are oriented toward the use of inquiry questions (1986). Raywid believes that schools of excellence should also be for all people. The Carnegie Commission criticizes Reagan and education; it then makes plans to give its own findings and recommendations--some of which are now sifting through to TV coverage (July, 1986).

Occasionally, "real" teacher-reaction comes through. Such is that expressed by Judy Holmes in her article "We Can Teach Students to be Responsible" (Phi Beta Kappan, September, 1984, pp. 50-54). Here she explains, very astutely, the frustration of many teachers;
and, using the triangle pyramid (Victim, Rescuer, Persecutor) of
Stephen Karpman, M.D. (Script Drama Analysis Bulletin, April, 1968)
as her analogy she discards theater seating, "opens up" her students
and attempts to get from her English class, the responses she wants
about "sonnets." Here she is trying to do something about the
methodology that produces her classroom climate.

Certain topics now seem to take precedence in the writings of
educators. Some speak of motivation but hasten to add that it too,
depends on the skill of the teacher. McDaniel writes further
suggesting use of "outlandish, provocative questions" of inquiry.
Roger Johnson and David Johnson have recently published Circles
of Learning (1984) in which they set up shared responsibility for
leadership and learning; teachers must teach social skills,
leadership behavior, communication, conflict management, and
analyze and evaluate for the groups of students those processes
being used to solve problems and share work. From such accounts--
the Taba method of inquiry and her use of unusual introductions
to her classroom discussions; from the laboratory method; from
Dewey's idea of democracy in the classroom; and, from others
already named, this researcher drew support for the classroom
method used in this study.
Some Relevant Theoretical Background

Several theories, although not the bases of this inquiry, are relevant and so are included in the paragraphs which follow.

In such theories, however, is support for the kind of results that might help the researcher to decide on the feasibility for the use of this method. The researcher surveys his group by a series of methods, both before and after the experiment. Any degree to which existing dissonance disappears, leadership develops, performance becomes better—all such trends will indicate, according to these theories, that DORM is effective for that setting and condition.

Glasser's reality theory; Pestalozzi's theory of caring and learning; Roger's theory of learning; Thorndike's chance-success and satisfier; Skinner's theory about pupil failure; Suchman's evaluation-of-motivation theory; Piaget's theory of assimilation; Bruner's theory of learning; the path-goal theory of leadership; and other attitudinal theories—all relate to certain aspects of this study.

William Glasser, in his therapeutic innovation, Reality Therapy (1965), reverses the theory of neurosis and argues that human problems (failures, in particular) are the results of performance being too low. Performance results, he says, are raised
by doing what is real, responsible and right. This performance, he continues, is the result of meeting three requirements: intense personal involvement; facing reality and rejecting irresponsible behavior; and learning better ways to behave. Thus, "the failure of the child in the classroom occurs because the student fails to make warm, constructive relationships essential to success, a failure caused by loneliness" (p. 170). In his current writings, Glasser indicates caring is not enough. He speaks to a need for trust and to the part that power plays in the classroom. DORM allows the student that trust, that freedom to direct himself and to plan for his own needs.

Pestalozzi (Swiss, 1798-1823) believed that this personal involvement between teacher and student (a constructive relationship), particularly in a school discussion, must actually be based on a love-respect relationship (Peterson, 1952, p. 65). Glasser (1969) tells how to achieve this. First, there is the involvement within the group; then, there is the situation--the
present behavior; the child must then make a judgment of his own behavior; he will then select a better course of action; last, the student makes a commitment and the teacher accepts no second best. Thus, what appears to be the problem of this study—what would happen if—is related to this personality theory. Now, any supposition that the use and exercise of social skills with directed independence and freedom for student involvement as set forth in this experiment may seem logical.

Carl Rogers (1951) had carried further Glasser's line of reasoning even before Glasser. He stated that if this basic theory of learning is true and facilitates learning that is called "Therapy," then, as we just inferred, it might also be the basis for that learning that is called "education." This posits the responsibility for someone in charge to see that a proper atmosphere is created and to look at how we know learning is occurring. "Learning is the process of disorganization and reorganization in which perceptions of self are being reconstructed" (Rogers, 1952). Teaching, then, is the implementation of interpersonal situations which promote such processes. In turn, evaluation of the results of such processes would determine the degree of learning. Rogers' basic premise follows, that a teacher can trust a student to grow if that teacher provides the right atmosphere (learning climate).
The teacher can not do this directly; he can only put the student in the right situation (learning climate) for this growing (p. 427).

Thorndike's cat-and-mouse box evolved the trial-and-error, chance-success and satisfier--in short, his Law of Effect: "when a connection between a stimulus and response is made and this is followed by a satisfying state of affairs, the connection is strengthened" (p. 51). Thus, if DORM proves satisfying to students, then they will continue of their own volition and motivation will be effective and ongoing.

Skinner, of course, believed that "if a learner fails to learn, it is the teacher's fault" (p. 91), that students do not fail: teachers do. Accordingly, the responsibility lies with the teacher to adjust and compensate for any extrinsic factors so that the learning climate is commensurate with the needs of the student.

J. Richard Suchman (1966), going a step farther on experimental methodology, developed a model of inquiry concerned with concept building. Already one could ponder an obvious spin-off from this study: if this involves creative theory, and it does, some believe the teacher should be creative and/or as some have suggested even gifted.

Suchman continues by saying that even if people are left entirely alone, they will feed their intellects through inquiry
(p. 178). Yet, Broudy (1974) says we, in turn, account for the results: that if we understand what is going on, we can by a change in attitude change the trends. This change in attitude, in turn, involves a change in climate (environment).

Piaget's theory of assimilation and accommodation is also supportive of this report. The transactions in the classroom allow students to "meet their environments;" and the learning situation or responsibility rests on the shoulders of the students and not on those of the teacher. In DORM, the students do the creating, the planning, the implementing and the evaluating.

Bruner believes that "Any subject can be taught to any child in some honest form" (Bruner, 1960, p. 62). Learning involves the acquisition of new information; transformation to make it fit new tasks; and evaluation. He speaks of learning a subject and that in learning of subject matter a series of episodes occur, each episode involving the three processes just mentioned. The past is considered a generalization made for the future. He also speaks of "quickened awareness" and of "understanding as a reward" (p. 50).

Suchman (1962) also referred to these as the evolution of two types of motivation. The experience of discovery and the enthusiasm that comes from the search and the organizing, he says, are excellent motivators (p. 28). Such impetus is an added, unexpected
function of Suchman's main thrust and is very important to this study.

Research also shows a relationship of this study to the path-goal theory of leadership (House and Mitchell, 1975):

According to this theory a leader is effective because of his impact on subordinate's motivation, ability to perform effectively. It is called path-goal theory because its main concern is how the leader influences the subordinate's perceptions of his work goals, personal goals, and paths to goal attainment. The theory suggests that a leader's behavior is motivating or satisfying to the degree that the behavior increases subordinate goal attainment and clarifies the paths to these goals (p. 177).

This explains the work of the teacher and the group leaders in this project. The path-goal theory applies to students in the classroom as a group of subordinates needing motivation toward certain goals. The teacher activity—while not the central performance—is indirectly the catalyst. Such activity would seem, then, to require a teacher who is a strong, enthusiastic, knowledgeable person, not an authoritarian figure but one skilled in leadership qualities, one with commitment and dedication—one who can agree with Leo Buscaglia (1982):

We need strong people in education, people in education who are willing to stand up and say 'This is hypocritical and we won't do it any more.' People who are willing to ... say, 'No we've got to have changes or we are going to
destroy ourselves.' It's like walking into doom. We are teaching for today and we're already in tomorrow (pp. 25-26).

This opinion assumes that educators--including teachers in the classroom--know what is going on, read the literature, train themselves in research methods, do research on their own and share what they find. Such enthusiasm and leadership encourage students who also learn by example in their own environments.

This study also finds relevancy to other phases of attitudinal theory. Many students experience cognitive dissonance in the classroom. Dissonance is more likely to occur in a given situation if the decision-maker commits himself to some course of action while remaining aware of his volition to do otherwise. According to the cognitive-dissonant (attitudinal) theory (Zimbardo, 1970) the student can be unhappy because of a public commitment--in this case, perhaps, a commitment to go to school and learn, something he must do but does not want to do. This is an inconsistency he finds uncomfortable. Almost subconsciously he will try to eliminate or reduce it. This pushes the organism (human body) in a direction to act upon the inconsistency (pp. 67-71).

Dissonance is always aroused by the discrepancy between two or more relevant cognitive elements, when one is about a person's behavior (his choice or compliant act) and the other is about his internal or external environment (p. 71).
Thus, his public action is anchored in external reality and so is more difficult to change. The theory can predict what change will take place: because the external referent is greater, the subjective states (internal) will change to meet the need to reduce dissonance (p. 69). Therefore, the work of the method in this study is to help change the internal feelings and to make the change immediate and happy.

Related more to design, perhaps, are the Gestalt theory and the German idea of verstehen. The Gestalt theory goes beyond and involves more than the whole of anything. The example of the triangle or any other rectilinear figure goes beyond its constituent parts and has a certain unified meaning to it. So in perceiving how a method operates there is more than just empirical data to be listed as results.

This idea is also related to verstehen--a German term for a particular kind of understanding. The German educators often say that teachers in many situations lack verstehen and waste the learning moment. In fact, Max Weber used the term in his Theory of Sociology and Economics Organization as early as 1947; and the term is really the basis for the grounded theory method of inquiry. Verstehen seems akin to the kind of clinical empathy existing when clinician automatically becomes the measuring instrument. Especially
important in studies to understand behavior and mental constructs, verstehen can even help detect the categories in which actions and thoughts belong (Truzzi, 1974). Not mysterious, verstehen can be provided only by qualitative data and the corresponding participants. Observation is the primary way to get such data. Verstehen helps the observer to understand what he observes and then to code it. Had the teacher "understood" he would have used the opportune moment. Likewise, verstehen adds to the grounding of the experimental method used in this study.

A brief summary of the relevancies from these theories includes:

1. Glasser - personal involvement of a student facing a real-life situation;
2. Pestalozzi - personal involvement between teacher and students;
3. Rogers - a student will grow if he has proper learning climate;
4. Thorndike - if student likes result he will repeat performance;
5. Skinner - the teacher is responsible for the proper learning climate; then student will learn;
6. Suchman - use of concept building; the experience of discovery as motivation;
7. Piaget - the responsibility of the learning situation rests on student-teacher relationship;
8. Path - goal theory - influence of leader(s) on subordinates;
9. Zimbardo - ridding student of any dissonances
10. Gestalt - (more relevant to design) seeing beyond as an observer;
11. German verstehen - (design) understanding what is observed.

DORM, however, is grounded in the data from the inquiry.

Summary

Fifty years ago education departments offered a course called "Classroom Management." Teachers were supposed to motivate students by having good lesson plans (very detailed, with questions and probable answers), provide entertaining techniques and use grades and extrinsic rewards as success experiences. Chandler (1961), who enumerated the principles of classroom management (one-half page, p. 222, in Education and the Teacher), did suggest the use of more democratic processes in the classroom. Then the behaviorists introduced behavior modification, still emphasizing the use of techniques including extrinsic rewards until Rogers and others focused on intrinsic techniques such as the idea of the self-concept, attention to individual needs and encouragement of student progress. Today, we are to improve classroom climate by inviting success; having high expectations; using set induction; grabbing student's attention by an act that is arresting; asking questions of inquiry; and/or, using interaction techniques. Success of such activities admittedly still depends on the teacher
using her skills, somehow, to get students to learn what is planned for them (McDaniel, 1984).

Yet, some seem to have come full circle - back to classroom management, popular in the thirties. A book called *Classroom Management* by Daniel L. Duke and Adrienne M. Michel was published in 1984 by Random House, giving several management strategies; assertive discipline; reality therapy; teacher effectiveness training; transactional and behavioral modification; logical consequences; positive peer pressure; social literacy; and systematic management of school discipline. Some chapters focus on smoking, tardiness, and disrespectfulness. Too, the teachers are to examine their own goals and assess the students with whom they work. The teacher must still be the problem-solver.

American education has, despite its background, made attempts to change—attempts in many areas, often mere repeat performances. In reading methods we have come from McGuffey's syllabification-phonics-phonetics through mere sight-reading, the Look-Say method, Montessori's color code back to Distar's rapid, phonetic drill. The linguistics and structural grammar movement, begun in 1932 by Otto Jespersen, blossomed in the late sixties with research studies (Bateman and Zidonis, 1964) and the fiery exchanges by such specialists as Dr. Fillmore of Ohio State and Dr. Chomsky of MIT.
Curricula and curriculum theory with Hilda Taba in the sixties continued into the seventies with Frymier, Frazer, and others advocating change. Now instruction in writing, badly needed, is at center stage, a movement currently addressed by Dr. Walter Barbe (1984) with respect to the gifted. Currently, we have the back-to-the-basics movement, but are these the basics of-the-good-old-days? Anderson (1981) asks, in The Search for School Climate, "Is the beast worth it? Are we chasing a unicorn?"
CHAPTER III
METHODS AND PROCEDURES

Introduction

Considering that methodology is still in the developmental stages, a researcher should be successful in finding some data that is informational, indicative and helpful. We have already noted that Dewey in the twenties, drew attention to philosophy that advocated, in part, the teaching of all students well—in short, democracy and individualization; and that Taba developed her social science plans for the gifted but suggested such plans could be used for other students. Since some believe the gifted can learn only by the gifted method (e.g., Marland) and Taba with others (Aldrich, 1983; Cabe and Connell, 1981; Hegarty, Pocklington and Lucas, 1981) believe many can use "gifted programs", teaching a heterogeneous group by a "gifted method" seems plausible. Such a procedure, according to theory, might be expected to produce positive, interesting results. The next step, then, would be the setting up of a design.

Fox (1969) says that "Experiment involves the creation of some new condition" (p. 470). "Educational design refers to those plans
made by the investigator to ensure the generation of the most appropriate data for testing the hypothesis or answering the question posed" (Gephart, et al., 1969, p. 470). The design of an experiment involves, then, prior condition, the change of which occurs in such a way that reliable data is produced in order to test a hypothesis or, perhaps, by the method used, to produce a hypothesis.

Guba and Lincoln (1981) are specific as to how most researchers go about achieving reliable data: "The 'ideal' model includes designation of a particular design ... definition of variables, a sampling plan, instrumentation used, techniques to be used in analyzing data and so on" (p. 274). This, then, is the traditional point of view.

Guba and Lincoln, however, believe that to "choose a particular method requires a researcher to decide on a method suitable to the assumptions of a paradigm and the phenomena to be studied" (p. 56). The naturalistic paradigm shows a series of realities that must be discovered, one of the major characteristics that influenced the choice of method for this study.

To explain the design of the method, DORM itself, and data collected, this chapter, then, has divisions and several subdivisions:
A. Introduction

B. Design

1. Method of DORM
2. Problem
3. Hypothesis
4. Theory used in design

C. Studies

1. Pilot
2. This study with narrative
3. Study 3

D. Data Collection and Analysis

1. Notetaking
2. Methods of collection
3. Content analysis
4. Coding
5. Hypothesis to be generated
6. Tests for rigor

E. Summary

Design

This study will not be one which results merely in empirical data and generalizations. Instead, the design of the experiment will produce data from a procedure that is shared between those measured and those measuring. This will provide records of similarities and differences, quantities of data that will help the researcher to come to an understanding—again, that term, verstehen—of the situation and of the results. Thus, the naturalistic paradigm is based on phenomenological epistemology rather than on the
logical, positivist epistemology as is the "scientific" treatment of the paradigm.

Developed originally by social anthropologists, comparative analysis is a method for generating theory using social units of any size often using the project director as the only instrument to gather and to analyze substantive (raw) data (Guba and Lincoln, p. 72). Comparative analysis requires the continual delimiting and correlation of data, thus, finally, if so desired, basing hypothesis and/or theory on diverse data. Primary analysis involves only that data collected in the process of the project and eventually could lead to the presentation of an hypothesis or even to a theory. Secondary analysis is not considered in this study.

Method

"Participatory-democratic" is a compound adjective adapted from the needs of our society. Interestingly enough, Jan de Vries and Pamela Hais-Eakins, editors of The Participatory Research Report (1979), used the word "participatory" to describe the report of a shared research seminar, one of the newer research modes. The complete compound adjective--participatory-democratic--is self-explanatory and the method takes its delineation from these two words.
The participatory-democratic method—DORM—may be adapted to include many of the gifted methods currently used:

a. enrichment
b. experiential activities
   (1) field trips
   (2) laboratory work
   (3) specific use of the inquiry method
c. in-depth studies
d. T-groups
e. individualized learning
f. independent study

but DORM adds

g. adult freedom in the classroom society
   (1) planning
   (2) implementation
   (3) evaluation and

h. responsibility for self and for others.

Because it is a composite of so many gifted methods, DORM is also labelled a "gifted" method. Such added activities allow for development of leadership; managerial and societal skills in a democratic format; an increase in self-confidence; and, the use of decision-making and evaluating procedures. As in any society,
leaders should emerge and effect a kind of loose organization with a student secretary; some sort of schedule; a time slot; a plan for finding and relating the findings; goals; the scope and sequence of the project; and, a procedure for evaluating whatever takes place. Most societies do what they need when they need it; thus, the aforementioned activities may not be set up initially nor according to any specific plan of the teacher.

This study assumes with Dr. Walter Barbe and others that students who are especially capable in many areas learn differently from the so-called average child, requiring more freedom, more self-direction, more vicarious information—more all-around room to grow. Observation seems to indicate that the more gifted, talented and creative the child, the more deeply he wishes to become involved with his work. This does not mean that the average child should not have the same opportunity, too. So, while the participatory-democratic method may share many parts of other gifted programs, it goes even farther to accommodate both gifted and non-gifted students in a truly gifted climate.
The role of the teacher, however, remains particularly important. He it is who sets the stage and implements the action. His role includes:

1. His delineation of the limitations of the school system, the time allowed for the project, requirements of the course and perhaps even actual curricula of the area with which students are currently working (as needed);

2. The teacher's creation of the original--initial--learning climate in accordance with a very different philosophy of education:
   a. to get pupils to think;
   b. to get pupils to learn a variety of useful skills;
   c. to help them learn and master a variety of subject matter - both relative and vicarious;
   d. to share their own knowledge; and,

3. His help in evaluation during the progression of the unit and of the final effort.

The teacher as consultant often reads student material and comments, suggests sources, talks with student on an adult-to-adult basis; shares enthusiasm about work; talks with student
about the work as related to the work at hand, life in general, 
his project in particular and any specifics in which that stu-
dent shows interest. The teacher listens and encourages; suggests, 
encourages and listens; listens and encourages. This importance 
of a teacher in any classroom is emphasized in the Rand report:

The Rand studies of factors affecting continu-
ation of U.S. federal programs supporting edu-
cational change concluded that a major determi-
nant was the teacher's sense of efficacy--a 
sense that the teacher really made the differ-
ence in pupil learning and program effective-
ness (Shulman, 1981, p. 97).

According to this report the teacher's role determines the degree 
to which a program succeeds.

Yet, the teacher never assumes an authoritative posture. 
He is very inconspicuous. Since the vicariousness of the material 
collected by the students is so great, he, too, can learn much 
factual information; much about people and their behavior; much 
about managerial skills and perhaps even something about himself. 
He, too, must be a learner, unashamedly so, willing to admit some-
one knows something or has found something he does not know. Stu-
dents watch him learn as he watches them learn and they all share 
the enthusiasm. Besides, he should be doing his homework:
current materials on what is happening in the work-a-day world 
as well as in the teacher's area of expertise; any studies in
methodology; methods of research; individual case studies; talk with other teachers.

Very important also is his zest for learning—the enthusiasm he brings to the classroom. One must genuinely have enthusiasm before he can share it.

Everyone participating and sharing—that's what this is all about—the participatory-democratic method, a method called DORM. Peters and Waterman (1982) note that

... our tools are biased toward measurement and analysis but cannot measure a turned-on work force nor can the scientific method measure a 'turned-on' group of students... There is an ability to achieve extraordinary results with quite average people... The name of the game is participation—participation in every phase of the process (Preface xxii).

To repeat, the acronym DORM describes this method. D is for democratic design; O is for openness among all participants—teacher and students; R is for research; and M is for mastery of the learning involved.

Various introductions may be used. An easy opener is for the teacher, serving as catalyst, to act as temporary chairperson, to implement a discussion which in turn evolves a
problem of common interest. If a block of curriculum must be considered, then a way for relating the content, the problem to be discussed and the method can be reconciled initially.

The students take over at the point at which the problem seems evident and the students are open and "anxious." A time limit is set for the block of work. A plan is made including the organization of the group, a schedule of activities, the goals already discussed, implementation and a plan for evaluation. Much of this will evolve spontaneously as needed. All of these activities are shared by students. (See Schema, Figure 1).

Thus, the philosophy of sharing is basic to DORM. From the planning stage to the final evaluation, the unit is creatively built as work progresses. From the inception of an idea to the finished product, as with a piece of sculpture started from a piece of clay, the work proceeds. The teacher should expect students--ordinary students--to accomplish that extraordinary achievement Peters and Waterman speak about, given the right kind of learning climate, the kind of learning climate that spells involvement, the learning climate of DORM--the behaviors and interaction of students and teachers in a given setting. The teacher, although responsible for a favorable climate, really
FIGURE 1. POSSIBLE SCHEMA FOR DORM
provides only the opportunity and encouragement for the creation of that climate. The freedom does not mean students have freedom without responsibility any more than the adult in society has freedom without responsibility; this learning climate is simply a democratic situation, a real-life situation.

The overall plan, then, includes these steps:

a. Preparation of teacher - very general
b. Preparation of students - very brief
c. Unusual opening of the class period or an explanation of the system by the teacher
d. Brainstorming
e. Evolution of a common interest or problem
f. Planning by the group
g. Take-over by student leaders
h. Implementation of plan
i. Evaluations

Listed in this manner, little seems strikingly different from a regular class procedure except the degree of involvement of the students in the actual process. Yet, a study of what actually takes place in each step and the results of each show the uniqueness of the method (see text).
FIGURE 2. TEACHING MODEL FOR DORM
Problem

The word problem (pertinent to research) has several definitions depending on many variables. Sometimes a mere question serves as a problem while other times the goals are listed, one question or several questions asked. While in some situations a hypothesis or a mere purpose—given a rationale—suffices for doing the study, some investigators use all of these in the same study. A problem according to Guba (1981), is a situation resulting from the interaction of two or more factors (for example, givens, conditions, desires and the like) that yields: (1) a perplexing or enigmatic state (a conceptual problem); (2) a conflict that gives readers the choice from alternative courses of action most (an action problem); or (3) an undesirable consequence (a value problem) (p. 88).

The possible problem at hand in this study, at first glance, is a question and evokes that class of action known as "consequential mode"—what would happen if—rather than that known as "causality," "contravention" or "verification" and "documentation." The naturalistic inquirer as opposed to that inquirer using the formal scientific research method expects the final statement about his problem to result from observation, from experience and from data—in this case, data about the processes, the results and the consequences of a particular method.
The investigator, as he ponders the feasibility of DORM, does have, from research, some idea what the study could yield and what the alternatives might be. A positive change in attitude, an enthusiasm for learning, development of leadership skills, excellent class attendance and an increase in achievement would certainly be indicative of a method that functions well. In this case, the researcher also ponders as to what degree all children can learn by DORM; if only those students already known to be outstanding will be the only ones who will thrive; or whether no one will learn by this method (almost a null hypothesis).

Learning, here, does not refer to those commonalities gleaned from environment but rather to the Brunerian definition of learning related to subject matter (Bruner, 1960, p. 49). Since no exact hypothesis actually exists for this study at this point, the researcher is at liberty to let his mind wander to the degree that he couches his "fantasy" in Aristotelian terms--a syllogism--which in this case assumes a student will learn in a learning climate conducive to learning; again, Brunerian philosophy (see text).

The participatory-democratic method provides a good learning climate.
A good learning climate is conducive to learning.
The participatory-democratic method is conducive to learning.
The major term is assumed as factual and the syllogism is valid. The syllogism is true, however, only if the researcher can indicate that positive changes indicating learning have taken place. Very important categories of the data, then should include those behaviors, grades, evaluations and the like that will allow a researcher to infer that, for each student, changes are positive thereby indicating that learning has taken place according to those theories involved.

Supported by theory, then a teacher and the learning climate—while certainly not the only factors contributing—if functioning in a positive manner, should produce positive results. Since the learning climate is controlled for the most part by the methodology the teacher uses, this study is about a change in methodology.

The actual problem, then, of this particular study is to determine the feasibility of using DORM—the participatory-democratic method—with heterogeneously grouped eleventh- and tenth-grade language arts students in a suburban area. If this method alone will change attitudes—cause students to want to learn—then the method is a viable one. If attendance becomes better, then the method is a useful one. If grades are better, the method may be worthwhile. If a multiplicity of these kinds of evidence evolves from the students, then this method could be counted productive,
still a feasible method for use at least in the kind of situation in which it was studied.

To move toward the study of feasibility in accordance with the title of this report, certain assumptions are made:

a. A learning climate is that environment which results from teacher behavior, student behavior, a setting and a curriculum;

b. A teacher is responsible for the learning climate in that teacher's room;

c. A teacher can be a change agent, gatekeeper, consultant, facilitator varying the classroom climate;

d. Almost all students will learn in a favorable learning climate--one which really involves the students (Bruner says all will learn).

Almost all educators would agree with one, two and three; some, would agree with four. But, what does happen if we change from a traditional method to this gifted method, DORM, in a heterogeneously-grouped class of high school students in a suburban school setting?

Hypothesis

The hypothesis is the center of the emerging theory, the probable relation among categories. The elements of theory that are generated by comparative analysis are first conceptual categories and their conceptual properties; and, second, hypothesis or generalized relations among the categories and their properties (Glaser, p. 55). Substantive theory used in this study, as opposed
to formal theory, is that theory developed perhaps for later use in an empirical inquiry: for example, in substantive theory, emphasis would be on eating habits as a status symbol in racial classes of the world; in formal theory, comparison is made among many substantive cases in a formal area. Often in substantive theory, an integrating scheme emerges with the data (Glaser, 1967). This study, then, focuses on substantive theory.

To generate an hypothesis, the researcher notes relationships among categories and properties; then joint data collection and analysis occur often simultaneously (Becker and Greer, 1960, pp. 270-289). The observer must be theoretically sensitive, constantly alert to probable direction and recurring patterns in the project. "Slices of data" (Glaser, p. 65) evoke different views which the analyst perceives from categories and data properties. To generate a hypothesis is not the main purpose of this study.

Theory Used in Design

The nature of the research in this study is better adapted to the naturalistic method of inquiry, a process in which the technique will be qualitative and the source of theory grounded. The instrument is the researcher, except for attitude tests, including the standardized and field-tested IAR-Intellectual Achievement
Responsibility Questionnaire of Dr. Virginia Crandall. Data collection and analysis will occur during and after the inquiry. The design is "emergent", one which Guba and Lincoln choose to call "rolling" or "cascading" because of its constant evolution. The style is one of selectivity with some of the procedures anticipated beforehand. The analytic units of research will, upon analysis, produce patterns that, hopefully, will indicate a probable hypothesis about students in a natural setting. The most relevant sources for the design referred to in Chapters III and IV will be Guba and Lincoln's Effective Evaluation (1981) and The Discovery of Grounded Theory: Strategies for Qualitative Research by Glaser and Strauss (1967).

Qualitative research can maintain a high level of credibility, plausibility and trustworthiness. While many people still view the results of this method as only a first step in so-called "scientific" research, scrutiny of this method shows it to be reliable; educators have nor. ended the controversy (Educational Researcher, Vol.15, No.1, pp 4-10).

In the first place, the closeness of a researcher to the group studied has built a trust that allows him to get data never available to that one who visits the group a day now and a day then, testing and quantifying, aloof and apart from the subjects.
Instead, the field worker can now develop, from his closeness and his data, substantive theory which is, in turn, grounded in his methods of collecting information, methods which he tests and trusts. Yet, he must take especial care not to record merely the positive data and omit the negative. He must be conscious all the time of the probability of subjectivity. Other measures at his disposal help to avoid subjectivity; other tests and information help him to validate his work as it progresses.

The biggest hurdle, perhaps, is to write for those who will judge the study. The theoretical framework must be well-presented. Those theories to which the work is related must be considered, and the concepts as they emerge, supported.

Another problem is that of describing data. The reader must literally hear and see the people. Illustrations, tables, charts and graphs help. The researcher can quote; he can summarize. In fact, he has to do much what the novelist does: make his framework, his people and his data believable to his reader.

The codified analysis must show the reader how the researcher arrives at his conclusions. Otherwise, any transition from data to hypothesis could be difficult to follow. If negative ideas emerge, these must be accounted for, explained and weighed. In constant comparison, coding and delimiting help the reader and/or
judge to become a believer. He can see the integration and so follow the process as to how, logically, the researcher comes to his conclusions.

This study is a single group design--a true experimental design. Essentially, the first condition--original situation--can be evaluated by a pre-test and resultant conditions evaluated by a post-test. While Fox (1969) and others consider such a procedure with one group as weak, Fox continues to say that "the pre-test-post-test design with one control group (a single-group experiment) remains the single most popular experiment design in education" (p. 474).

Wise, Nordberg and Reitz (1967) state that "the single group method is the simplest type of functional design" (p. 132). In a so-called functional design the observer can manipulate the independent variable as opposed to the factorial-causal comparative design where the researcher can not have this freedom. The law of the independent variable dictates "that in order to establish a cause-effect relationship all relevant factors must be held constant in some way except the independent variable" (Wise, et al, p. 136).
Really, three parts are pertinent to these laboratory experiments - for such they are:

a. The teacher - the scientist who plans, conducts, observes, concludes;

b. The students - the substances - acted upon; and,

c. The method - the reagent; in educational terms, the independent variable (see Chapter III in this report).

The teacher, basically is a scientist, conducting an inquiry - a research - in a laboratory, the classroom. He needs ultimately to know, not only what the results are but also whether or not they are desirable enough to warrant repetitions of the procedure. The entire experiment is conducted in the classroom, the laboratory.

The teacher has assessed all of the components and is knowledgeable about the process. As has any scientific observer, he has an open mind and will document everything he observes. He is also aware of the possibilities, the probabilities and the value of the research project. He needs to know if the results he gets makes the experiment a viable one - if the method (the reagent) is the right one.

The Pilot Study

The setting is in a suburban area of 25,000—a town with few inner city students, few foreign students; the home of the WCTU
and still "dry." Many white-collar workers from Columbus live here and most of the people are middle, middle-class. Some areas have executive-type homes and people seem affluent; other areas have small houses, but houses, well-kept and neat. Some students work to save for college but most students have sufficient money and usually plenty of time. The usual drug problems and teenage problems exist.

The school—one of two high schools, the other small—has two thousand students and one hundred fifty teachers. The Language Arts Department has eighteen teachers and currently teaches most of the two thousand students. The room itself is used by three teachers at some time during the split-session school day and by approximately three hundred students. One blackboard at one end of the room, one bulletin board—4'x6' and a teacher's desk and chair are stark against stucco walls of dirty, institutional yellow.

The thirty ninth-grade students—a class chosen at random—have just finished eighteen weeks of literature, composition, grammar and a bit of speech. Students and teacher, alike, dread the next eighteen weeks. As John Goodlad said in A Place Called School (1984), "the emotional tone is neither harsh nor warm and joyful; it might be described most accurately as flat" (p. 108).
check—somewhat tending toward those who could have reverted—showed that the positive attitude toward school still held.

Their reading was something totally unexpected—the amount of research and the levels on which they worked. One speaker, Dr. Helvoigt of Otterbein College, when interviewed after his hour with the class, said he was amazed at

a. The knowledge shown by the students about the project;
b. The vocabulary level of books used for reference;
c. The intelligent questions asked—some questions students had prepared in anticipation of his coming;
d. Their attention span;
e. The earnestness with which they took notes; and,
f. Their genuine concern that something be done about the problem, using their findings (journal kept by supervisor).

A teacher-observer in this system now uses this method in some form almost exclusively. In fact, he says he would not stay in teaching if he could not use this method. The first time he used it, he chose two junior classes of students who had been dropouts, were "druggies" and/or were discipline problems—as he said "... from the bottom of the heap." He used a six weeks period. These students presented their results to the Board of Education, to the entire staff of the high school, and were on the 5:30 segment of Channel 4 News. These were students who hated school
AND TEACHERS. They had not anticipated standing before a group but they could not tell their results fast enough. Later, they became involved in more PR. Again, each study seems to produce its own follow-up.

Study Used in This Inquiry

For this experiment a group of sophomores and juniors—sixteen sophomores and thirteen juniors—was chosen at random from the student body of a small suburban high school, students chiefly from white Protestant backgrounds. Although the choice was a random one, it proved to be a wise one. The experiment, designed to change attitudes, has more chance of succeeding with older children (Truzzi, 1974). Then, if attitudes are changed here, the method could be a usable one.

These students (nineteen girls, and ten boys) are avowedly bored with school and particularly with rote learning. The attitudes generally reflect boredom; and, actually the students are very vocal about their feelings, often communicating their distaste to the teachers in some of their classes. The group has one student who supposedly has a learning disability; yet no one seems to be particularly informed about it. He becomes disoriented, forgets where he is supposed to be and what he is supposed to do next. He is a lover of nature and an accomplished pianist. He
is a junior and in all of the school term has never asked a ques-
tion nor volunteered an answer (see case history in Appendix B).

One student—an over-achiever, a junior girl—usually gets an
A grade in her studies. Some of the others get an occasional A
but the majority of the students fall in the C range or below.
Some students are kinesthetic learners and have had to take summer
school repeatedly (see modality test results in Appendix B).

Study habits follow the gamut; a very few seem to have study
habits par excellence but most seem to have poor study habits.
Moreover, only six say they enjoy reading. Of the group, 78.6%
prefer to watch television or talk on the telephone (survey). For
the most part these students know how to memorize; this skill is
their forte (100%). Abilities on the Otis-Lennon test, May, 1984,
show higher potential than classroom grades indicate, a situation
one could consider quite common. Four enjoy language arts.
"Turned-off" in today's lingo—for whatever reason—many of these
students find school and/or teachers anathema—something to be
tolerated (from survey, 85.8%).

This study (2) is really a repetition of the pilot. The
teacher and the method are the same as in the pilot; the setting,
the material, the approach are all different. Yet for this study
as compared with the earlier units of the year the only independent
variable is the method. Because of the pilot and work done by other teachers in the first school system, the researcher anticipates certain outcomes. The results will be different but the conclusions may likely be the same. Determined to find any fallacies in the procedure, the researcher still goes into the situation really watching for any negative results.

At this point in time, the researcher definitely believes that an unusual behavior pattern by the teacher, a pattern creatively designed to make them wonder, gives them mental concern; and, perhaps--to theorize--has to be presented in order to put the students in the proper frame of mind to free them from the regular format of work. Thus, the entire unit will initially follow the pattern of the pilot study.

The overall plan is in the mind of the teacher but she has no idea of the particulars. She is depending on initial enthusiasm and the structure of the method to generate itself. The general plan for this study follows this outline (an asterisk denotes a deviation from the traditional methodology):

a. Teacher's planning prior to unit

   (1) Diagnosis of problem to be solved--at this time, to change the attitude of the student, thereby causing learning to take place
(2) Decision on objectives—long term and short-term

(3) Enumeration of the skills to be emphasized

(4) Selection of units of content that may be pulled into the procedure

(5) A survey of year's work to decide how much time—maximum and minimum—may be allotted—this time not more than three weeks, a time shorter than the pilot

*(6) An unusual way to introduce the unit

b. Teacher's preparation of students

*(1) Freedom from teacher-assigned homework and from teacher-made tests

*(2) A block of time to work on something each of "you" (the student) will enjoy—something "you" want to do

*c. Narrative of the actual procedure (follows)

Narrative

The teacher, who is very even-tempered, and punctual, comes to class late, rushes in, slams the door, goes to her desk hurriedly, brushes everything off her desk into the wastebasket, takes off her shoes, throws them into the wastebasket, one at a time forcefully, then sits at her desk and stares angrily at the students, looking at each one individually. Then the wait. These students—accustomed to very strong discipline (e.g., a pink slip often for only asking a question, pupil-disrespect)—also
wait. Finally, they venture to look at each other but no one
laughs. Since the teacher exhibits no further freakish body
language and does not talk, one student, very softly, says,
"Mrs. C., what's wrong?"

The teacher answers crossly, "What difference does it make?
Besides, this is my room and don't I have a right to do what I
want to do? If you had listened with your eyes in the days gone
by you'd know."

Again the wait. Another student comments, "It must be some­
thing dreadful to upset you so." Immediately, they become sympa­
thetic, about what? They don't know.

"Can't I be different? You deny me change even of personality?
Of behavior?" Here the entire discussion and the entire unit
could have taken many different "roads:" drugs, our culture;
the technological society; the world of their children; violence
or controversial issues. At this point, the teacher could have
given input that would guide. If she does this, that input should
be very brief and very, very tactfully done. In this instance,
the only input would be for the block of time, and that would be
done at a more appropriate time in the discussion. The teacher,
at this point, must be very aware of all the factors of her preparation, the setting and the skills she hopes the students will use.

So, the discussion is initiated. "Why do you think I changed and what changes did you notice in me?" The discussion continues to "What makes people change?" "What characteristics have you noted in people behavior--people who, you know, have changed?"

At this point students begin to volunteer questions as well as answers.

One student says, "What do we have to do for today?"

The teacher answers, "Aren't you enjoying what you are doing?"

"Yes, but we're just talking. Do we get a grade on that?"

"Do we have to get a grade on everything we do?" queries the teacher. "Remember I told you we would do something different, take a breather?" And so the tension is relieved and talk eventually becomes free.
The teacher now listens for a common theme, a word, a phrase, an idea—one that seems repetitive in their conversation. She finds it in the word "change," a word she had used earlier. This word seems logical for many reasons, not the least of which is their boredom with school—there the topic is—almost back where they started, back to her big objective in her pre-planning—to change attitudes. Yet, the "attitude" part does not surface from the students—just the idea of change so she goes with that. She is still guiding and following to that point at which they seem to be in another world of thought entirely unrelated to nouns and Shakespeare. Recent changes? What does change do? What is progress? Why do we want change? Is change always good? And, they begin to question each other. How do we decide what is good? How much change can we endure? What would happen if ...

The question? What would happen if the Van Allen belt no longer protected us? At this point the teacher notices Will, the student who had never volunteered in class. Another question, what would happen if we received no more light from the sun? How long do you think we could survive? Suddenly, Will becomes vocal. "Don't you think ...?" he begins and everyone stares at him for a minute but then picks up on what he says and the discussion goes on. He is now one of the group—not an LD. Now, the teacher is
confident. She surveys her class and she has an alert class, with everyone involved. The bell stops them and it's time to change class.

"What's for tomorrow, Mrs. C.?

"Remember, Brian? We are having a breather. There is no assignment." And, the next day everybody comes in, sits and conversation practically erupts even before the tardy bell rings. The conversation reverts to cultures, an earlier topic. The students are now free, mentally. They are talking about their world—the real one. The theater seating has long since been abandoned and students are in little groups with a student occasionally sitting on the floor.

"Why don't we set up cultures, beginning cultures, live in them during class periods for a number of days and see what culture is all about?" The teacher agrees and the students are full of ideas as to how to go about this. The teacher reminds them of a time limit which no one can avoid and of the lack of source material for reference. The students bring up two other possible limitations: space and approval of administration. Although the students do not know, the teacher has gone over the entire plan of the study with the building administration and has his approval. What she did not know was that the students want
separate cultures and for that they will need at least four rooms. She agrees to get the approval because the unit can no longer be self-contained in one room. Everyone, including some other teachers and many other students, is very excited...

Gifted students seem to "take hold" first and volunteer to lead. These are not necessarily students with best grades. If the discussion fails to involve some student, at the first, while the teacher is still the leader, she may say to that backward student, "John, what do you think about ...?" so that she involves everyone. No prompting is necessary in this brain-storming. Leaders volunteers are voted in and planning begins.

To keep the curiosity bubbling at the outset, the teacher must be creative and knowledgeable enough in various areas to interpose unusual, thought-provoking questions to take the students' thoughts away from the average, the usual and the mundane. Good round-table manners regulate discussions and sometimes enthusiasm--always kept on task--which tries to run away. Students are suddenly set free to use related concepts occurring in their thinking and now have much to say. From here on, the teacher acts as a consultant. She approves even without seeming to, for spontaneity is high. Yet, as do most observers, she will often
take part in discussions among three or four students from time to time.

Actually, a student may elect to work alone and have plans all his own on a different subject, on a relevant project; but, he, like the other group members must abide by the planning of the group--since each person is responsible to the entire class for what he does and for what he learns; the group sees to that. Sometimes the teacher as consultant will guide a student by questions. Students plan; students implement their plans; and, they evaluate their work. At no time does the teacher take over. She may have conferences with individuals, with group leaders, or if there is a project supervisor, with that person. Initially, a leadership structure will have been formed out of need and job descriptions written for those people.

Evaluations by teacher, observers and by the students themselves are made very, very frequently. Often students do this themselves almost automatically: "How many of you found material on ... last night?" What they are really saying is "Did you do your homework last night?" Group leaders often conduct these checks on a more formal basis and even become competitive with other groups as to the amount of work done.
Evaluations should not include tests unless content mastery is a specific goal and has been so specified by students. The scope of learning may be different for each individual (individualized both in interest and in learning style). For the final evaluation students may ask the teacher to make a survey sheet for them and/or the students may volunteer to write one. In these they will evaluate themselves and often give the grade they think they should have, together with the rationale for that grade. The teacher will have kept a diary and usually some student or a student from each group will have kept a diary or journal or even a log. Sometimes students may—as in the pilot—ask several outside speakers to come talk with them. Sometimes, they ask those speakers to evaluate the project after having talked with the speaker. The students will contact the speakers originally, have their groups plan questions for the speakers, have their groups take notes, and write "thank you's" to those speakers. Teachers do not instigate these procedures.

The teacher will do an evaluation of her own. She had certain goals at the outset—long-term and short-term goals; sometimes, behavioral and instructional goals; for example:

a. Maximum student participation;

b. Change of learning climate;
c. Mastery of some parts of content--often different for different students;
d. Opportunity for students to master many, many skills; and/or
e. Special help, directly or indirectly for some students.

For c the teacher may have a conference with a student; ask leaders to write recommendations for their constituents emphasizing their strong points; ask observers for evaluations; at a student's request, even give him a quiz--he may want to know that he has mastered some particular area of his study.

Teachers ask "Do students not get off task and talk about something else?" True, but people on any job do this; these students know they have planned their work and they feel obligated to the group. In fact, the group exerts pressure on its members to get the job done. Anyway, students in every teacher's class get off task mentally, sometimes. Group leaders check students to see what is happening for the group will have established a time frame and everyone will have worked out his own schedule in that time frame. If the entire class works as a unit, it is a miniature society and should show the weaknesses and strengths of an average society if the number is a fair sampling. Enthusiasm of the group, their personal interests and their relativity to the real world should carry these students to achieve more than they
usually do in an average school project. Besides, it is their idea.

In the case of the cultures, many spin-offs could have been set up and entire units based on societies and how they operate—based on the behaviors of the cultures—complete with research, readings of novels, comparison of one period of history with another... All kinds of spin-offs can incorporate what the students think, what they dream about (careers), even why school seems such a chore. For example, what careers are compatible, will feed into another? Is there such a pattern? Granted the average worker has three careers during his lifetime; what sequences usually occur? The student can go to his literature books and study the lives of authors and find that journalism is often the spring-board.

Incidentally, these students used the three weeks with the last two days set aside for evaluations—one day for orals and one day for written. The building principal attended the orals and commended the class highly on their unit, emphasizing, too their excellent discipline in all of their enthusiasm. He was also amazed at the quantity and quality of unit content.

They had also suggested that the teacher compose a written evaluation form for them to fill out and they would make one of
their own, the latter to be complete with grade and rationale. The teacher was to give a grade before looking at what they had given themselves. In two instances the teacher had given higher grades than they had given themselves, those being the only variations. Before the project had ended, however, many of the students from other classes had become involved in a very positive way. It is from this study that specific data is given in this report.

Study 3 - Narrative

The setting was the same as for the second study and except for the students who this time were ninth graders—a heterogeneous group of 17 boys and girls—a group chosen at random. These like the others had experienced mostly rote learning. Some had had trouble passing all through the grades. Others had managed A's and B's; the group had no one who consistently made A's. This year they had covered the curriculum in their text except for some biographical and autobiographical materials, sketches about inventors.

The "automatic" follow-up here was The Mustard Seed a literary magazine—planned and produced the next year by the juniors using material from the entire school.
With this group of students the researcher tried another approach. This time the entire process was explained to them: how the discussion begins with queries; the group then brainstorms and listens for a commonality; then, brainstorms even more. At some point here, they will have found both interest and enthusiasm and feel that they want to find out more about the commonality or about some phase of it. They ask a few questions. Home work? None. That within itself provided substantial motivation and everyone was now attentive. Grades? Explanation of that sent the motivation even higher. Who plans it? Students. Those three "sleepers" really built the motivation. The teacher's input was that they still had some work to do in the text before school was out.

They, of their own volition, decided very sensibly on "inventions" since that was the block of work remaining to be done sometime after this project was finished. Now they could combine time and curriculum. Then more questions: What do inventors do? How does one become an inventor? What processes does inventing involve? How does an inventor protect his invention?
Their procedure resembled the procedures in the other two projects although the initial steps had not included a burst of enthusiasm on the part of the teacher. Five groups were organized and they decided to invent. Ideas! Where to get ideas? Is an invention an inspiration? Does it have to be useful to society? Each group brainstormed and talked to other people in school and out of school. Yet no home work assignments were mentioned by the teacher. One had a grandfather who "invented gadgets" and had marketed some very profitably. A telephone call--home work--and Bill had a discussion with Grandpa in Florida.

Eventually, one group decided to make and market teddy bears--made a special way; another to make "organized" purses for ladies; a third to make an hydraulic window lift controlled remotely; another to make a special vinyl cover for boots and shoes--a cover small enough to be carried in a pocket or pocket-book. Still another had a hover-board. Three propellers, a Weed-Eater motor and a skateboard, they believed, should work. Then every group built a work schedule and wrote goals.

Someone in an outside conversation picked up the idea of market survey. More investigation. What was that? How was it done? What does it tell a manufacturer? Does the inventor do
his own manufacturing? More research, more study, more inquiry (all home work). Class was taken up with sharing and planning. Then someone noted that inventions should be researched to find out if anyone had already made such inventions. A little late, perhaps, but they were learning. More home work that was not 'home' work. Visits to stores; talks with managers; more telephone calls.

One group found that the hovercraft--already on the market was related to theirs but different enough that theirs could be marketed separately. The group with the plastic cover shoes found some on sale but not like theirs. The pocketbook group found the same situation. Now they needed technical advice. Here the teacher provided the name of a friend--a patent lawyer who travels internationally for several corporations. If he would be at home on the weekend... They called him (home work), used the teacher's name as reference and had several conversations with him; finally, he gave them xeroxed material about the laws they needed to know and agreed to help them further if they wanted him.

Next came blue-prints and patterns. The business administrator of the school happened to be also an aeronautical engineer and the teacher had had three years of civil engineering. The hover-craft people needed some information on wind velocity ... so they were sent to the business administrator for that. One girl's mother helped
with a pattern for the bear. One of the boys' fathers took them to Westinghouse scrap pile to get materials. That project was still ongoing at the close of school. The pocketbook group each made herself one. The girl in the bear group made seven bears herself, called hers Candi-Bears (her name is Candi), and sold them for fifteen dollars each. The other two girls in her group did a different kind of bear.

The students made out evaluation sheets and again the teacher at their request made out an evaluation sheet. Skills were enumerated. Everyone had an increase in grades in language arts. Nine had an increase in grades in other subjects. Attendance improved; those who had tardies (first period in the morning) made it to class on time; as one student put it, "I'm afraid I'll miss something." Again, the high school teachers as well as the elementary teachers in the other wing became involved, asking how they could use the method. One teacher wanted to use it for a block in reading at the beginning of next year rather than having book reports as such. Students on break or in study halls were allowed to wander in and out quietly to observe but not to participate or disturb. Two students, passing few classes, suddenly "blossomed" even in other classes. One could not make
the grade in Spanish; too much vocabulary, even though other students tried to help him—he had waited too long.

Findings were different in two respects from the first two studies. In the first place, the approach this time was different. The motivation accredited largely to the enthusiastic beginning in the other studies was generated almost as well by "no homework," evaluations and student planning. The other major finding was that two weeks is not long enough. The actual pilot without the additional work had run for five weeks. The main study done for this report (the second one) lasted three weeks but needed some time for research. The third, for two weeks, had deleted the teacher introduction of two days, but the time slot still was too short. Four weeks, more or less depending on planning, research, introduction and topics of concern, seem at this point practical. The age of the student did not appear to be a factor. The students chose themes on their own levels and worked in their own modalities.

As to attitudes, again, the attitude of every child who was not pro-school was changed to one that was very positive. School became a "good place"—not a "jail". The attitude carried over in each study to at least a "tolerance" of other subjects. It seems that if the student has one class per day of this kind, his
day seems enjoyable though the other courses are taught by rote methods (survey). The student seems willing to endure.

**Data Collection and Analysis**

The participatory-democratic method, DORM for the second study, begins its work, work that will last three weeks. Organization, planning, objectives, some research, relation to language arts—all will be planned by students. Students will keep attendance; do long-term and short-term evaluations; assign group and individual work; keep journals; plan quick checks; write work as needed; contact observers as needed; conduct discussions--formative and summative; and do any other work they plan singly or in a group. The class must be theirs and much data will come from them. The class must be flexible and the data must reflect that flexibility. Students will be given the needed freedom within the school framework as the project develops. The teacher will be the observer and will have another set of data collected in keeping with the research design. All of the data collection will be done in keeping with the design of the study. The processes by which such collection was made and was analyzed follows.

**Notetaking**

Although this is the third step in the real process (research and design having been the other two) this is actually the first
step toward solution of the problem. Notes and data are taken in different forms; some notes were taken by students and some by observers. "Any item of information that can be construed as a concern, a descriptor or an issue will also be recorded on a note card" (Guba and Lincoln, 1981, p. 314). Notes taken by the researcher were in keeping with Bogdan and Taylor's method:

a. Each group of notes will be on 3x5 cards.

b. The first page will identify the packet for the unit of work; e.g., observation.

c. Margins for notes and comments, frequent new paragraphs, free use of quotations--all rules will be followed.

d. The observer will record his own remarks, actions, feelings and his preconceptions.

e. Words will be descriptive not evaluative.

f. Dialogue will be noted even if not at first understood (p. 65).

Negative and positive statements and observations were included (as previously mentioned) and had equal consideration. All of this was coded later on cards. The "All" has the meaning of the Greek altheia--encompassing all that the observer could remember, even using carefully taken notes. Borg and Gall also advise the use of hand data cards so they may be pulled quickly for reference (1983). These were used.
Interview notes were taken during the interviews. When the interview was brief, notes were made immediately after the interview. Some notes were taken during the longer interviews since notes are preferable and often are a necessity. The notes were evaluated soon thereafter. The interviewer usually evaluated the credence of the respondent and the seeming credibility of the notes. The interviewer also "situated" these notes as a part of the whole. For example, in a series of interviews on a given subject the interviewer noted any consistencies thus helping determine the degree of believability of the evidence.

Data Collection

Five kinds of information were generated (Guba, p. 339):

a. Descriptive information
b. Information responsive to concern
c. Information responsive to issue
d. Information about values
e. Information about standards relevant to the work.

Such information is related not only to the sampling at hand; it is related also to the larger social units and as much becomes really a cross-sampling of larger groups. Note Figure 3, after the fashion of the Venn Circles showing the relation of the larger groups to the data collected. Such data was collected by the
FIGURE 3. THE IMPORTANCE OF THE DATA IN A GIVEN STUDY
researcher for this study of method and included a plethora of material:

From students

- journals
- logs
- goals
- summaries of work reports
- grades for this class
- grades for other classes
- evaluations on skills, attitudes and "home work"
- schedules, short term and long plans

From researcher

- plans
- case study
- triangulation
- conferences with individuals outside of school and in school
- notes and observations
- research and comparison with related materials
- discussions with student groups
- discussions with individual participants
- follow-up with students after work is over—if possible

Four single units and three kinds of incidents are presented in the final report. A short summary of each of the incidents and units is given; diagrams of some coded cards are included to help the reader follow the development of categories. The single units included:

a. Attendance--graph

b. Grades--graph
c. Attitude--tests
d. Evaluations--summary sheets

The three kinds of incidents include

a. Interviews with students
b. Interviews with teacher observers
c. Interviews with parents

Although these several incidents and items are evaluated in Chapter IV of this study, much raw material (including case studies) is included in the Appendix. Such accounting provides objectivity. As before mentioned, all findings will be supported by theory and this, within itself, is one kind of comparison.

Content Analysis

The content analysis used in this study is comparatively new and is still evolving. What occurred may be summarized in four stages of activity:

a. Comparing incidents and evolving conceptual categories and patterns using analytic concepts and sensitizing concepts (coding and comparative analysis occur here)
b. Integrating categories and properties
c. Delimiting the hypothesis--for example, by using generalizations
d. Evolving an hypothesis and/or theory and marking its verification--the last is not a main concern (Glaser and Strauss, 1967).
Coding

The very first step involved analyzing data, coding. This required the analyst to compare incidents of that data.

The analyst starts by coding each incident in his data into as many categories of analysis as is possible, as categories emerge or as data emerge that fit an existing category (Glaser, 105).

As the coding continues, the constant comparative units change from comparison of incident to incident (as in Step One) to comparison of incident with properties of the category that has resulted from initial comparison of incidents (p. 108).

After coding three or four times, the analyst needed to follow the second rule: "Stop coding and record a memo of your ideas" (p. 127). This gives the analyst time to read, reflect and test the logic of what he believes to this point. Meantime, he has coded the interests of others. He can now proceed: "By joint collection and analysis the sociologist is tapping to the fullest extent the en vivo patterns in the data itself" (Glaser, p. 109).

After a decisive point when no change seemed to be occurring the coding for that category was discontinued for the categories become theoretically saturated (p. 111).

The universe of data that the constant comparative uses is based on the reduction of the theory and the delimitation and the saturation of categories (p. 112).
(Holsti, p. 94; Guba and Lincoln, p. 243). The collection, coding and analysis are often called "theoretical sampling."

Early decisions confronting the analyst fall under three of these general rubrics: How is the research problem defined in terms of categories? What unit of content is to be classified? What system of enumeration will be used (Holsti, p. 94)? Too, live taxonomic canons control categories. They must be reflective of the purpose of the research, be exhaustive, be mutually inclusive; must be dependent and be derived from a single classification principle (p. 95).

The coding process begins as a judgmental task but finishes as a clerical one. The recording unit was theme—a single assertion about some subject—for much analysis of discussions, interviews and written materials were necessary. The use of this kind of recording unit allows the entry of parts separately—for example, of an interview—while also serving other data (see Table 1 and Figure 4).

Several kinds of data evolved. Some are presented mathematically. Other data is presented graphically, in anecdotes, case studies—materials that will show individual instances, trends, indications even of related studies that should be done.
<table>
<thead>
<tr>
<th>Who</th>
<th>Where</th>
<th>When</th>
<th>What</th>
<th>Why</th>
<th>How*</th>
</tr>
</thead>
<tbody>
<tr>
<td>T teacher</td>
<td>CL classroom</td>
<td>(actual time)</td>
<td>command or He Help</td>
<td>(May be body language)</td>
<td></td>
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<tr>
<td>C student</td>
<td>LI library</td>
<td></td>
<td>request</td>
<td>I interested</td>
<td></td>
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<tr>
<td>D different student</td>
<td>HA hall</td>
<td></td>
<td>rhetorical</td>
<td>Go Goofoff</td>
<td></td>
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<tr>
<td>2 two students</td>
<td>OU outside</td>
<td></td>
<td>question</td>
<td>DI Disrupt</td>
<td></td>
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<tr>
<td>S small group</td>
<td>TE telephone</td>
<td></td>
<td>response</td>
<td>Le Lead</td>
<td></td>
</tr>
<tr>
<td>L large group</td>
<td>(8+)</td>
<td></td>
<td>instruction</td>
<td>H happy</td>
<td></td>
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<tr>
<td>M other teacher</td>
<td></td>
<td></td>
<td>explanation</td>
<td>U unhappy</td>
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<tr>
<td>E student, not a classmate</td>
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<td></td>
<td>comments,</td>
<td>T touch</td>
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<tr>
<td>F visiting teacher</td>
<td></td>
<td></td>
<td>greetings,</td>
<td>Q question</td>
<td></td>
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<td>OT other teacher</td>
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<td>general</td>
<td>Dr dramatic</td>
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<td>action or</td>
<td>Po positive behavior</td>
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<td>task related</td>
<td>Ap approval</td>
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<td>statements</td>
<td>Da disapproval</td>
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<td></td>
<td>acknowledge</td>
<td>Di diligent</td>
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<td></td>
<td>praise</td>
<td>Pi planning</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>corrective feedback</td>
<td>Ft follow through</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>no response</td>
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<td>waiting</td>
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<td>observing</td>
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<td>listening</td>
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<td></td>
<td>(use 13a etc.)</td>
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<td></td>
<td></td>
<td></td>
<td>evidence of learning</td>
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<td></td>
</tr>
</tbody>
</table>

OT: Other (this will be noted in words)

*When applicable
FIGURE 4. A SAMPLE CODING CARD
The coding of the card used (Figure 4) in this study follows somewhat the plan of the Stallings system used by Lynn Morris and Carol Fitz-Gibbon in How to Measure Program Implementation, a 1975 Sage publication (p. 115). Revised code symbols were used with class observations and other units such as interviews. Some units were coded using only that part of the code applicable, with added data clipped to card. The person coding circled the proper codes on the card adding, below the circle, any letter: for example, the coded record for greeting was 6g and so on. A + or a - above the abbreviation helps to refine the final record. This distinction may depend on the situation as the observer sees it (Figure 5).

A probable interview and an example of the coding follows:

A Mock-Up of an Interview with a Teacher of Gifted

R. I really think I might get out of teaching.
I. I'm not sure I would do that if I were you.
R. But I can't stand this. I'm going nowhere and the program is going nowhere. Even though my philosophy agrees with yours and Dr. Barbe's--gifted do learn differently--I'm going nowhere. What you did works.
I. It's not the programs for there is--
R. No such thing as truly gifted program--it's the teacher--I've known that for some time.
<table>
<thead>
<tr>
<th>Notes</th>
<th>Category</th>
<th>Item &amp; Teacher Interv.</th>
<th>Memo</th>
</tr>
</thead>
<tbody>
<tr>
<td>check with them later</td>
<td>Who</td>
<td>Theme The Study</td>
<td>positive</td>
</tr>
<tr>
<td>Where</td>
<td>When</td>
<td>CD2S1MNEF</td>
<td></td>
</tr>
<tr>
<td>What</td>
<td>(time)</td>
<td>Cl Li Ha Ou Ta</td>
<td></td>
</tr>
<tr>
<td>Why</td>
<td>1 2 3 4 5 6* 7 8 9 10 11 12 13 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How</td>
<td>Hg I Go Di Ld</td>
<td>B Fe H U Ta Dr Po Ne Ap Da Di Pi Pt</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

**NOTE:** It marks teacher as important.

This interview would need a code card for each of these -

1. Theme: Teachers for DORM - Memo would be "positive" etc.
2. Theme: Current gifted program
3. Theme: Attitude toward teaching in general
4. Theme: Education in general
5. Theme: Philosophy concerning gifted and the average student for a total of five coded cards).

Categories would come later for these.

**FIGURE 5. A SAMPLE CODED CARD**

(Of the Interview)
I. And what that teacher does. There's also no one basic educational theory.

R. I found that out when I began my Master's work in the gifted area. You know me well! You know I want progress, I want these kids to get what they need. I don't want them to be bored stiff and I don't want to be bored; so I have resigned from—I'm being smothered.

I. Apply in another school close by; stay in the business; stay in the gifted area and do your doctorate in education. You believe as I believe: every student has—

R. Talent and a right to develop that talent—I know what you have been saying and I watched your study; but, not every teacher can do that.

I. With proper training--yes. And, every student has a right to the same opportunity those kids had.

R. I've applied at _____. You know how much I enjoy teaching....

**Categories**

Coding involved noting categories on the margins; thus, the first rule of the constant comparative method is now applicable:

> While coding an incident for a category compare it with the previous incidents in the same and different groups coded in the same category (Glaser, p. 106).

Such comparisons soon begin generating a possible theoretical statement from that category. Two kinds of categories emerged: ones the analyst has constructed; and those in the language of the research situation (Table 2).

Since Glaser and Guba both suggest the possibility of setting up categories at the outset of the study, two such categories
### TABLE 2

SAMPLE WORK SHEET

PARTIAL LIST, CATEGORIES (EARLY IN STUDY)

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
</tr>
<tr>
<td>Involvement</td>
</tr>
<tr>
<td>Skills</td>
</tr>
<tr>
<td>Participation</td>
</tr>
<tr>
<td>Motivation</td>
</tr>
<tr>
<td>Class climate</td>
</tr>
<tr>
<td>Attendance</td>
</tr>
<tr>
<td>Kindness - social skills</td>
</tr>
<tr>
<td>Helping another student - kindness</td>
</tr>
<tr>
<td>Negative body language (class)</td>
</tr>
<tr>
<td>Positive body language (class)</td>
</tr>
<tr>
<td>Telephone calls</td>
</tr>
<tr>
<td>Volunteer</td>
</tr>
<tr>
<td>Outside material</td>
</tr>
<tr>
<td>Research</td>
</tr>
<tr>
<td>Teachers' remarks</td>
</tr>
<tr>
<td>Staying on task</td>
</tr>
<tr>
<td>Talk in hall</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>Cooperation</td>
</tr>
<tr>
<td>Trip to library</td>
</tr>
<tr>
<td>Sharing</td>
</tr>
<tr>
<td>Grades</td>
</tr>
</tbody>
</table>
inherent in the purpose of the project were used. One of these, however, became a sub-category.

First, a category to measure the attitude of each student in class was set up on a semantic, differential scale. Since measuring attitudes is often difficult, some sort of differentiation to show intensity was used.

<table>
<thead>
<tr>
<th>Category - Attitude</th>
<th>(Student)</th>
<th>(Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>+3 +2 +1</td>
<td>0</td>
</tr>
<tr>
<td>Strong</td>
<td>+3 +2 +1</td>
<td>0</td>
</tr>
<tr>
<td>Active</td>
<td>+3 +2 +1</td>
<td>0</td>
</tr>
</tbody>
</table>

This is in keeping with Holsti's method (p. 107) and with Leski's. The category of Attitudes was used at the beginning of the study. To compare the results from a final rating with any data concerning pre-existing attitudes is important. That attitudes be generally positive to a high degree is also important since one of the indications that the method works would be the changing of all negative attitudes...
to degrees of positive attitudes; an accounting of such results would be part of *prima facie* proof that the method is feasible.

Special attention was given to the use made of an attitude test, written and field-tested by Dr. Virginia Crandall of Fels Institute (Wright State University). This test was administered prior to the study and after the study. This test—the Intellectual Achievement Responsibility Test (IAR)—is used quite often as a criterion by which a child's projected achievement may be diagnosed as well as his present academic achievement assessed. In this study, the researcher was interested in whether the student takes responsibility for his own successes or failures or whether the "blame" is placed on the school climate. This test tells the degree to which the student internalizes which in turn shows the degree to which he will take responsibility.

Attendance was kept as the first initial category. As with the other categories, it was eventually—as mentioned—placed in another category. Attendance can be quite indicative. Students are careful to attend school when something interests them. Thus attendance is indicative of the kind of learning climate that exists in the classroom. Tabulations of categories as they developed and of their constituencies were kept on a sheet (see text). This, in turn, was used to arrive at data that might lead to a solution of the problem.
Since this research question deals with the feasibility of using a particular gifted method with all students, the data should indicate something about the degree of that feasibility. If this gifted method, DORM, is usable, then attendance should be regular, attitudes should become positive, the learning climate should be conducive to learning, the use of skills should be developing and learning be taking place. Categories in general, which evolved relative to these areas, helped define the research problem. Further decisions as to specificity were made in the course of the study. The degree of this specificity was determined not only by intensity ratings but also by subsidiary solutions that emerged. Other categories emerged in the research situation as it progressed.

Hypothesis to be Generated

The fact that the title of this study includes the word "feasibility", gives direction to the entire research. Since the data consisted of interviews, journals, student evaluations and similar materials, a naturalistic grounded method of inquiry with the constant comparative method of analyzing qualitative materials was used to generate substantive conclusions from the raw data collected and analyzed. Special care to observe both positive and negative results was taken in order to determine the practicality of using DORM in grades ten and eleven in a secondary school. The ultimate goal, again, then, was the feasibility rather than a theory.
To summarize, in part, then: the data analysis, as previously noted, is a process identifying the categories and solutions to be supported. During the collection of data, the categorizing, the coding—all were going on. With this data there was no special attempt to establish a proof or a test for any emerging hypothesis. The analyst read the notes and noticed especially the topics, behavior patterns, themes—any regular recurrence or order of events.

Some of the original categories were very elementary, such as "constantly 'puts down' librarian"—an indication of another problem, a behavior pattern, an attitudinal problem. Do several students do this? Is it a peer-group behavior pattern? The querying goes on in the mind of the observer and observation continues. This category may be combined with another and/or phased out with data being placed in another category. Construct typologies (repetitive themes) or larger categories combine many early categories, thus continuing Glaser's delimiting plan, meantime comparing processes.
Figure 6 shows the inter-relationship of categories near the end of coding and categorizing. Four categories of data remained: grades; class climate; attendance and two classes of results from evaluations and interviews (positive and negative). All of these involved motivation, use of skills and maximum participation. Eventually all pointed to attitude as the key category, resulting in the structure at the left of diagram.

Two observations relate to the situation: the researcher took the data (content) that came; and, the characteristics that emerged determined the real categories. Thus "the categories and later the theories will be grounded in the data" (Guba and Lincoln, p. 240).

Four major characteristics of content existed. Kaplan explains these in The Conduct of Inquiry (1964). First, certain procedures were followed to avoid the analyst's subjective tendencies. Secondly, there was the inclusion or exclusion of content or categories done. Thirdly, the process aimed for generality with theoretical relevance. Fourth, the analysis itself, when coding was going on, stayed with manifest content (the actual incidents as opposed to latent content) and then showed the interpretation.

Glaser and Stauffer, in their constant comparative method, support the concept of coding and analysis being done jointly. This procedure, as mentioned before, was followed in this study. The
FIGURE 6. FLOW CHART OF RESULTANT CATEGORIES
categories included assumptions of the nature of the data; ques-
tions guided the coding and the categories (Holsti, p. 94; Guba
and Lincoln, p. 243).
Thus, delimitation was the third step (see Figure 5). Delimita-
tion, an activity that must be considered, occurs at two levels:
the theory and the category.

First, the theory solidifies, in the sense that major modifications become fewer and fewer as the analyst compares the next incidents of a category to its properties. Later modifications are mainly on the order of clarifying the logic, taking out non-relevant properties, integrating elaborating details of properties into the major outline of interrelated categories and--most important-- reduction... (meaning) that the analyst may discover underlying uniformities in the original set of categories of their properties and can then formulate the theory with a smaller set of higher level concepts (p. 110).

The last step is writing a probable hypothesis, a step with which this study is little concerned:

At this stage in the process of qualities analysis, the analyst possesses coded data, a series of memos, and a probable theory. The discussions in his memos provide the content behind the categories which become the major themes of the theory presented later. To start writing one's theory, it is necessary to collage the memos of each category, which is easily accomplished since the memos have been written about categories (p. 113).
The constant comparison, however, tends to produce a developmental theory, so called because of the way in which it evolves.

Now reduction of terminology and generalizing can also be based on whatever literature, including relevant studies and theories, may be available. This study, for example, is related to Rogerian teaching strategies (Joyce, p. 327). Categories are now combined or deleted as the hypothesis begins to become more evident. Once the categories are reduced, the analyst can devote more time to those incidents related to the fewer categories.

This process, then, was clearly an inductive method as opposed to a deductive one. All processes were continuous and direction was very flexible. The data collected were coded only enough to generate comparison (p. 103). The data collector was the instrument and developed "slices of data" (p. 65).

Too, personality theory, an intrinsic element here, involves change but not bias; for example, as data were gathered, categories and patterns were constantly checked—each new collection against that formerly collected; thus, delimitation was constant (pp. 101, 102).

SUMMARY
A summary of the actual design, then, includes

1. Basis in theory (see Review of Literature);
2. Use of naturalistic inquiry method and qualitative analysis:

   a. Researcher as instrument in the role of
      (1) Planner,
      (2) Observer, and
      (3) Evaluator;

   b. Selection of sample and setting;

   c. Outline and implementation of procedure;

   d. Collection of that data;

   e. Coding data;

   f. Categorizing

   g. Delimiting (an ongoing process).

All of this is given succinctly so that a teacher and/or any other researcher may repeat the entire study or adapt it to some other situation to see how DORM would function under the same or other conditions.
CHAPTER IV

FINDINGS AND INTERPRETATIONS

INTRODUCTION

No needs assessments were taken in this experiment. Guba quotes Scriven and Roth (1977) as suggesting "that needs assessments are the most ludicrous spectacle in evaluation" (p. 355). For the students in this study, the need is substantiated, however, by certain findings concerning conditions at the time of the study.

First, several students with average and/or high potentials had average and/or low achievement records. To substantiate low achievement and high potential three kinds of records were examined:

a. classroom records of grades
b. a battery of achievement tests
c. Otis-Lennon Tests (school records of results)

The last two are given every year to high school students. Only one student had classroom grades consistently A and a study of potentials showed that student to be an over-achiever. The other students rated average or above in potential, except for two students - one with a decided learning problem and another who was handicapped in the Otis-Lennon Test and in the standardized tests by the time allowed. Yet, most grades remained average or below of the time
(records provided by business administrator). Conversations with two teachers and a guidance counselor supported the evidence as well as the conclusion that students with high potential were consistently doing average or below average work.

Secondly, an overall atmosphere of boredom existed in the classroom. The researcher had only to listen to everyday conversation to understand how students felt about school. The following brief questionnaire, however, was given initially to all 29 students and showed these results:

1. Would you skip class if you thought you would not be punished?
   a. Sometimes - 6
   b. Any time - 21
   c. Never - 2

2. In the last week have you enjoyed
   a. One class? - 5
   b. More than one? - 3
   c. No classes? - 21

3. Why do you come to school?
   a. Because I am required to attend. - 26
   b. To learn so money can be earned. - 2
   c. To satisfy my desire to know. - 1

4. Where would you like to be just now?
   a. A specific place such as on the beach. - 6
   b. In a particular class. - 0
   c. Anywhere but in school. - 23
5. Do you see a present or a future use for what you are getting in school?
   a. For all of it. - 0
   b. For part of it. - 5
   c. For none of it. - 24

Again, teaching staff concurred with results.

A check with administration and faculty members showed that modality had never been a consideration in their teaching. The modality tests by Dr. Walter Barbe (see Appendix B) were given to these students and showed
   six to be kinesthetic learners;
   four to be visual;
   six to be aural;
   eleven to be visual and aural; and,
   two to be aural and kinesthetic.

None of the teachers had any college work beyond the teaching degree. The workshops held once a year dealt only with curricula and discipline.

Findings from the entire study itself may be divided into six groups:

1. Those resulting from attitude tests:
   a. Dr. Crandall's IAR test
   b. Evaluations of attitude using the Holsti method
2. Those resulting from factual information
   a. number of students showing extended interest
   b. attendance
   c. grades
3. Those from categorization
4. Those from triangulation
   a. observers on several levels
   b. teachers who use the method
5. Those from interviews
   a. parents
   b. teachers
   c. students
   d. principal
6. Those from related materials such as journals
7. Those from evaluations
   a. many students
   b. teacher-observer

Much of the information gathered was descriptive in nature.
The setting, the purpose, the target group or entity, the agents,
the schedule, the transactions, the timing, values to stakeholders--
these are dealt with in previous sections relevant to other information. Concerns, however, must be assessed as to cause and
consequences as well as to contravention employed. Since the
sampling of materials at hand is really part of a much larger body
of findings, a check was also made to determine if material repre-
sentative of all of the kinds of information had been included.
THE FINDINGS

The findings in this experiment exceeded in number those anticipated at the beginning of the study. At that point, attendance and attitude were established as categories which, if yielding favorable results, would be indicative of a positive learning climate. Such a climate—according to Glaser (1967)—would be one in which personal involvement would help the child succeed. Pestalozzi's theory regarding making decisions as to courses of action and Rogers' theory of teacher responsibility as well as his definition of learning (Chapter II) led the observer of the processes to believe and expect that positive learning conditions would result.

Such processes occurred as a result of something the teacher did since the teaching method was the independent variable. Also leadership skills, evaluation skills, thinking skills,—the use of all of these, if in evidence, would seem to indicate that DORM is a viable method at least to a degree. Results related to these concerns are documented in the pages which follow.
Attitude Tests

Since attitudinal theory and findings are so pertinent to the use of DORM, the results from the tests of the IAR given before and after the study should, perhaps, be considered first (see copy of test in Appendix B). The long form was given to the students before the study was begun and then at the close of the study--after three weeks--the test was given again. While Dr. Crandall uses results to study ramifications--for which she gives documentation--this study is concerned particularly with the reaction of the student to the learning climate, as to how he feels about where the responsibility lies, thus showing both in his answers to this test (see Table 4) and in the Holsti ratings (see Figure 7) his feelings about his environment.

\(^1\)Dr. Virginia C. Crandall's Intellectual Achievement Reliability Test: used by Carol Hill in dissertation: see Dissertation Abstracts International 1980 Feb. Vol. 40 (8-A) 4490; see article in Journal of Experimental Psychology: 1969, 79 (3, Pt. 1), 578-580; also see ED 111840, a Stanford Research Institute Adaptation - Office of Education (DHEW), Washington, D.C., RIE Jan. '76. For further material see Appendix B.
TABLE 4
COMPARISON OF RESULTS

<table>
<thead>
<tr>
<th>Test</th>
<th>Gender</th>
<th>Mean</th>
<th>IAR Mean</th>
<th>Range</th>
<th>IAR Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test I</td>
<td>Girls</td>
<td>+13.842</td>
<td>+13.29</td>
<td>+9-16</td>
<td>+6-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-12.894</td>
<td>-13.22</td>
<td>-9-17</td>
<td>-5-17</td>
</tr>
<tr>
<td>Test II</td>
<td>Girls</td>
<td>+14.631</td>
<td>+13.13</td>
<td>+12-17</td>
<td>+2-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-11.894</td>
<td>-12.13</td>
<td>-9-15</td>
<td>-4-16</td>
</tr>
<tr>
<td>Test I</td>
<td>Boys</td>
<td>+14.222</td>
<td>+13.33</td>
<td>+10-17</td>
<td>+6-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-12.666</td>
<td>-12.13</td>
<td>-6-17</td>
<td>-4-16</td>
</tr>
<tr>
<td>Rest II</td>
<td>Boys</td>
<td>+14.333</td>
<td>+13.33</td>
<td>+10-17</td>
<td>-10-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-12.444</td>
<td>-12.13</td>
<td>-10-17</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Test I</td>
<td>+13.964</td>
<td>+13.21</td>
<td>+10-17</td>
<td>+6-17</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td>-12.071</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Appendix B for additional material about IAR test.

Comparison of results from IAR test (students in the inquiry) with those of IAR (Dr. Crandall's testing)
Individuals vary in the degree to which they believe they themselves influence the outcome of their reactions. Two students may see the same situation and one may believe he controls it while the other may believe it beyond his control, perhaps controlled by someone in authority. If the individual feels he has no control, then he will have little reason to alter his behavior.

As a result of her testing, Dr. Crandall believes "it probable that a belief in self-responsibility constitutes a motivational influence upon achievement performance and should predict behavior on tasks where motivational factors account for a relatively large proportion of variance over and above ability or acquired knowledge" (Crandall, Katkovsky and Crandall, 1964, p. 108). This could account, in part for the fact that while students, by their own ratings and by the teacher's rating, have low interest in school, they are working and making average grades. If, as Dr. Crandall states, a student with a higher plus score on the IAR questionnaire tends to react to motivational factors and achieve over and above ability, this might also explain, in part, why grades for these twenty-nine students rose in this study. Since the grades rose in the pilot, and in Study 2 and Study 3, to assume that students reacted this way in all three instances merely because of high motivation might be presumptuous; yet, the results
of these two tests in Study 2 show a little more variance than did the results of Dr. Crandall's test and retest where no changes had consciously been made. The ranges in her test scores, however, seem greater, a fact which may be accounted for by the size of the sample in her study as compared with this one. A researcher, then, could expect at least a slightly higher positive variance and a slightly lower negative variance in a retest if some strong motivational factor were introduced. Too, her students (183) were all tenth graders. Some in this study (13) are eleventh graders. Her studies proved that the older the student, the more he internalizes (takes his own responsibility). This could also account, in part, for a stronger sense of responsibility originally shown in these tests.

In the results of the test and retest in this project the I-test scores for girls fell 1.1 and for boys .22. This sharper decrease for girls is probably attributable to the findings of Diveck and others; girls were found to be more responsive to motivational influences than are boys. Again, for the I+ test for girls, the mean score rose .789, significantly more than the .111 points for boys. The fall in the I- scores and the corresponding increase in the I+ scores indicate a sharp increase in the degree of responsibility students were willing to take for their own behaviors. This,
in turn, indicates a greater receptiveness to learning according to Dr. Crandall.

The reliability coefficient of Crandall's test and retest of older children (ninth grade-random sample) was .60 for both I+ and I- subscales. The Spearman-Brown Prophecy Formula was used. In this (Study 2) the product-moment correlation formula (Gronlund, 1971) was used. The resulting correlation in this experiment tested with girls (positive IAR test results) showed a correlation coefficient of .59.

The initial conclusion from the test scores is that they provide an incentive, perhaps, for further testing using the short form of the IAR or using another test after prolonged use of DORM. Secondly, there is an indication that these students are inclined to react favorably to motivation because they, for the most part, increasingly believe the responsibility for what they do is theirs. This belief seems to become greater with age—a natural phenomenon according to Dr. Crandall. Then DORM should, by inference, produce better results with older students than with younger ones.

Two other conclusions seem somewhat relevant. The class grades then could rise in response to any positive change in the learning
climate. Too, this test (IAR) helps to explain the excellent discipline of the four cultures, a condition at which observers marveled. Students who feel responsible seem to act responsibly. With these results and inferences it is also easy to see and understand why "the IAR itself has come to be one of the criteria by which the success of educational and therapeutic innovations are evaluated" (Crandall, p. 2).

"Attitude of an organism is inferred by the reaction of that organism to a class of stimuli." Sherif, Sherif and Nebergall (1965) build on this by saying one can determine attitudinal change by noting change in acceptance, rejection or noncommitment—attitudinal indicators (p. 178). Thus, in the Holsti study, those three indicators were used to tally the reactions of students to learning climate in an effort to determine change caused with DORM working as a stimulus or as a motivator. Acceptance would mean that the student does his work willingly and such descriptors as "strong" and "active" would help define the assessment. The Holsti plan, while first used to evaluate student attitudes (Figure 7) by teacher questionnaire (page 125), was also used by students in personal assessments (Figure 7A) of themselves. Although the fact that the student evaluation has eighteen categories and the teacher
Figure 7: Attitude toward school from teacher survey using questions reflecting Holsti indicators.
Questionnaire for Figure 7

1. When you are assigned work do you
   a. do it as soon as you can?
   b. give it priority?
   c. take your time but do it?
   d. put it off to last minute?
   e. do part of it?
   f. do none of it?

2. When class is in session do you
   a. really become involved?
   b. listen, take notes and contribute sometimes?
   c. listen and take notes?
   d. take notes only if forced?
   e. listen sometimes?
   f. "turn off" the lesson?

3. The teacher teaches
   a. well; I understand.
   b. I understand most of the time.
   c. I try to understand.
   d. over my head.
   e. always the same.
   f. I don't know.

4. The content seems useful?
   a. Yes.
   b. Most of the time.
   c. Part of the time.
   d. Only on some units.
   e. Hardly.
   f. What for?

5. If I fail this course it is
   a. my fault.
   b. because I didn't study enough.
   c. because I didn't take enough notes.
   d. because I didn't understand the teacher.
   e. because someone took my notebook.
   f. because the teacher doesn't like me.
FIGURE 7A. STUDENTS' RATINGS OF THEIR ATTITUDE TOWARD SCHOOL BEFORE THE STUDY AND AFTER THE STUDY (OBSERVATION)
evaluation has nine makes the comparison of before and after somewhat different in outline, both attitude charts show definitely the overall pattern and direction of change.

**Factual Information**

The number of students involved actively on any given day should also indicate a degree of acceptance. If interest is high and students involved, then students have accepted the method and agree with how they are being taught. Then the responsibility for learning is theirs. One line (A) on the graph (see Figure 8) shows those actively involved on any given day during the study. The other line shows the same group of students with the same teacher for an equal block of time taught earlier by a unit-lecture method largely involving rote learning. Granted, other variables may have entered in. Yet, three other teachers and a principal concur with the results shown in the diagram. Too, students had been allowed in the unit (rote learning) to choose their own block of material and had chosen short stories; freedom of choice should have increased their interest even on that unit.

Interestingly enough, although the results using the Holsti plan show that originally attitudes were very poor, interviews and research show that these students were passing most of the time—shown by individual interviews—because of parental and
Line A - project
Line B - three weeks of rote learning

FIGURE 8: NUMBER OF STUDENTS ACTIVELY INVOLVED ON ANY ONE DAY
teacher pressure. Statements (documented and dated) of teachers in the school corroborated that conclusion.

Attendance, another initial category, and one of the two groups of strictly factual information, for these weeks (see Figure 9) showed only three instances of deviation. One girl--absent with "flu"--and the problems of Bryan and David caused the only absences. In looking over attendance for the year the observer found these three weeks to have, for these 29 students, the fewest absences of any three weeks in the school term (school records). If anyone was ill, he went to his doctor after school. "We can't miss class; we want to know what is happening." Actually, they seemed to want a part in what was happening. The teacher knew no more what would happen than did the students. They had an overall plan, yes; but there was the interaction between and among cultures that often changed those plans. As noted, one assistant leader was ostracized one full day for being disloyal and new laws were immediately enacted because of a need.

Previously, students had asked frequently to go to the lunchroom to sell "class candy" during the last fifteen minutes of the period. During the three weeks of the study, not one student asked. Everyone was where he was supposed to be.
<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomores</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td></td>
<td></td>
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**FIGURE 9. ATTENDANCE GRAPH**
The effect on grades - another factual group - from this study can be divided. First, there was the effect on classroom grades. Although some students had been doing as much as B or C work in spite of the classroom climate, dramatic changes were shown in work of some who had been very low:

Dwayne - a C, D student became a B student.
Diana - a C, D student became a B student.
David - a D, F student became a C student.
David P. - a D, F student became a C student.

Most students either kept the grade, or made a higher one. The graph (Figure 10) shows the average for DORM on the top line and the grades for the six weeks previous on the other line. The teacher, at request of the students, wrote an evaluation form at the same time the students wrote theirs (see Appendix B). On their forms the students were to write the grades they felt they should have for the unit and the rationales for them. In two cases the teacher graded students higher according to her sheet than the students themselves had; otherwise, the results coincided. A skills evaluation sheet helped to explain achievements and also helped to show the degree to which students were using certain skills. Such evaluations were also mentioned in previous pages.
FIGURE 10. GRADES

Note: Student (an overachiever) was given credit for extra work in the grade for the previous six week period.
The average grade for the six weeks preceding--fairly representative of the year's work for most of them--averaged 70.3. The average grade for DORM per student was 85.86 percent, a gain of 15.86 percent on the average. Many student grades in other subjects were also significantly higher than the grades previously that year. This is only a related observation and not really a pertinent part of this study.

In the second place, the Otis-Lennon Tests which these students take every spring showed higher increase in achievement than students usually show at that grade level (conference with principal, examination of school records, May, 1986). The year before (1985), these students had shown average achievement and average gain (interview with building administrator). This year (1986) more than half the students were above average in achievement, a fact one administrator could hardly believe. To say that three weeks with DORM can make that much difference may be presumptuous. Yet, when they took their tests (in 1985) after having just had the unit, one teacher remarked that she had never seen students so serious about tests. The guidance counselor remarked that "Their attitudes toward tests and school work have improved." To say the results of three weeks with DORM are so far-reaching would require much further study; yet DORM was the only common variable at school.
"I just can't believe Lisa is in the 99th percentile" said Mr. Miller, principal (previously) and business administrator for thirteen years, who has known this girl from kindergarten; "but there it is." This year (1986) from that group came ten honor roll students consistently and sometimes more.

Categorization

The next group of findings include those from coding and categorizing—a system explained at length in an earlier chapter where a sample card and a sample worksheet were included. The pages which follow here show the results of that work but do not show all the delimiting nor nearly all the categories that evolved and were combined later with other categories (Table 5). The final steps seemed to fall into place when all larger categories integrated into one—"attitude" (Guba, p. 100). At the last, "learning climate" and "attitude" had remained for quite some time. Smaller categories such as "Research," "Helping Diana," "Brought in outside material," "Cheered up Cindy" (a societal skill)—all had faded early into larger categories. But, finally even the larger categories became so closely related to attitude that the final result was almost an instantaneous decision. This categorization was a step farther than the steps taken in the pilot study. There, the results were noted and assessed but the research design here appears to indicate attitude change as a probable reason for the results.
TABLE 5
A PARTIAL TABULATION FROM CODED CARDS

<table>
<thead>
<tr>
<th>Category</th>
<th>Unit</th>
<th>Item</th>
<th>No. Items Recorded</th>
<th>Pos.</th>
<th>Neg.</th>
<th>% Pos.</th>
<th>% Neg.</th>
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<td>699*</td>
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<td>289*</td>
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<td>29</td>
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*Note cards used for some groups where results are the same.*
Summarizing many of the results (Table 6) was comparatively easy but time-consuming. In all of this no negative results came from this study except the one noted from a teacher—one certain she, herself, could not adapt to the method. So positive and encouraging were the results that the researcher began to jot down incidents, put codes on the slips, mark pluses and put them in stacks according to theme. Theoretically, each incident should have several cards and did at the outset. This procedure, however, proved a waste of time since the results were positive. Should a negative result or comment have evolved, the original system would again have been used.

The conclusion that DORM brought all of these results would be subject to the awareness that other variables such as innate ability, societal conditions and home backgrounds are very influential. Yet, so many related, positive results seem suddenly to be in evidence whenever DORM is used.

**Triangulation**

The third group of findings—results of triangulation—includes, many, many comments from observers, assessments from observers and results from teachers who have used the method entirely and/or in part. First, we need to correlate the concept
<table>
<thead>
<tr>
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<th>Support - Related Theory or Study</th>
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<td>to stimulate</td>
<td>Reality Therapy of</td>
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<td></td>
<td></td>
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<td>Writing shows thinking</td>
<td>Involvement</td>
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<td>- extension of class work</td>
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<td>Interest</td>
<td>Willingness to plan and</td>
<td>Observation by outsiders</td>
<td>Learning is occurring</td>
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<td>Students' personal reactions</td>
<td>Their own feelings - no grades involved</td>
<td>Students enjoy what they do</td>
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<td>Teachers must have certain qualities</td>
<td>Verstehen Trussi (1974) Suchman (1966)</td>
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of triangulation with the kinds of information to follow. Triangulation is a concept of social research and a very useful one. It is the process of comparing the information and opinions of those observing a process, procedure or a method (Guba, 1978a). Guba further quotes Webb and others (1966) as saying that "once a proposition has been confirmed by two or more measurement processes the uncertainty of its interpretation is greatly reduced" (p. 257). Such confirmation often comes from "circling". "Circling" involves passing around that information to a circle of knowledgeable contacts for their reactions or by "shuffling" to get extended information from those contacts (pp. 257, 258).

One of the best methods for getting information of this kind is by getting the unsolicited opinions of observers from several levels. Chance conversations were often documented, sometimes several times a day--conversations with parents, teachers, principal, custodian--anyone who introduced the subject. Since this was the usual topic of conversation at school, material was plentiful. Care had to be taken on the part of the observer not to "slant" remarks or to "prime" an answer. Interest and excitement seemed to keep students talking; curiosity and observation kept the adults talking. Again no negative comments were forthcoming (see excerpts, Appendix B).
Since this situation involved an ordinary class in a traditional school, no one expected change and certainly not from day to day. Yet, this class changed daily. If the principal missed a day of observation he would ask the teacher later in the day what the students had done that day. His own daughter, in one of the cultures, could give him feedback from that culture but he wanted to know what the others had done. These results he had to keep, for the cultures were separate entities. Conversation, however, particularly from teachers, often took a judgmental twist: what would happen if ....? Since some of these people were in and out almost daily, their opinions were very valuable.

An OSU senior—who will teach—observed, at his request, the introduction of the method to the high school group. He knew about the young man with the learning disability. This observer said "When I saw the reaction of that class and particularly of Will, I knew the method was working."

Parents in school on business would stop by, during conference period, and ask about the unit that had their students "all fired up" as one mother put it. "All they talk about is English," another mother said. "You are going to use that in Brenda's class next year?" the school secretary queried. "I've heard so much
about the cultures; those students are really involved"—that from a minister of a church nearby. And, from one of the custodians of the school (an "offset" printer by day): "Lisa always liked your class; but, now, she thinks she wants to be an English teacher. And still another, a father; "This is what kids need; this is about real life."

Without exception, anyone who watched any one of the studies thought that DORM worked exceptionally well. The only remark showing dubiousness came from two long-time teachers who thought it was wonderful and would like to use it but they would be afraid discipline would get out of hand. One of these was a teacher in the system where this study was done and the other was an older teacher in the system where the pilot study was done. These remarks, then, raised the question as to whether or not just any teacher could copy this procedure. This is dealt with later in Chapter V.

To have others repeat a study and get favorable results is to add further to its validity. Interviews from the two teachers in separate schools who have also done work with DORM are included in part in Appendix B. Neither had any negative criticism of the method and thought it quite a viable one. Neither found any problem in using the method. Both were quick to say, however,
that a change in teacher philosophy had to take place initially.
The teacher who observed the pilot uses this creative method
almost exclusively and the second teacher is trying more and more
parts of DORM.

To repeat a study oneself also provides added information and
confirmation. Actually, the researcher has used and documented
DORM three times: once—a pilot—in a very large school; this
study with grades ten and eleven; and a third study with a small
freshman class—seventeen—in this same school. The third study
is not, perhaps, a fair sample but since all of the results are
very positive, the third one still adds something to the overall
conclusion. The fact that two of these were done in two separate
schools tends to add to the validity of the studies and the
feasibility of the method. Three grade levels were involved,
seeming to indicate, to some degree, the scope of the use of DORM.

The third group selected content much different from that in
the pilot and in Study 2 but still showed positive results. Since
their literature text includes some biographies and autobiographies
of inventors, the students elected to do a unit on inventions (see
Chapter III). These students could be interviewed in a follow-up
next spring (1987) and further substantiation given to the validity
of this research. No student from the ninth grade left school this spring, disliking the classroom climate. This new tolerance of other methods seems to be a "plus." Empirical data verifying this tolerance of authoritative learning climates—once students had a place to be adults for a while each day—accompanied all three studies.

**Interviews**

Getting more data and better data is often accomplished by conversation that is more or less covert. Yet, a formal interview can be very productive. All kinds of interviews—formal ones—can be used; from the ones that have highly structured questions planned in advance to those emphasizing certain kinds of reactions—pro and/or con—in an effort to find out the true criticisms the individual may have. The method often employed in this study was an oral reconstruction of the school situation followed by two or three open-ended questions. Usually an interviewee speaks first about his foremost concerns and needs only a bit of prompting and the usual attentiveness—indicating that everything the interviewee says is important. Sifting comes later. No negative results were given in interviews (see Appendix B).

Actually many of the interviews with adults became ones of inquiry and the interviewer had to be careful to avoid becoming

\[^2\text{See Appendix C for questionnaire,}\]
the interviewee. "How did you happen to dream up this method?"
"How often have you used it? "Can you use it with anything?"
"Can you use it all the time?" Questioning had to steer them away from their curiosity and to their evaluation of the method. Again, to repeat: no negative evaluations came from this study--only the one older teacher felt she could not adapt to it.

Journals

Journals--teachers' and students', the sixth group of findings--are usually interesting but in this case they also show degrees of involvement and steps of progress. A student journal on Day 6 shows learning procedures in action:

1. Diana will be leader tomorrow.
2. Skills today - added one - repetition for mastery. We just must get our "rites" memorized.
3. Maybe we shouldn't change leaders. I wonder.
4. Somebody's talking too much.
5. Do all cultures have a hard time? Why can't everybody get along? I'll bring that up tomorrow. Oh well!

These, sometimes humorous but most often serious, include, with the activities, students' opinions. Even they were supportive. One student wrote "Today, I'm out of jail for an hour."
Excerpts (from lists) such as these became common in the teacher's journal:

Day 5 - Talked with students intermittently through the day - grades seven through twelve. Those not involved begged to come watch. Fourth grade teacher - "What is going on? Those kids think they are in Heaven.", etc.

Day 6 - Mr. Maxwell cornered me on break and asked what we would do today. He can't visit the cultures today. Since I don't know either, I'll stop after school and fill him in. He thinks this is wonderful.

Patty's mother stopped on her way to pay a bill. She said, "I don't know what you are doing yet but you're doing something right; I've never seen Patty so excited.", etc.

These are only parts of journal entries for those days. Conversations from custodians to ministers were entered - these in addition to notes, to interviews and observations occurring.

In a planning session in one of the cultures the following conversation took place (Day 3):

S. What do we need? Now, you all have to talk or this won't work. What do we need?

J. Look at what our culture has.

D. But do we need all of this?

L. Do you suppose the extras cause all of our problems?

J. Let's get to the basics.

W. What are the basics?
S. What we need is to communicate, for one thing.

L. Let's get a leader and then go from there. This is to be democratic you know.

L. Nominate ... (at same time)

S. Somebody volunteer ...

J. We have to have order first and respect each other so each has his say-so. This is not a rap session ...

Evaluations

The next findings came from evaluations. "Evaluation" is a much-used term and has been for some time. Used often interchangeably with "measurement", it was for many years used largely to test how much factual knowledge an individual knew. The evaluations in this study, however, considered largely the focus of pupil behavior and the results of any changes taking place in that behavior.

Many kinds of evaluation were done formally as well as many, many quick informal kinds. Some of these were done on certain days, as the studies progressed, to show involvement, activities and even amount of home work--now called "How-much-time-do-you-spend-outside-of-class-working-on-or-thinking-about-the cultures?" Finally, students did their own summary evaluation as well as one written by the teacher. According to current studies in evaluation (Guba, p. 13) such student evaluations are valid. It must also be
repeated that the teacher had her own general goals at the outset along with some specific ones for people such as Will; and that the students had specific goals which they had to consider when they evaluated.

Students provided time for announcements. They came to the classroom at change bell and went to cultures at tardy bell. They returned five minutes before next change bell for any group conversation they might need. An evaluation question by some culture leader—to try to find out what others were doing—usually involved a show of hands for an evaluation.

Day 5 - Friday - How many are going to the library tomorrow?
Hands - 10.

Day 6 - Monday - "How many had help on your English over the weekend?" Hands - 12.

Day 8 - Wednesday - "Be honest! How many of you have already told somebody outside your group some secrets?" Hands - 6. Discussion followed. The six students had talked to parents.

Day 9 - "List the skills you are using and bring them in tomorrow. Let's see what we are doing."

Day 10 - "Are any of you doing home work in your group?"
A discussion of "home work" followed. The vote - 18. Then a caution from another leader: "Don't write anything down that is top secret!"
Day 11 - "We need an evaluation form soon. Jot down what you think should be on it and give it to your leader."

Day 12 - "Let's meet (the leaders) in study hall and get this evaluation form out. Everybody make a list of skills you used today and bring it tomorrow. The forms are on Mrs. C's desk." (Teacher's notes).

The students also talked to others about the work; such conversations were a very positive influence on motivation. "I wish our class would do something." "You ought to be glad you're in that English class." "Gee! You get to evaluate yourselves? Can you give yourself an A?" "You don't have to sit one period in the same old seat! I'd sure like that!" (Student's notes.)

The evaluation sheet that follows is the one the students constructed. Questions 1, 2, 7, and 9, 10, 16, and 17 were directed to assessing the degree to which students responded to their new responsibilities--something they felt they owed to their new freedom. The averages on a scale of 1 to 10 were:

<table>
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<tr>
<th>Question</th>
<th>Average</th>
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</tr>
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<tbody>
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<tr>
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<td>9.52</td>
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<tr>
<td>Question 7</td>
<td>8.30</td>
<td>group loyalty</td>
</tr>
<tr>
<td>Question 9</td>
<td>8.60</td>
<td>following directions</td>
</tr>
<tr>
<td>Question 10</td>
<td>8.95</td>
<td>your part (team)</td>
</tr>
<tr>
<td>Question 16</td>
<td>6.71</td>
<td>extra work</td>
</tr>
<tr>
<td>Question 17</td>
<td>8.28</td>
<td>your initiative</td>
</tr>
</tbody>
</table>
Evaluation
(Composed by Students)

Mark on a scale of 1 to 10 (top):

1. How well did you contribute your ideas?
2. How well did you cooperate?
3. How would you rate your loyalty to your group?
4. How well did you spy?
5. How complex was your culture?
6. How creative was your culture?
7. How well did you keep your culture's secret?
8. To what degree were you involved in role-playing?
9. How well did you follow directions?
10. How well did you work as part of a team?
11. How well did your group utilize what you had to use in planning?
12. To what degree did you use research?
13. How much do you feel you learned in comparison with other L.A. units?
14. How well did you perform your part?
15. To what degree did you learn about other cultures?
16. To what degree did you do extra work for your group?
17. What was degree of initiative on your part?
18. To what degree was each person included in your culture?
19. Would you like to be leader of a culture?
20. Would you like to do a similar unit?

What letter grade do you think you should have? (Be fair)

What was your attitude (on the scale) toward L.A. before this unit?

After this unit?

1. On back of page list ideas you contributed:
   Also check all of the idea used  —
   part of idea used —

2. Were you a member of group 4?

3. How much time out of class did you spend thinking about your culture?
FIGURE 11. EVALUATION, DAY 4

1. Are you interested?
2. Do you have to think?
3. Do you draw conclusions?
4. Can you relate these to your life?
5. Do you look forward to English class more than to others?
6. Do you think about it after you leave?
7. Do you think of related questions not asked?
8. Do you feel freer to speak out?
9. Would you like to skip class? (really a "yes" meaning)
Question 19 was aimed at leadership. Seven gave this question a ten, designating that they would like to be leaders. Three gave it two or below; the overall average was 6.6. Number twenty asked a judgmental question: "Would you like to do a similar unit?" All but one of the twenty-nine gave a ten. The student with a probable learning disability gave a seven.

Some of the other results were equally as interesting. The average grade requested was a B and the average time spent outside of class on the unit was 16.1176 hours, a bit more than an hour a day per pupil. Some spent an average of two hours a day and some spent much less. Most, however, gave the unit more than its average share of homework time. No homework was assigned, only as they assigned it in their cultures--and they did on occasion assign some. The amount of research classified as such was little--in fact, everyone recognized when the unit was begun that time and library facilities would keep this activity at a minimum. What the students did not realize was that asking someone for information is research also and so they rated this question very low.

Students did their own surveys of the skills they were using (Table 7). One of these, one for Day 12 is included here. To build a unit that would use this number of skills for so many students and have them do this willingly poses a problem in an ordinary unit (from "circling" session with teachers).
Researchers generally concede the carry-over from total education is the degree to which a student develops and uses skills. This unit of study, therefore, should be emphasizing the following:

<table>
<thead>
<tr>
<th>Results - # of students using that skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning skills</td>
</tr>
<tr>
<td>2. Listening skills</td>
</tr>
<tr>
<td>3. Evaluation skills</td>
</tr>
<tr>
<td>4. Communication skills</td>
</tr>
<tr>
<td>a. reading</td>
</tr>
<tr>
<td>b. writing</td>
</tr>
<tr>
<td>c. speaking</td>
</tr>
<tr>
<td>5. Library skills</td>
</tr>
<tr>
<td>6. Note-taking skills</td>
</tr>
<tr>
<td>7. Study skills</td>
</tr>
<tr>
<td>8. Skills in following directions</td>
</tr>
<tr>
<td>9. Memory skills</td>
</tr>
<tr>
<td>10. Thinking skills</td>
</tr>
<tr>
<td>11. Testing skills</td>
</tr>
<tr>
<td>12. Leadership skills</td>
</tr>
<tr>
<td>13. Discussion skills</td>
</tr>
<tr>
<td>14. Organizational skills</td>
</tr>
</tbody>
</table>

Note: The total number of students involved was 29. The numbers on the right show the number of students who believed they had utilized these skills and could verify those uses up to this point in the unit. Study skills and testing, although used in students' own performances, were not especially identified and were not assigned by the teacher. Somehow study skills and tests are identified with teachers and not with anything students set for
themselves. Note-taking? Everyone took notes on language, customs, etc. and kept a kind of journal for his own use; yet this skill was identified by only a few. Likewise, "evaluations are not tests." Discussion later brought out the fact that students believed that unless work is collected for a grade, it is neither homework nor test.

The researcher, at the request of the students, also wrote an evaluation sheet. When this was finished, it included three open-ended, general questions so students could express themselves freely; and eighteen rather direct questions on relationship with cultures, their cultures in particular. Attitude questions, judgmental questions, informational questions—the evaluation included some of each. The teacher's evaluation follows:

Evaluation (Teacher's)

Name
Date

Circle one to which you belong: Culture 1 2 3 4

Place answers to first six in front of the number?

1. Name of your culture
2. Your leader
3. Social classes in your culture
4. Kinds of work in your culture
5. Status of women

6. Other people in levels of power—other than rulers

7. Characteristics of each group as you see them: circle ones given and add as you need:
   Group 1: kind; patient; warlike; scheming
   Group 2: kind; patient; warlike; scheming
   Group 3: kind; patient; warlike; scheming
   Group 4: kind; patient; warlike; scheming

8. What feelings do you have toward your own culture?

9. How would you change your culture if you were planning another?

10. How does your interest in this unit rank with interest in other work in language arts to this point in time?

11. ... with work in other subjects this year?

12. Suppose we use a teacher-assigned block of curriculum such as literature as content. Would you still enjoy it?

13. Has your attitude toward language arts changed? If so, why? If not, why not?

14. What did you want to do in this unit that you did not get to do?

15. What could you have done in your culture to have made it better?

16. Do you believe your leadership in your group was effective? Explain.

17. Did your group cooperate well? To what degree?
General Questions: (answer these on the back of your paper)

1. What binds a culture together?
2. Did your culture address the aesthetic, the spiritual, education, etc. in setting up?
3. Do you think that the lack of traditions and/or adult leaders affected your planning?

To understand better this evaluation, a little of the narrative needs to be told. Students had four cultures, each with its own country (a room to itself). The four cultures were:

1. 99-7-4-17-22-3-17-4-48-5-12—female leader
2. Chameleon—one in which leadership changed hands each day
3. Citizens of the 13th Dimension of Bangkok—leader chosen based on length of fingers
4. Inhabitants of Star Planet Beta—the leader and assistant leader.

They visited each other but only two could visit any given culture at any given time. Observers other than their class members were free to come and go. One student's journal enumerated five visitors in one period one day. For the principal or some of the other teachers to wander in and out of all four cultures in one day, watching whatever went on, was not unusual. In the final days students from other classes would get passes to come and watch. This had to be stopped for some attempted to join in what was going on.
Results of the evaluation were very consistent. Their feelings toward their cultures without exception were "ones of loyalty". Students did not want either the culture or the unit changed—only "additions" and "more time". The attitude question brought all positive answers. "I like my English now;" "It gave us freedom to express ourselves;" "All attitudes are better because students are not just sitting there and looking bored—they are participating." All attributed the change in attitude to the fact that they had something to look forward to each day. Another student said she had "learned so much in this unit;" that she "had never known that cultures were related to so many things."

The three general questions commanded some statements that would indicate the student had learned factual material. Some of the specific questions dealt with societal skills. Students, too, stated they were happy with the leadership they had chosen democratically. The one single complaint—and it was unanimous—was that they needed more time. This would have been justifiable, had adequate library facilities been available and the school term
have been longer. The action of the unit, however, needs to move and leave the student hungry for more. This unit did that, too.

SUMMARY

A study such as this begins with information, a what-to-do-about-it, a hunch, an idea, a "do-you-suppose-this-would-happen-if...", then an "I-wonder-if-I-could-set-up-a-framework..." and the birthing of a research plan eventually occurs, always bedded in other theories and other conceptual ideas (Glaser, 1960). Then, several decisions for a study have to be made at the outset. The research must come first. The researcher must know the ramifications and have an idea of the support for his undertaking. Then, where are we going? How do we get there? What do we find when we have arrived? It is the last question that Chapter IV attempted to answer.

Findings have included results from

1. Attitude tests
2. Factual information - attendance and grades
3. Categorization
4. Triangulation
5. Interviews
6. Journals and
7. Evaluations.
Some extraneous bits of information have been added to help the reader "feel" the progression and enthusiasm permeating the classroom climate. Appendix B provides further material from Study 2.
CHAPTER V
SUMMARY AND IMPLICATIONS

INTRODUCTION

This study, resulting from the desire of a teacher to investigate an alternative method which would accommodate both gifted and non-gifted students, had for its problem the determination of the feasibility of that method. The research design of Glaser, Guba and Lincoln—a constant comparative qualitative design—was selected because of its adaptability to the constant accumulation of first hand information and to the type of study—one relevant to classroom climate involving student behaviors. The findings listed in Chapter IV are based on the second of three studies; a summary, some conclusions and some proposed implications based on those findings are given in this chapter:

a. A final assessment of preceding materials;
b. A check of objectives to try to determine if those objectives were realized;
c. A recapitulation including two anecdotes to emphasize intensity of student involvement;
d. Comparison of some results from the three studies;
e. Limitations;
f. Implications;
g. Teacher training; and,
h. Summary

**FINAL ASSESSMENT**

The results do "make sense" (content validity, Holsti, p. 146), and the prediction(s) should be valid. The data include the direct results of the work—attendance, achievement and attitude change—but cannot take credit for long term results—a degree of accountability requiring a longitudinal study. For the pilot (1983) a random survey three years later showed those students were maintaining a positive attitude toward school (noted earlier in report).

Furthermore, since the current sample was sufficient in size, carefully observed by many, coded, triangulated, and interpreted in accordance with designs, the predictions should be valid (construct validity, Holsti, p. 148). Guba's test for consistency—"internally homogeneous but externally heterogeneous"—governs categories and their "fleshing out" (Guba and Lincoln, p. 102). Moreover, the categories, after delimitation, seem definite enough that another researcher could repeat the study and arrive at the same conclusions regarding categories used. In fact, other teachers are using DORM. "Hands-on" coding; the fact that the method largely takes care of itself thus freeing the instructor to be an observer; the use of four groups of students, in this study, thus allowing the observer
to be comparatively free of bias—all point toward reliability.

The indication from the three studies is that if DORM were used even once or twice during a school term, everyone involved would seem to have a different attitude toward school for at least a period of time. As one student put it, "This is the best thing that ever happened at this school."

In the finality, raw data came regularly from these sources:

School
- tests
- evaluations
- interviews
- observation
- journals
- grades
- attendance charts

Outside
- parents
- patrons of the school
- other students
- college students
- teachers outside of the school

See Appendix B.

The fact that many kinds of data were collected from many sources adds to the rigor. Occasional checks with the entire group of students and with observers gave additional audits and verification of results. Such cross-checking helped to reduce further any bias. The time, too, was kept short. With more time,
a greater chance exists for uncontrolled events to occur thus
increasing the possibility of the introduction of other variables
(Sax, 1979).

CHECK OF OBJECTIVES

Summaries have certain definite functions and objectives
should be checked to see that no omissions have been made. In
the first place, the researcher was looking for a way for students
and teachers to work without boredom in a classroom situation in
a democratic manner. Interviews with those chosen at random and
concerned with the study confirmed the adult behavior of the stu­
dents and the freedom they had to do their planning, their execu­
tion of those plans and a final evaluation of what they had done
(see Appendix B for further substantiation).

Secondly, the composite gifted method, DORM, was to be
examined as to the feasibility of its use in a heterogeneous group
of students chosen at random. One student had a learning disability,
and the other students according to modalities, grades, home back­
grounds and ambition had no outstanding problems. Since only
limited narration should be included in a summary (except perhaps
for an anecdote or two), the researcher hopes the reader gets
glimpses of the enthusiasm, meantime realizing that the amount of
material of all kinds was almost endless. Results (see Chapter IV)
were positive.
Furthermore, the researcher has placed parts of this report in sequential order, organized, documented, grounded them in that data—still, in a manner hopefully interesting enough for teachers to read and with results, conclusive enough, to encourage teachers to try this method. Many conclusions have been indicated and others suggested. At this point, a hypothesis has been given only as an "if". Yet, an attempt to interest others in repeating this study is somewhat evident throughout the last part of the report. In addition, many spin-offs are suggested later in Chapter V.

Finally, the last and most important objective was to change student ideas about the learning climate by changing student attitude in the classroom. Overall, is DORM feasible at least under these conditions? A human judgment must finally be brought to bear on findings (Renzulli and South in *New Language of Evaluation*). The answer indicated from the findings is "Yes."

**RECAPITULATION**

As to the second function of a summary, recapitulation, much additional material can be found in Appendix B—materials expressed in a fresh and original manner, since much of it is from the students' work. The climate the study attempted to create was one in which the student would (1) take responsibility for his own action;
enjoy learning; (3) individualize his own work and develop his own talent; (4) show motivation; and (5) learn not only content but also societal and communicative skills as well. The evidence seems to indicate this was done and done with enthusiasm.

A brief recapitulation of the actual procedure must begin at the inception. In this study certain factors had to be considered. A teacher usually must follow the scope and sequence of content prescribed in the curriculum. Administration must be aware of and sympathetic to change. Students' interests and capabilities must be considered so an atmosphere of openness may be developed at the outset. Days of discussion must be monitored. All during this time, societal skills, leadership skills, self-evaluation skills, recognition of needs, sharing of ambitions and interests (sometimes even of personal problems) really need to be turned loose, with students still definitely in and aware of the framework of school discipline and school requirements, yet having the privilege to be adult and to exercise the management decision-making skills:

Certain requirements are emerging...such as the following; the teaching of self-management skills and the design of educational settings in which learning-to-learn skills are fostered (Glaser, 1972, p. 96).
In his book, Learning for Tomorrow, Toffler includes modules by Rojas and Eldredge in which students assume roles of adults and do their work (1972, Appendix, p. 378), much as students using DORM make adult decisions and judgments meanwhile assuming responsibilities for themselves as well as for others. Employment of such activities implies a change in method. The idea of allowing students to be adults is not a new one.

The essence of DORM centers, in part, in using enthusiasm, creativity and talent; giving that freedom—that room to grow. To begin such channeling the enthusiasm of the teacher is helpful. She must enjoy what she does and relish teaching all kinds of students, caring for each and desperately wanting him to succeed. She knows these young adults and their abilities; she cares and they know it. Likewise, she knows their own abilities and has confidence in her students; she respects them as real people and they, in turn, respect her. She leaves her troubles on the doorstep and, for the time being, belongs only to the students. This is her commitment.

She is as anxious as the students to break the routine—to do something different. When she enters the room to start the unit,
she does so with a relaxed attitude as far as routine is concerned. She may give a creative introduction or she may explain how the method works. Whichever she does she must be enthusiastic about the change. Her enthusiasm is the first step in motivation. She must make the students either want or feel the need of what is about to happen.

To see how freedom—a key word—and leadership evolve, let us examine specifics at the same time comparing further, from another view, DORM with routinely-used units. In the first place, the teacher using DORM has no specific, pre-conceived plan. She may have certain goals and some generalities, a frame-work in which they have to operate, particularly if the use of this method occurs near the close of school. Perhaps, she has a block of time—any parameters about which she must tell students when they plan.

Secondly, the brainstorming—sometimes used with a regular unit but with a different purpose—serves in the doing to free students' minds and, early on, to change the learning climate. Such a change will also give directions to the entire project, thus allowing leadership skills to develop.

In the third place, the freedom of student minds and conversation allows them to be young adults respected for their opinions
and equal in right with any other student or with the teacher to express an opinion or ask a question. Next, the discussion is such that everyone is thinking and does not have to have read an assignment or have memorized something to be a knowledgeable participant. Too, suddenly, there is no hurry, no home work, and no hyper for grades. The three hated h's that cause the pressures for students are no longer there.

Freedom to think, to explore one's own thoughts and share with others--not a "rap" session or a "gripe" session but a session engendering thoughts that transcend schools and the system that "trapped" the students! Here is freedom; someone is listening who believes that what the young adults say is important. The real world has entered the school world--in fact, for one hour a day, is replacing it. Now young adults can decide, on their own, main concerns and, contrary to provisions of the traditional method, can also decide how to find out (learn) more about them. Planning? Yes, and students are allowed to do it.

Another main difference between DORM and a traditional method approach is that with DORM the theme or content comes from the brainstorming of the students. The questions as well as the answers come, for the most part, from the students at this point. No fore-ordination exists here either of content (usually) or of skills.
The theme does not evolve until after students feel their freedom from pressures. The teacher recognizes the recurrent theme and, only if needed, queries to heighten the curiosity and the enthusiasm in what little brainstorming may still remain. Students ask questions, then, about the chosen theme and enthusiastically give structure and direction to the plan. A time block is arranged and the students plan within this. A teacher, as consultant, may at this point have said "We do have this to cover in curriculum; can you somehow relate this block of work to what you are doing?"

This insertion of control should, however, be avoided if at all possible. Students will decide what writing, reporting, researching they will do. These activities are decided as the project progresses and as need arises. Students have something they want to know that concerns their lives and they are willing to work to find out. They will also decide on evaluations.

Traditional units are teacher-planned, teacher-implemented and teacher-evaluated. The teacher tells the students how many stories will be read and configurations made; how many summaries written; how many panel discussions and how many oral reports given—and by whom; how many tests will be given and what the weights are for each.
The formula of DORM is simple. What do you want to know? How are you going to find it out? How do you know how well you have succeeded? Yet, DORM seems to be very flexible at almost any point except in the introduction—providing enthusiasm is not dampened, freedom is not hampered, or planning and control by the group are not impeded.

Another element of DORM that may differ from the traditional is the possible use of the element of surprise at the introduction. This is an adventure for both teacher and student and provides the impetus for democratic participation, structuring and planning. The whole project is the brain-child of the group.

Another factor probably contributing to the apparent success of this method needs mentioning. When a brain-child is created, the creator(s) feel(s) responsibility to have this child succeed. The "birthing" makes the "parents" proud. This commitment does much for the consistent use of the work ethic and the discipline of the individual and the group. Additional work will be done without assignment—to get the job done. Telephone conversations become lengthy with unusual topics. Students carry on discussions in other classes often involving other students and certainly other teachers. The whole project is addictive; the enthusiasm and interest become infectious; the whole project, a challenge.
Still another plus is the fact that even without special
teacher help and assignment everyone works on his own level with
his own learning style; now, assigned homework from the teacher
and teacher-made plans are passé. In traditional classes conscien-
tious teachers often write out work on three levels or do a spate
of programs such as PACE, with tests on different levels; yet
there are really as many levels as there are students in the class,
and at least three modalities of learning and their mixtures. In
DORM, as with any other method, the student involved may be any of
these and so wish to role-play, write or listen--or learn perhaps
entirely visually. With DORM he uses his own modality and so
individualizes his own learning. One outcome of this method is
that every student--even the slowest one--becomes a participant.

One other factor in the positive results could be operative
perhaps because of emphasis placed on cooperation sharing and other
democratic behaviors. Peer pressure, particularly in grades nine
and ten, is very strong. Even at the adult level many people do
not consider logic but get on the "band wagon"; each person wants
to do the "in thing." Juniors, however, tend to take more respons-
ability for their own activities (shown by IAR test results) and
are more likely to be motivated by something other than peer
pressure. Further study could help determine why DORM has such
results. Although this report is concerned only with what those results are, yet, some underlying causes would help to explain why the students react in such a positive way.

In the last place, the evaluation of a traditional unit usually involves written work turned in, and test(s) for a grade. DORM students provide almost daily evaluation requiring decision-making skills. At the close of the class project, students make their own evaluation sheets filling them out and stating the proposed grade with a rationale and/or a summary of work done as to why that student should receive that particular grade. This researcher has always found that students grade themselves more severely than the teacher does. Sometimes, if some work has needed mastery, students may ask the teacher to prepare a test covering that part of the project and then to include the result in the final grade.

Students take responsibility for each other. They help in research; they proof-read for each other; and they help discipline each other. This is a class of students being treated as adults, grown-ups. In these studies, students out of line were disciplined one way or another without the help of the teacher. Likewise, students watch attendance and see that those absences that do occur are legitimate. Attendance in these projects has never been a problem.
Neither have grades posed a problem. Grades in the subject itself have improved. Grades in other academic areas have shown improvement. One could argue and say that without a control group equal in all ways to the study or experimental group, one could not make a statement such as this relevant to grades. Yet, when grades have improved in like manner in every project for every teacher who has used this method, a researcher must concede there probably is a common condition (factor) responsible for the improvement in grades. Those who have used and/or observed the method have unanimously designated this common cause as "attitude", and the situation—a change in classroom climate with the teacher as the change agent.

Actually one section involving anecdotes—allowed in a summary—should be included. To really appreciate the strength of the class work one must understand even a little more of the background. After the word "change" surfaced, eventually the discussion led to cultures and the query as to how a culture begins. The purpose, the students said, of the topic was to establish definite cultures, each alien to the other and then, living in those cultures, try to find ways to communicate—by body language, sign language, or better still, by cracking the language code of another. This way they could learn what the word culture means, something of how cultures are built, how
and why certain problems arise (Chapter III). The visitors or "spies" were alternated and went from group to group to observe and find out what they could. This became very serious business. One visitor stole the code of another group and at first her own group lauded her, then took another view, passed some laws and made them retroactive. Then the question arose in that culture, "Can a law regarding a crime be made retroactive?" Time again caught the group short for research so the student was not severely punished. The group also feared retaliation. In preparing their basic culture they had omitted setting up defense, a priority in any culture. Security and loyalty were values now encouraged. One student offered a student in another group ten dollars--real money--for her language code. In another group, an assistant leader had "leaked" some information and was not allowed to participate for a day. She was ostracized and had to sit by herself and speak to no one.

Needs necessitated additional class work of a kind for which the cultures had no ready plans. Values--a term never considered or discussed--now surfaced and demanded specific attention. Originally, loyalty and worship had been delineated but no one seemed to have anticipated the fact that someone, sometime, might fail in some measure. New societies had new problems and reactions were swift.
To note the increase in interest in this study as compared with any change in interest in a rote-learning unit allows the observer to see something close to spectacular. Four days take the DORM group to total involvement. Students who rarely speak in class become quite vocal and curiosity helps to encourage motivation. No, the teacher does not know all the answers but everyone brings all of his experiential background and uses his research skills to find out more. Students do read; they do dream; they do listen to anything related to their own lives, the world in which they live and their own futures.

By Thursday these students were "hooked." On Monday of the second week, one sophomore girl became ill of "flu". The telephone calls from her friends brought her back on Wednesday even though she could hardly talk aloud. They explained to her they were building the language of their culture and she would not be able to converse with her group since no one had time to teach her. Besides, they needed her; other concerns such as certain laws and religion had not yet been established.

On the second Wednesday of the project, David F., a leader of one group, "lost" his plastic lens behind his eyeball. He was absent most of one period for a visit with the opthamologist and
upbraided by his peers accordingly. On the third day of organization Bryan (a junior) did not attend class. Group 2, in choosing leaders, had wanted Debbie to lead their culture. While Bryan did not want the "job", he definitely was not "going to be ruled by any woman, even in a class culture." Amy, his girl friend in the same group, took a dim view of his opinion, and said so before the group and called him "immature". That evening Amy called his home and told him the relationship of a year was over. The next morning his mother stopped at the front desk to say Bryan had an upset stomach and would not be in that day. She said Amy had made a call to him but the mother had not known what had precipitated the ensuing conversation. The teacher gave her the rest of the story and she remarked, "Oh, yes; they (the students) are taking this all very seriously." The next day Bryan was back but Debbie remained the leader. This was also interesting because Debbie had never been a leader; she had been a cheerleader but certainly not even the head cheerleader. The cultures seemed real to these students. They learned much about themselves and about each other.

Their abilities to organize, to make rules for themselves, to be loyal to those rules— all of these could be observed in the day-to-day activities. This class period was a "life" separate
and apart, one which they made and amended as need came along.
Bryan's relationship with Amy, however, was over.

The opportunity for leadership to develop was in every group and the groups were small enough for the participatory-democratic method to work. The groups that tended to share leadership had students of B and C grade levels. One wonders if those levels would be more social-minded, willing to share, more democratic. No so-called "gifted" was in those groups. Where there were "gifted" students (not so-called because of achievement), these students led. Some in attitude ratings had been in the lower sections; certainly none was in the upper two percent of the class, academically.

Leadership later exhibited itself in other ways. Let us bear in mind a theory had surfaced in the class regarding action and reaction and had been accepted by the group as a law. Relevant to that came another theory that everyone could control his own reaction—and was responsible for himself, thus making discipline personal.

When the cultures were set up at the first of Week 2, the plans had been made for "spies" to visit four days during Week 3. In fact, the last "visitors" day, new leaders from other groups, really steered two cultures away from their planned deportment. Group 4, the group that had a strong single leader although
with a very weak assistant, was the only group that remained stable. This leader (David), at the beginning of the unit, could have cared less about school and language arts. To quote the building principal, "He is from the bottom of the heap; nobody ever got that much action out of him." This student leader had for his members many such as those in the "shared-leader" group--good followers. Investigation showed that ambition and leadership were both present in David and had been latent except for an occasional "spurt", usually on the soccer field. Yet, David was one who did research on his own and brought research materials to his group. In fact, one of his group members--a girl--asked the teacher for her copy of Idylls of the King (a ponderous volume of poetry) and read it during the summer. He it was who really "led" his culture and so they were not upset, frightened or even ill-at-ease.

One other observation seems worthy of note although not really pertinent to the original problem. When the students put their booklet (The Mustard Seed) together--follow-up activity of their own--they screened according to certain standards. One of these was not as to whether the mood was happy, serious or sad. While the material is definitely creative, the reader feels the restriction and the pessimism remaining in their attitudes. This project
lasted a year and material was pulled from the entire school. One outside adult reader remarked, "Are there no happy students over at that high school?" Then, what effect does authoritarian teaching have on this? Does it contribute? Then one step more: to what degree do teachers contribute to the rebellion of teenagers? Thus, DORM generated other questions, related but not immediately pertinent.

COMPARISON OF THE THREE STUDIES

In retrospect concerning all three studies, certain results should be compared. The first two studies were introduced enthusiastically--almost blindly from students' standpoint. The third group was told how the method worked. While measured only by observation, enthusiasm was higher sooner and students were more exhilarated in the first two studies than in the third. Day 4 seemed to be optimum for total involvement and completion of initial planning in all three groups.

The relative times--five weeks, three weeks and two weeks--were all brief enough to avoid historical change and yet to leave students wanting more. That, after studies had been concluded, several students continued working on their own toward new end products, work totally uninitiated or supervised by the teacher, was
a result consistent in all three studies. Each study produced its own follow-up.

The three time-lengths—five weeks, three weeks and two weeks—had some bearing on results. The last two studies gave little time for research. Many students felt this a handicap and appeared frustrated by it—especially those in the two-week study. The five-week period seemed a bit long although several of those students came back and worked many days in the summer—worked because they wanted to complete an idea of their own.

The overall aims of the three groups were interesting. The first group wanted to help society—education in particular. The second group wanted to find out the basics of society, of culture. The third wanted to make something society could use but, basically, to make money for themselves.

In all three studies, positive attitudes in class became unanimous. Too, when this condition was reached in language arts, a tolerance developed for those classes using rote learning. Some students at first in all three studies harassed other teachers, asking them to use this method. Then students acquiesced and seemed content if they had the hour of respite in language arts.

Results observable, but again documented only in teacher's journal, included:
1. a change of attitude toward the whole educational process;
2. increased discussion of plans for higher education;
3. increase in reading of newspapers and listening to news programs together with a sharing of ideas about current events;
4. increase in attention to personal appearance reflecting a better attitude about the person's self;
5. a concern for welfare of others; and,
6. a decrease in hurtful gossip.

The effects of giving students adult responsibility and the relation of this to degree of maturation seem interesting according to observations from all three studies—yet unproven empirically.

LIMITATIONS

Limitations may be divided into two groups: those that could affect a study such as this; those that could influence the implementation of DORM. In conducting such a study one of the problems is the fact that the observer plans, implements and evaluates the entire operation. This series of activities is peculiar to the American educational system; in fact, the teaching profession is perhaps the only system in the United States in which the person who plans and implements also evaluates. In such an arrangement is the inherent danger of bias. The method is the brainchild of the researcher who consequently is anxious to see the method
succeed. On the other hand, the students plan and implement the specifics so the Hawthorne effect and the halo effect can possibly play a part in the ultimate success. This is not all bad because according to the studies in this report the success for whatever reasons brings certain desirable results. Actually, this researcher began looking specifically for any indication of negative results with Study 2 and Study 3, sometimes to the omission of success-related data, and then would have to retrace records, rereading and reworking them again to be sure to get the total picture.

Another danger inherent in all three studies was the fact that the system works so well that the teacher can experience quite an ego-trip. Observers - and even people outside who have merely heard about the method are very complimentary. Other teachers in the system are at first a bit snobbish. Then curiosity conquers and they ask questions, observe, talk with the students when they are in other classes later with the teachers, and eventually also become quite complimentary.

Furthermore, a teacher who wishes can become very lackadaisical. The students, once started, generate their own enthusiasm. Although the class will continue, there is, however, always danger that enthusiasm could wane and need a boost; too, the students need an
exchange of ideas and occasionally some provocative suggestions — some new ideas and source materials. Moreover, the research design requires an enormous amount of listening, interviewing, notetaking, categorizing, coding, evaluating and drawing of conclusions. Besides, at the same time, a teacher needs to research source materials relevant to the subject matter that the students are using. After all, the teacher is a consultant. If a researcher is not careful, record-keeping will suffer and the resultant data be incomplete and, therefore, inaccurate.

Too, a researcher must constantly be alert to noting all observations — as much as is humanly possible. Something may not seem pertinent at the moment of occurrence but will later fit neatly into a pattern giving support to or confirmation of some other conclusion. Much triangulation can be missed by omission of material and/or by incomplete data.

A researcher can fail to talk with, listen to and/or observe those students likely to have problems, and/or be negative. To see that all students are involved at the outset helps prevent such problems. Maximum participation is so very important especially initially. This involvement builds a permanent interest in the different steps and provides ongoing motivation. Now the student does because he wants to do.
Since the design supports the researcher as the instrument, large quantities and several kinds of results must be collected to make results believable. In this study, to establish credibility has been doubly difficult because the method gives positive results - from so many sources and from other observers as well.

To establish this credibility further, the results had to have not only quantity but also variety as well. To depend entirely on interviews, evaluation and/or observation is to receive and project an incomplete picture of the whole. To collect substantive material - staying away from editorializing and being judgmental - is at first also very difficult. To collect with verstehen - understanding - and still not editorialize is doubly difficult. The many results from many different sources in this study supported each other. Delimitation led to conclusions that were constantly verified.

Also, to do more than one study is very helpful, particularly if the additional study is done in a different setting. To have other teachers try the method used in the study and be very
successful is also very supportive and tends to decrease suspicion of bias in the study.

At the outset of the study the researcher needs to be on a collaborative footing with parents, teachers, administrators, students - any who would be key informants. There must be mutual trust among these people. Nevertheless students change the observer and the observer changes students. If there are changes in others these, too, must be regarded. The greatest change(s) come(s) in students. This (these) change(s) must also be observed and recorded.

To have a valid final report the researcher must include:

1. a certain number of factual statements
2. direct quotes
   a. interviews
   b. notes
   c. journals
3. data reports (figures, tables, charts)
4. interpretation of
   a. general description
   b. specific description
5. theory
6. a certain amount of relevant literature in the field.
This plan, followed in this study, is in keeping with Frederick Erickson's plan for qualitative methods of research (Handbook III, p. 145).

Delimitation, if not followed consistently, allows material and data to accumulate without being used. Constant comparison, combination of "families", coding and categorizing consolidates data, thereby helping conclusions to surface. In this way hypotheses may evolve. Otherwise, the study remains a series of mere observations.

Although some factors could have limited this study many others could have limited the method itself. The problem investigated helped determine inquiry limits. Time, the experimental groups, the school, the instructor, and a particular gifted method—factors directly involved—each subtended relevant factors.

The sampling included a class chosen at random, heterogeneous; with the usual assortment of problems, grades and backgrounds. Many of the students seemed to feel as did Gilgamesh: "we are born into a disordered world, into a family we did not choose ... we are even called by a name we did not select" (Kopp, 1981).

The instructor had already taught these students traditionally for eighteen weeks. A routine in the classroom has already been established. Some teachers believe students need the feeling of
security supposedly given by the same procedure everyday. The teacher's philosophy regarding routine can be a decided limitation.

The attitude of administration can be quite passive, negative, and/or forbidding. In the instance of this study—in fact for all three--administrations were very supportive. In the pilot, the superintendent of schools, Mr. Dickson, was quite supportive; in fact, he came over one day and spoke to the students, even staying to field their questions. Dr. Helvoight, of Otterbein College, came one day (mentioned previously); later, Dr. Addington, head of Otterbein's Education Department, came. Other educators came: a personnel director; a teacher of gifted. During Study 2, Dr. Barbe came and spoke to the teachers about learning and modalities. Students received this information. Yet, no money and no new materials were asked. Field trips and additional materials certainly would have helped. Yet, each time the method operated solely on its own merit without any elaborate aids.

The block of time should have no interruptions with vacations or bad weather periods. The enthusiasm builds, but the students need the continuity, not a cooling-off period. Part of the excitement comes from the freedom to share and to say what they think
about a particular situation without fear of reprisal. The continuity helps create the excitement. This study was fortunate inasmuch as it had no interruptions.

The teacher must be open to comparison and so must be willing to have the students take tests. Students here take the Otis-Lennon tests. Last year's sophomores--this year's juniors--made so much more progress than they had ever made before in one year. Administration had not expected that (conference with principal).

The climate of the classroom undergoes a remarkable change. Everyone seems adult; the usual bit of the teacher being the authority figure does not exist. Instead, the teacher is faced with a different problem. No longer is he a fund of information, per se; now, he is expected to know where to find all sorts of information. This requires the teacher to read avidly all kinds of material. Such a situation also allows the teacher to grow mentally and become a more interesting person. The teacher will read little that, if he is creative, he can not use on almost every project. Everything is relevant and interrelated to the creative person. The degree to which a teacher is creative, is willing to grow, continues to do the home work can also limit and/or destroy the entire project.

3Discussed in Chapter IV.
Another limiting factor concerns the sizes and numbers of the classes. The teacher should have few enough students and few enough classes to allow for extra reading time and consultation. Once students become accustomed to the method, the initial enthusiasm carries over and the project evolves its own enthusiasm. The teacher can not be "down" for students will reflect this attitude. This reaction occurs, however, in any class at any time. The teacher can read in the class with the students, sit in a circle and discuss with a partial group, do anything that shows that her enthusiasm and her learning posture are on a par with theirs.

Another limitation is that other teachers often become unpopular and are harassed because of their use of rote methodology. Later in each study this stopped and students became tolerant. The DORM teacher becomes very popular--without any effort on her part—and the curiosity spills over into other classrooms (observed in all three studies).

Other teachers are quick to ask what students do for home work since there are no assignments. Yet, a look at the amounts of time spent by these students show that they did more than the usual amount of home work. Still other teachers ask about grades. Standardized tests, achievement tests--all will include and test
the scope over which the student learns; in addition, he will learn many real life situations and skills during the use of the method. If he is exposed to the content required by the curriculum in a learning climate such as DORM produces, he seems to learn content as well as skills. The poetry booklet, entirely unsolicited on the part of the teacher, was definitely instrumental in teaching prosody although no formal classes were held for that class on poetry.

Did an hypothesis really emerge? The coding and the categorizing caused the researcher to look toward conclusions other than feasibility. Some fifty categories--at some points, cumbersome--were in use. Then they "fell" into "families" and so were put into little groups. Then relationships by delimitation narrowed to six categories. The many, many categories were necessary at first for they kept the researcher from bias, from jumping to conclusions. The use of a large number of categories originally helps to keep the study objective and in focus, eventually pointing towards hypothesis.

Results are certainly not obvious until categorization and delimitation have been going on for some time. For example, originally, one student interviewed--after the second day--said he felt a lack of security--that he liked to have certain pages
and then have tests on those certain pages. This interview had to be categorized as negative, under security, rote learning, structure, testing and other headings. Two days later, an interview showed that he was happy with the change and the coding took place all over again. He had pointed out, however, something that could have been a problem, yet has not been in the three studies done by this researcher nor has the problem ever arisen in any of the triangulations. After the fourth day, no one except the two older teachers in each case expressed any doubts, and then only in relation to their own use of the method. Everyone who observed, including these two, expressed surprise at the interest, involvement, acceptance of responsibility and of discipline.

IMPLICATIONS

The greatest implication, perhaps, is the need for further research. With the existing conditions in education—drop-out, burn-out, crowded conditions, violence, test ratings, negative criticisms—certainly the data warrants further study. The nature of the problem—classroom climate/student attitude; the three studies made; the results as well from continued use of the method by other teachers—all lead this researcher to want to see further study done.
One such study could increase the numbers and kinds of attitudinal data. Other attitude tests could be used with larger numbers of classes. Even if Holsti's method is retained, longer questionnaires could be created and field-tested before use.

Another interesting study would be to take a group screened as gifted and try the method with them; then take a group of so-called non-gifted and teach them by DORM. Then put the groups together and teach them all by DORM. Would the method work better with a heterogeneous group since these studies showed the leaders were the so-called gifted?

Since students exposed to DORM seem to see and continue to see classes—even ones they had disliked—differently, should students be taught by DORM only on occasion—maybe by a master teacher who travels in that particular school system and does only that kind of teaching?

Too, this study seemed to indicate improved attitude brought improved learning in all classes. Much learned can not be easily measured but standardized tests in given subjects would show factual content learned. Since those in all three studies had improved grades and those in Study 2 showed improvement in overall achievement tests, further study in this area should be interesting.
Another study might attempt to determine the parameters of the flexibility of this plan (DORM). One teacher changed his philosophy and used parts of the plan successfully. What would happen if certain activities (student-planned) were graded—such activities as the teacher elected to grade—without student suggestion? A class discussion of this by the pilot group, unsolicited, concluded grading by teacher (unasked) would ruin the project.

A viable study would involve giving to teachers a questionnaire regarding teaching philosophy—testing those who had been teaching ten years or more. Perhaps, one could predict how much support DORM would have initially in a system—even the individual teachers who would be receptive to the change.

Perhaps a study using two teachers and two study groups could produce some interesting data. If one teacher were a teacher who commonly had discipline problems could she use DORM effectively? How would the results (discipline) compare with those from a group whose teacher rarely had discipline problems in class?

Then follow-up longitudinal studies of five to ten years could explain how the changes in attitudes were transferred or even were retained. Short-term changes were evident in all three studies. Study 1 showed in follow-up many came back in summer of their own volition to do more. Study 2 of their own
volition did the literary booklet - The Mustard Seed—working in their extra time all the next school term. One member of Study 3 is making Candi Bears and selling them. Other members are still working on their projects. Interviews showed in Study 1 that grades still held. Study 2 showed improved grades that year and the following year. Study 3 showed an overall improvement in grades except in the Spanish course.

TEACHER TRAINING

In the beginning of this report, the focus seemed to be on the teacher, on the method the teacher uses in the classroom. One other implication in this report is that the teacher using DORM must know how to use the method. Knowledge is important but knowledge without wisdom is useless (Bible). After this study and research the report ends on the same theme indicated at the beginning--not what the teacher does in the classroom but how he does it seems to make the difference. Therefore, training is necessary.

At the outset, the prospective teacher of DORM must accept certain assumptions. These concern talents, creativity, and children as human beings. We are told that one man was given one talent, another five talents and still another ten talents. DORM is based on the theory that each person has at least one talent.
In the parable, each recipient was to use what was given him. Thus, an educational system should be organized so that whatever talent a student may have, he should have the opportunity to develop it by whatever learning modality he may have--without being segregated from society and thereby sacrificing his chance to learn realistic societal skills. This process requires someone knowledgeable in modalities and learning theory—as well as in related information.

Certain basic conditions influence anyone using DORM. Every teacher, however trained, tends to teach as did some previous teacher who made an impression on that particular person as a student. Secondly, each teacher has a philosophy of education "of sorts." That philosophy may be a partial one, an illogical one, a biased one or a copy of someone else's; but some kind exists in the mind even of a "would-be" teacher. Too, that teacher has an educational background of at least sixteen years of something called education.

To ascertain the parameters of these, a questionnaire as a beginning can be very informative. Questions pertinent to qualities necessary, questions relevant to goals and ambitions, questions relating to the candidate's educational philosophy—all of these need answers.
The questionnaire finished and assessed, an interview is in order. Further questions about background, training and philosophy can be asked. Points on the questionnaire can be clarified. Of particular importance is the person's acceptance of the idea of the talent and the child's right to develop that talent in his own modality. This means that the teacher knows how to assess, to diagnose the child and his abilities and to give a prognosis; to know what he needs, what to give him and what the expected result would be.

The training of a teacher-to-be involves four steps. The first is training in theory. DORM is related to some eleven theories (see Chapter II). Learning theory, attitudinal theory, research theory—all of these are relevant to what is done, why it is done and what the results should indicate.

Next, is the explanation of the method itself. The many ways DORM can be initiated—ways without number; the role of the teacher; the skills involved; the modalities needed; the degrees of creativity; the roles of the student—all of these must be explored. Role playing in the training class, going step by step through possible procedures—more than one should be used—and realizing the versatility of the method should help the "teacher"
become familiar and finally comfortable with the method. Then, students—"teachers"—should set up hypothetical situations and role play the products of their own creativity. Particular instruction should be given regarding initiation of the unit and sensitivity to student reactions—the art of questioning and using provocation. Helping students set goals, the work of a consultant, skills that students must learn—the "teacher" needs to know these also.

Most important is for the teacher to observe, live if possible or on video-tape, a teacher actually making the preparation and planning the "staging" of for the first day of the project. Sometimes prior to this observation the "teacher" should have studied or had a course in body language. Someone should have taught him how to query creatively using the inquiry method. "Listening" to students' body language and reading that language helps the "teacher" to do on-the-spot evaluations and find direction in the results. He, too, must be able to make decisions and act on them quickly. That first day—and sometimes the second and the third days—when brainstorming and the initial shaping of the project take place he needs to bring into focus almost all the skills he has—not just those related to content.
The "teacher" needs to share the anticipation, the excitement and enthusiasm from the very outset. No observer has been able to sit through one of these so-called "initiations" and been able to stay out of whatever was going on in class. In fact, most observers participate in some degree with someone or with some group whether the activity be planning, discussion, research--any stage of procedures.

Teachers should also be taught evaluation. Not only must they know where they are going and how to get there; they must also know when they have arrived and in what condition they are when they get there. Students need these skills also on a different level--particularly decision-making skills. Furthermore, in the evaluation of the project, everyone should know why the process worked, or why it failed and what accomplishments there were. In other words, there should be a diagnostic evaluation.

Finally, the "teacher" should have an opportunity to try the method under the supervision of a teacher who uses the method. The "teacher" should plan with the cooperating teacher and then effect those plans feeling free to alter his course as the situation dictates. If the "teacher" feels he can not create enough enthusiasm and curiosity to motivate students and thus care for
the discipline, he needs to rethink the procedure by which he arrived at that juncture. If he is not ready to let the students lead the way with some stimulation from the "teacher" himself, then he is not ready. If he has to have that feeling of power, that he controls all, he may never use the method because of his lack of confidence.

When starting a procedure such as DORM, any teacher must have an adventuresome spirit. The world of learning is an exciting place, a "yeasty place". The challenge to see how much we can learn each day is there—either in depth and/or in scope. The secondary teacher needs both. Even students who are "straight-jacketed" will learn something in any class if nothing else but how much they hate school. No teacher can control a student's thoughts. The teacher, as was pointed out earlier, can go as far in any learning process as motivation. Then the student takes over and controls the perception and all the other parts of the learning activities. The teacher can either make a student feel a need or inspire a student to want what the class has to offer. DORM attempts to make the student want to learn—to learn something worthwhile and useful.
SUMMARY

That in the finality, feasibility seems to hinge on the category of attitude— even on the attitude of the teacher—is almost ironic. When student attitude is changed, in these three instances, the other factors—attendance and motivation in particular—seem to result in better grades. Not until the final categorizing of all material and final delimitation, however, did the single category evolve. Suddenly, everything fell into place leaving one category—one answer was there. Such a conclusion is sensible, logical and grounded in data. Attitude seems to affect everything.

If a hypothesis were to be stated based on this collection and study of data, that hypothesis might read something like this:

Because attitude seems to control classroom climate and DORM, in turn, seems to effect that attitude positively so that students learn, then the use of the gifted method, DORM with a heterogeneous high school class in language arts in a suburban community seems feasible.
To determine the degree of feasibility for the use of DORM requires further study. At this point that degree would appear to be equivalent to the degree to which DORM is properly administered. Again, the teacher would seem to be the key to the success of the project.

The matrix of DORM summarizes further but requires some explanation: the first, of its components; and, the second, of its grounding. The three major components of the diagram are the teacher and what he has to offer; the content--facets of the curriculum with much vicarious material; and the student with the skills he must develop to find out what he wants to know. The skills he develops and the content he acquires are what he needs to cope with the "real world". DORM is grounded in data but relevant to theories and models. (see Chapters II, IV and Appendix B). An explanation follows.
FIGURE 12. THE CREATION OF A LEARNING CLIMATE: THE 12X12 MATRIX OF DORM; ITS COMPONENTS AND GROUNDING
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<td>Written</td>
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<tr>
<td>Oral</td>
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<tr>
<td>Visuals</td>
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</tbody>
</table>

**FIGURE 12A. CURRICULUM OR SOURCES OF CONTENT**

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<tr>
<th>Leadership</th>
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<tr>
<td>Research</td>
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<td>Writing (skills)</td>
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<tr>
<td>Reading (skills)</td>
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<td>Listening</td>
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<tr>
<td>Creative</td>
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<td>Thinking</td>
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<td>Memory</td>
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<td>Evaluation</td>
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<td>Societal</td>
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<td>Study</td>
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<td>Learning</td>
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**FIGURE 12B. STUDENT SKILLS**
<table>
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<th>Enthusiasm</th>
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<td>Flexibility</td>
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<td>Leadership</td>
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<td>Knowledge</td>
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<td>Love of Life</td>
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<td>Values</td>
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<tr>
<td>Dedication</td>
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**FIGURE 12C. ATTRIBUTES OF TEACHER**
The focus of this teaching model is on the heterogeneous group of students in a secondary language arts course. Students seem to learn when a learning climate is consistently conducive; the teacher is the change agent, the catalyst; the long-term planning, with the students will provide day-by-day teaching-learning situations with emphasis on the latter. The model itself is related to many of the models most often recognized and, in actual practice, blends them.

Thus, this model has a bit of several groups. The social interaction models are evident in the use of societal skills: information-processing models are used when students do problem-solving and research. The personal model, that of a self-concept, is acknowledged in use of leadership skills and evaluation skills. Sequencing of learning tasks and processing skills used in research with study skills brings about changes in behavior.

The learning climate here is not divided into cognitive and affective domains. These overlap using Williams' thinking and feeling; Taylor's multiple talent ideas; Renzulli's process skills; and, Parnes' creative problem-solving. The learning climate then is the entire matrix supported by many of the models and the theories.
Indicative of the increasing awareness of the need for change in methodology is an article published in the March issue of the Phi Delta Kappan (1986). Sandra Long summarizes in dialogue an interview with Harold Shane, a man long famous for his work concerning educational futurism. He made in this order the following statements:

a. "Schools must help all learners develop
   1. positive attitudes;
   2. skills in remedying possible problems;
   3. sound values;
   4. talent in human relations (societal skills)
      which should supplement ... goals related to language numbers and sciences."

b. "A need to reconceptualize curriculum, the classroom climate and the content of curriculum exists."

c. "Students need to get personal skills."

d. "All students should be taught to analyze carefully the skills that will transfer from one career to another."

e. "Students should learn how membership in a certain culture governs values."

f. "The importance of communication skills is increasing."

DORM addresses

a. attitude;

b. societal skills;

c. change in classroom climate;
d. skills that can help students transfer from one career to another;
e. cultures and their effects on their members; and,
f. communication skills.

These add to the feasibility of using this original gifted method for all students. According to Shane, these are the immediate needs; yet he stops short of suggesting a real method or a real classroom climate. According to the findings in this study DORM seems to provide both.
BIBLIOGRAPHY


Dawe, Harry A. Teaching a performing art. Phi Delta Kappan, April, 1984.


Deveney, Claire. A school that reaches under-achievers in Education Digest condensed from Massachusetts Teacher LVII May/June, 1979.


Dunn, R., and Dunn, K. Educator’s self-teaching guide to indivi-
dualizing instructional programs. West Nyack, New York: 

Eby, Frederick. The development of modern education, in theory 
organization and practice, 2d ed. Englewood Cliffs: 
Prentice-Hall, 1952.

Erickson, Frederick. Qualitative methods in research on teaching. 
Handbook of research on teacher education, 3rd ed. Merlin C. 

Farralone’s scrapbook. Star Route, Point Reyes Station, California: 

Feldhausen, J.F. and Wyman, A.R. Design and importance of Purdue’s 
special program for the gifted children. Gifted Child Quarterly, 

Fenstermacker, Gary. Defense of method. In Handbook of Teacher 
Education, 3rd ed. Merlin C. Wittrock, ed. New York: 

Fitz-Gibbon, Carol Taylor and Norris, Lynn Lyons. How to present 
1978.

Fox, David. The research process in education. New York: Holt, 

Fox, Lynn H. Instruction for the gifted: Some promising practices. 
Journal for the Education of the Gifted, 1969, Vol. 4, No. 3, 
pp. 246-81.


Friedenberg, Edgar Zodiac. Coming of age in America. New York: 

Friedman, Paul G. Teaching the gifted and talented oral communica-
tion and leadership. ERIC-RIE. ED 197523-80.


Gay, L.R. *Educational research: Competencies for analysis and application*. Columbus, Ohio: Charles E. Merrill, 1976.


Holmes, Judy Harmon. We can teach students to be responsible. Phi Delta Kappan, Sept. 1984, Vol. 66, No. 1, pp. 50, 51.


Meyer, Martin. *The schools: The process of teaching*.


Moos, K.H. and Moos, B.S. *Classroom social climate and student absences and grades.* *Journal of Educational Psychology,* 1978, 70, 263-269.


Noyce, Ruth M. *Enrichment for everyone: Teaching reading with the Triad model.*


Raywid, Mary Anne et al. Schools of excellence for all the people. Education Digest, 50, 2:4, May 1985.


Scriven, Michael. The methodology of evaluation. Lafayette, Ind.: Purdue University, 1966.


Shelby, Madge E. Who should teach the gifted? RIE. December, 1978. ED 157336.


Teaching modes in education of the gifted. USA Today, p. 243.


Torrance, Paul E. *Educating the gifted in the 1980's: Removing limits on learning*. ERIC-CIJE; Journal for the Education of Teachers, Vol. 4, No. 1, pp. 43-49 FA.


Torrance, Paul E. *Predicting the creativity of elementary school children and the teacher who made the difference*. Quarterly, Vol. 25, No. 2, Spring 1981.


APPENDIX A - PILOT

Case history
Background from journals
Interview from teacher
Notes from visiting professor
Follow-up interview with gifted teacher
Evaluation check for interview
Follow-up results from pilot (see narrative following appendices)
Excerpts from booklet
CASE HISTORY

This young man, a son of an Episcopal priest, father and a secretary mother, came to ninth grade with a defeatist attitude. "My mother, she says you are to call her. She knows I'm going to fail but she wants to talk to you anyhow."

Further conversation with him disclosed he had merely been passed on from junior high and that he, too, knew he would fail. Call his mother? Hardly. Here on the front row every morning at nine o'clock sat a well-kept, well-managed, "meek" boy, slight in build, gentle in spirit but definitely depressed.

Examination of the school records showed an I.Q. of 95, and failures intermittently through the first eight grades. Letters had been sent home, conferences held, but no element of surprise about failures was evident in any recorded communication from parents - only acquiescence.

The first semester for Robert was all downhill. The method used in Language Arts, as in the other classes, was the rote method with a bit of inquiry added on occasion.

At first, the second semester Robert was standoffish but politely so. Then, as other students became involved, he was swept into the mainstream almost unavoidably. He became even
more excited when he was told he could work with the group or on
his own as long as he would report to the group; when the group
leader asked him, he would even enter into discussions with them.

Robert was failing science miserably yet loved it dearly
especially light and electricity (his paternal grandfather is an
electrical engineer, a man Robert worships). He asked if he
could work on light and was just being told "No" by the class
supervisor when the teacher intervened. With a science major the
teacher could help and still teach the language arts skills using
the science as a vehicle. Robert was ecstatic. The next few days
he was reading science reference material, writing at a great rate
and drawing diagrams. He was setting up all of this in a note­
book to take to his grandfather in Texas.

To shorten a happy account, Robert not only passed English;
he came up the scale to a B at the end of the year, began to
date the top student in the class and to plan to go to college.
Incidentally, the grandfather took over on his project and they
plan to follow through on it. Mother was so surprised! Too,
he did pass science but not on the strength of his project for the
teacher (science) gave neither help nor encouragement. One
problem he had failed to summarize the periodic table. His grades
in his other subjects came up also but most of all his opinion
of himself and his attitude changed. He had to work hard but he would make it. This was in 1982.

I left the system the year before he graduated but I followed his progress. He was keeping his grades in the C and B range with an occasional A. He called the night before he took his SAT test and talked a long time about his progress and his ambitions. Then he called a month later and asked me to meet him at a local restaurant. There he told me that

1. they were leaving for Seattle, Wash.;
2. he had an A for the second semester in senior English;
3. he was everlastingly grateful;
4. I could visit there and stay as long as I wished, and that
5. he was going into the ministry.

A book could be written about the struggles of one Robert—in varying degrees of lethargy. One—Edsel—was not so troubled as Robert, but found earning grades very difficult. He has become outstanding in drama and in German and his is another success story.

Robert has (1986) now completed one year of college at Seattle and has gone to live with his grandfather in Texas where he is attending a Texas University. Interestingly enough, many of that pilot group still keep in touch with each other.
Robert

My grades in this class 6-7-3 have increased greatly. I have Curry enjoyed this class, and it has been fun. My other class have done good to I have gotten a better grade in over all revery except science but school was better and more livable. I think I have gotten an A this 7 weeks I hope I have.

I see Mr. Curry

This semester has helped me realize it's not if the grade is an A or F of somethin' between it how much work and that you put into it and you have helped me do so. I will work hard for the hope of a better nation and a better world someday. PS. Thank you.

Mr. Curry 6-1-82
Evaluation

Skills
research 6
listening 9
note taking 7
thinking 8
speaking 6
social 5
reading (vocabulary) 7
organization 9
responsibility 10
perception 7
spelling 6
comparison 7
critical analysis 7
evaluation 8
learning (practical application) 8
writing 7
decision making 8

Robert
P.O. 2: Query
234

March 26, 1972
I have nothing good to say about my life. My parents don't get along because most of the time, my dad is drunk.

One of my three brothers is blind, one is deaf. I am the oldest of 7 kids while Mom is trying to sober Dad up, I take care of the kids.

I've never had a date like most of my friends who are seventeen but I don't mind. From what I've heard, most of the Watervilles guys are just like my dad. I'm just not interested in them.

Dad yells at me when one of us kids get bad grades. He finished the eighth grade to be 'just a genius'.

I've worked since I was 11 and right now I'm the only one in the family making money. Mom needs to feed a few dollars here and there but I'd rather not say how.

When I'm 18, I'm getting out of there, if she graduated by then. I'll never go back there again, and I think I'll marry a millionaire!
Mark
12/15 10
Jan. 3, 1992

I hate coming back to this dumb school. I've been having fun on vacation and I would have liked it to be longer. I went hiking in the woods and this is why and I think I should get more time to do it more often! I hate coming here because I get so bored and I don't like it here at all. The food here isn't that good. Sometimes I walk to the Penthouse. Sleeping on the balcony was what I do, even if I wanted it to more. I want to regulate! Sometimes these classes are so boring I feel like leaving them. The study halls are a super bore. There's nothing to do in them. I hate coming back to this crummy old prison of a school.
I think school is really miser-

able and that I'll never go to it. If it were, he is there.

like cars - like - if he doesn't

like - SuSen. When he is there, he is there.

Something he likes better. If he does,

like school - he stands fine.

This country is so much better.

I'm more used to it. Next year, I'll be ready to come back, and

Summer.
6:50 AM
Today I am not feeling well, my stomach feels like the inside of a cannon factory.

9:30 AM
I wanted to go to school today to see what was happening in English.

Kevin just called so I better hand this little journal!

Big Love

Glenn Rock

End of letter
Do you rate school?
What do you like about school?
1. My friends and lunch (going out to eat)
2. Friends
3. Gary, my friend, lunch
4. Friends
5. Friends
6. Friends
7. Friends
8. Get it with it!
9. Jerry, my friends, the end of the day
We had fun in English. We are going to try to find a perfect teacher, it ought to be fun. We got to evaluate some teachers? & I can't wait. I want to evaluate Mr. Anderson! Too bad it can't be someone we already have! I really put my mind to it and, if I had to have a teacher for the whole day, it would be Mrs. Curry. Sometimes she can be a real grouch, but surprisingly enough, I'm starting to look forward to English!!!

Lisa

Kevin
Interview with teacher observer (two weeks):

Question by C - Well what do you think now that you have watched them plan and follow through?

Observing Teacher - I like what I see but I don't see how you keep discipline. I'd be really worried.

C - They understand they must be self-contained (1 room) and keep within the framework of the school discipline. You noticed that Amy (supervisor) either goes herself or sends someone to get permission for everything they do outside the room. When their overall plan was in place, you noticed she talked it through with Mr. M. (principal). Mr. Dickson (superintendent) knows about it too.

Teacher - That's not my problem. You seem so unconcerned about their doing something wrong - not worried at all.

C - Did you notice when those two girls got the giggles that Andrea (a group leader) sauntered over and everything was peaceful? That's why I don't worry.

Teacher - But suppose they come in one day and decide they don't want to work and just start talking. Wouldn't you step in?

C - No, that's not my role. I don't anticipate that; the learning momentum carries them because of their desire to reach a certain goal. What else bothers you, Mary?
Teacher - I guess it's the home work. They are not all learning the same things. How could I give a test? And grades?

C - Did you notice their evaluations of time spent? Do you hear them talk about what they found outside of class? What Dad said last night? Whom they called? Did you notice the skills they use? And the societal and organization skills they get? Skills they would never get in the average classroom? Do you have to give a test? Can't they evaluate? Besides, at the end of the year, I'd be glad to put these up beside any body's students for scores on an achievement test.

Teacher - I think it's wonderful. They are all so enthusiastic and bubbly. You saw me; I even got in on discussions several times. I've never seen students so involved but I just can't do it myself. I have to be up front and in complete control. I like what I see, but I just can't do it.
Student notes

Head of I

Dr. C. A. Atkinson
(Chairman, Department of Education, Otterbein College)

March 17, 1922

Teachers are in demand

Teachers are hired by what they know

Must have Bachelor's degree

Admission to college based on ability to master

the English language

Student must be recommended by English teacher

Participation in school activities is good

After liberal arts can go to professions

Liberal arts is core of studying

Study 1yr as liberal arts

Applying for teaching aid

Characteristics of teachers:

Must College level work

Be tactful

Love children wanting to help them

Reliable

Cooperative

Good moral character

Good behavior acceptable to community

Socialable

Nice person

Teachers that student likes but usually are not

very popular with student when in school.
Follow-up with gifted teacher:

We set up a gifted program several years ago in our department with Mr. X as teacher. Since, he has acquired a Master's in teaching the gifted but has become increasingly disillusioned with the gifted program. He has recently changed schools, was hired for one position and has now because of school finances been changed to another, still gifted but not that for which he was trained.

Mr. X - What are you doing now in education?

I - I'm still working on my method. You realize that where this method is used gifted programs will go out the window. I know you don't approve.

Mr. X - I'm afraid I do. I have changed a great deal since we set up our program. After you left, I began to feel differently about having students segregated.

I - But, that still seems to be the "in" thing. The gifted program was "up," "down" and now it's up again.

Mr. X - It seems to me a method that will teach students all together should be used. My philosophy has really changed.
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<td>1. Did the interviewee deal with evaluation of the project?</td>
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<td>2. Was there any reason for bias on the part of the interviewee?</td>
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<td>3. What was level of enthusiasm of interviewee?</td>
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<td>4. How well did interviewee stick to the subject?</td>
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<td>5. If someone else besides this interviewer conducted the inter­ view do you, the interviewer, think results would be the same?</td>
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<td>6. To what degree were flattery terms used?</td>
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<td>7. How closely did the results relate to what the interviewer was trying to find out?</td>
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<td>8. Was this interview positive?</td>
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Did you the observer do a follow-up with this interviewee? What additional comments and/or advice was offered?
Follow-up With a Teacher-Observer (Pilot) in the System:

This method has been tried by a teacher in the system where the method was first tested and he will not teach any other way now. He had to change his basic philosophy, observe and really work to stay away from the methods he formerly used such as "being about the same place in the text as you were this time last year so you can use your 'refined tests' from years before."

The first time he used the method he worked with two junior classes, classes made up of failures, "druggies" and discipline-problem students. They had been studying Jonathan Edwards, Cotton Mather and the real beginnings of our school-system. Their key words were "change the school system". These students who would never read a book, do research, make a report now were doing all of these activities without even being nudged. They worked six weeks on this idea and then wanted to do something about it.

They presented their ideas to the 150 teachers in the building at a special staff meeting; presented their ideas to the Board of Education; and was part of a 5:30 news program on Channel 4 one evening.
History of Schools

Historians believe that the idea of colleges or universities goes back many centuries. It is thought the Arabs developed institutions resembling universities long before such schools were developed in Europe. The European universities were begun during the Middle Ages. No one knows the exact date on which any one of them was founded, as each evolved slowly from monastery schools and each was initiated primarily to train a select few for the professions, notably the profession of theology.

Two of the most notable of the early European universities were the University of Bologna in Italy, thought to have been established in the 11th century, and the University of Paris, which was chartered in 1202, but had actually existed prior to that time. These universities were considered to be models after which other European universities were patterned.

Oxford University in England was probably established during the 12th century, but the first records of university organization which have come down to us are dated 1214. Oxford University is the one which served as a model for early American colleges and universities, and which, today, is still considered one of the world's leading institutions.

Harvard, the first American college, was established in 1636. Its stated purpose was to train men for ministry. America's second college was established 57 years after Harvard first opened its doors. It was William and Mary College in Virginia, and this college, too, is still in existence. It was also established for religious training. During the years between 1636 and 1764, nine colleges were founded by religious
Discipline

1. Referred to a subject whose academic respectability is unchallenged.

2. "Formal discipline" - teaching by using the basic subjects.

3. Schools of discipline:
   1. Not recognized as a problem
   2. Punish transgression severely
   3. Accept behavior as releasing tensions
   4. Misbehavior is looked upon as a symptom

Community

1. Some teachers will pick a school in a neighborhood like the one they were born and went to school in.

2. Teachers get involved in community by making it their job to inform parents when their son or daughter is doing badly.

3. Wealth of community determines the kind of teachers

4. Go to school functions where the community is involved to boost their image

Methodology

1. Batavic method:
   1. Two teachers per class
   2. One attempts to give individual help to pupils in one section
   3. Other teacher carries on the usual classroom work.

2. Socratic method:
   1. Pertains to Socrates
   2. His method of repeated questioning
   3. Brings out truths assumed to be implicit in all rational beings.

3. Teachers try to provide purposeful learning experiences.

4. To help pupils to see the purpose of what they are learning

5. More emphasis is put on understanding how the pupil views the situation.
Master Teacher Qualities

I. Loving and Caring
   A. Cares about students
   B. Understands students

II. Charisma
   A. Holds students' attention
   B. Has enthusiasm (high energy)
   C. Builds solid student-teacher relationships
      1. Mutual respect
      2. Mutual trust
   D. Has good sense of humor
   E. Has an open mind
   F. Has a zest for living
   G. Provides motivation
   H. Presents a good appearance (wears first impressions)
   I. Does not deviate from regular image

III. Learning Climate
   A. Encourages maximum student participation
   B. Keeps up with new varieties of methods and uses them as needed
   C. Prepares for class
      1. Time budgeting
      2. Knows material
   D. Teaches to students' needs
   E. Gives individualized help when needed
   F. Teaches students to think critically and analytically
   G. Makes subject interesting (teaches creatively)
   H. Has successful reward and discipline system
   I. Uses appropriate vocabulary
   J. Has good attendance
   K. Is always fair
   L. Is always mentally alert (has awareness)
Tentative List - Ordered

1. Loving & caring = cares about and understands students

2. Charisma
   Holos students' attention, has enthusiasm (much energy),
   Encourages maximum student participation, builds solid
   student-teacher relationships (with mutual respect and trust),
   has a good sense of humor, has an open mind, has a zest
   for living, provides motivation, presents a good appearance,
   (watches first, impression), does not deviate from regular
   image.

3. Learning Climate

   a. Thinks of teaching as a profession
      (not deduction)
A few days after Dr. Helvolto's talk, the class was discussing where the unit was going and what our old and new goals were. During the course of this discussion one student off-handedly suggested the class write a book. This was immediately met with enthusiasm, but most students didn't think at all seriously about it actually happening and by the end of the period almost everyone had forgotten about it except the student who had suggested it. This student was so enthusiastic he was talking about becoming rich and driving a limousine in a couple years. He compared himself to Bugs Bunny cartoon characters when their eyes change to dollar signs. The idea died down for weeks, but surfaced again later. This time many thought seriously about writing a book for teacher seminars— not for money. (If we had figured out we might get a wrapping 50% each).

Dates were eventually set up for summer sessions when we realized there was no possible way to make time during the school year. People who were interested just came if they wanted to. There was no real enthusiasm in about 10-12 people although the largest group that ever showed up was composed of 7 people while nearing the first week of the project. The students who actually came dwindled to 1 or 2 people a week.

The class meetings to work on the book were set up for every second and Thursday morning from 10:00 - 12:00. Donuts were provided by Mrs. Curry. The first session was excellent. There were six people present, not including Mrs. Curry and there were approximately six pages written during that meeting. The next three meetings, less than a page written total of the 3 days.
Little throughout the course of the year, the
first quarter of the school year produced some
major changes in Craig. Craig became talk
in class discussions and began mingling with other
people. Another example is Edgel Maynard.
Edgel was an extremely boring
person the first semester, the second semester
he began to open up, talk in class, and
had a much livelier personality. The entire
class became much more liberal and involved.
Edgel's grades jumped from a D- first semester to A- second
semester.

Second semester: teacher
Mrs. Curry's whole personality changed second semester. We first
noticed this when Mrs. Curry introduced us to the shoe unit,
which is explained later in this booklet. According to her, this
she changed before that during Christmas break, Gordon's illness,
disappointment, and not getting to the students were major
reasons for producing changes. She seemed to be of
care instead of upset with us, Mrs. Curry was more relaxed
and smiled there was going to be a big change with Mrs. Curry and
the boring class she was teaching.
APPENDIX B - STUDY 2 - THIS REPORT

Case history - Will
Morality test
"Raw" material
IAR Test
Excerpts
Interviews from teacher
Journals
Additional materials
The case study of Will is one of unusual interest. Will is an unusual person. He comes into a classroom somewhat bewildered on occasion and needs to pause to see if he is in the right place at the right time. He will forget to come for a conference. He will have his place in "theater seating" confused. He can not keep on task because he is busy putting together what was asked of the students before. Likable, honest, always trying to do his work, he is so slow to answer that most teachers go to the next student for the answer. Apparently attentive, he can not seem to comprehend quickly enough to reply. Given a written assignment sheet and a longer time—much longer—he will get most of the work done.

Sometimes he seems to have bursts of enlightenment. At the beginning of the year, he turned in an expository theme rather well-planned and well-executed. The content showed unusually deep perception and his mechanics were above average. The teacher knew that he had done his work himself for he had spent three class periods on it. The sensitivity in his love for nature and for music (plays piano very well) far exceeded that of others in the class, although some are very proficient in music. At the conclusion of this unit he handed in, voluntarily, a poem with the idea cleverly stated and the prosody rather well-done too (p.265).
His evaluation sheet (p. 264) from Day 4 states at this point he felt no freer to speak out than he had in other units; however, he had already spoken out for the first time and his interest and agitation, as noted also by a visiting observer, had demonstrated his mental involvement even prior to this day. The principal, visiting the cultures one day, came out of the typing room (we had four rooms "going" at the same time) with eyes wide saying, "I saw it but I don't believe it! They are going through a worship march in there complete with motions and Will is right in there with the rest of them!" They had used a learning style that Will understood--body language--and which he could grasp. Then he could and did willingly participate and keep even with the others. An interview with the leader of that group substantiated his further participation. The students would involve him and ask him what he thought about certain items to be discussed and decisions to be made. He would answer, very sensibly, and often the group put to use what he had said. The point is that this method reaches everyone, even students with problems as serious as Will's.

Will's background reveals many interesting facts. Born of parents in their forties, the last of the family, Will was prime
target for problems and could well have been a mongoloid. Certainly he has the disposition. In the pages following he speaks for himself.
My name is William.

I was born in Allentown, Pennsylvania on June 10, 1967. My sister claims that's why my parents gave me the middle name of Allen. I have two brothers and one sister. My oldest brother, is twenty-seven. My other brother, is twenty-six, and my sister, is twenty-four. My mother is a housewife who has many hobbies and interests.

My family moved to Illinois when I was four years old because my father went to work at the Western Electric plant in Naperville.
We moved from a house in the suburbs to a house in the country so my brothers could race their motorcycles without disturbing the peace. My brothers made a track in back of the house and began racing. I was too young to ride a motorcycle so I just rode my bicycle around the track. When I was ten I jumped over the big jumps that Dad always watched my brothers go over.

One of my other favorite things to do was climbing apple trees in our orchard. Once I fell out of a treehouse my friend
and I were playing in and cut my arm so badly I had to go to the doctor. I will always remember that because it left me with a two-inch scar on my arm.

When I was ten years old, my family moved to Ohio because my father was transferred. We live by —— right outside of ——. I often go fishing in —— with some boys who live in the neighborhood. If you're lucky you can catch some big fish. I have caught sunfish, bluegill, catfish, and even some turtles. I also
like camping in the woods behind my house during summer. I usually spend two nights a week during summer camping. When I was in the Boy Scouts I went to a summer camp which was located on an island in the Cumberland River for two weeks.

One day two boys from my patrol and I went exploring by canoe. We found several caves, one of which had some 20-foot high cliffs. We jumped off the cliffs and swam all afternoon.

Some of my other hobbies are stamp collecting.
building models, microscopy, and astronomy. I also like reading adventure stories, books on science, and magazines. This summer I read Robinson Crusoe.

My family is currently going to Saint John's Chrystostom Church. I have been fortunate to have always lived outside the crowded city and had the chance to enjoy nature. It gives me a chance to get away from all the pressures of school and my family. It is the most spiritual time for me because I appreciate all the good things the Lord put on earth.
Day 4
Evaluation
End of period

1. Are you interested?
2. Do you have to think in class?
3. Do you draw conclusions?
4. Can you relate these to your life?
5. List the skills you used.
   a. Reading
   b.
6. Do you look forward to your English class?
7. Do you think about it after we leave class?
8. Do you think of relate questions that were not mentioned in class?
9. Do you feel freer to speak out in class than you have in other units this year?
10. Would you like to skip class?
The Woods

The woods are full of birds and trees,
Deer and squirrels and honey bees
As swallows through the underbrush.
My footstips felt the fruits lush.
The creepy, crawling things abound,
Until I knock that to the ground.

When nature was rejuvenated
Because slept in the woods, the thing relaxed.

Note: vocabulary - rejuvenated.
Modality Tests

In the modality test by Walter B. Barbe and Michael N. Malone, Jr. (Zaneblosier, 1980) ten incomplete sentences are listed with three possible completions for each. The ones chosen by a student indicates whether that student is a visual, an auditory and/or a kinesthetic learner. Sometimes a student has an equal number for two out of the three learning modalities but usually one is dominant.

The student who learns kinesthetically needs to touch or have some activity. The student needs to point when he reads (a practice often discouraged along with lip reading). Students who are auditory learners need to hear instead of/or with seeing. Auditory learners often read aloud when studying or put lessons on a tape and then play them over and over. Our teaching methods are arranged for visual learners and our kinesthetic students are often labelled slow learners. DORM is a "hands-on" method.
### Group 1

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**5-7**

Worship - watermelons
Everyone wears towels

Requirements for president:
1) must be women
2) under 6'5" and under 18
3) must be celibate

**Towels**

Guys wear around waist
Girls around shoulder

Laws:
1) men count as 1/2 vote
2) men cannot hold office
3) no women allowed

Punishments:

- Cant talk or have any
- Dry for 1 day

- Black wears watermelon
towel
- Everyone wears
  pink or green towels
Summary of Culture No. 3 as told by Jeff

Our culture had a different leader each day. On Mondays it was Shane; Tuesdays, Cindy; Wednesdays, Kim; Thursdays, Jeff; Fridays, Dianne; on weekends, Carmen. We live on a very peculiar planet that moves beneath us while we ourselves remain stationary. On different days, therefore, we have vastly different climates: Monday, ocean; Tuesday, desert; Wednesday, snow; Thursday, forest; Friday, fog; and, weekends, tropics. These climates are reflected in the clothes we wear: Monday, blue; Tuesday, red; Wednesday, white; Thursday, black; Friday, gray; and, weekend, orange.

We worship various items, most of which have some relationship to the climate: Monday, ; Tuesday, ; Wednesday, ; Thursday, ; Friday, ; and, weekend, none. The ritual begins by the drawing of it on the board (the symbol, that is). We also have pins symbolizing the item of worship. Without the pins in our right hands, we may not perform the ritual. We close our right hands into fists and stand in a circle. The circle represents the union of our culture with our environment. We raise our hands to the center and hum while walking in a circle. We sometimes perform this in the corners of the room to encompass the whole room.

We arbitrarily chose numbers for each day: Monday, 5; Tuesday, 6; Wednesday, 8; Thursday, 4; Friday, 12; and, the weekend, 86. Whenever the day's number is spoken or 86 (weekend, which is always fun), we break out in uncontrollable laughter. Each day we bow down toward the clock at the day's number of minutes until twelve o'clock.

Our food is gained from chewing on the note cards on which we communicate. A sample of our written language is below. No workable spoken language was ever compiled. Our culture prefers to carry out its basic life and religious rituals in complete or semi-darkness.

Sometimes we would form a line and march around the room a few times before returning to the circle. Spies who tried to join our rituals were not appreciated (just ask Brian).
PLEASE NOTE:

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These consist of pages:

Adult Form (IAR-A) 270-276

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University
Microfilms
International
300 N Zeeb Rd., Ann Arbor, MI 48106 (313) 761-4700
Teachers caught notes

From conference outside class

Day 3

One day these two homeroom students from grade twelve couldn’t believe they could do a unit. Told no, they were quite upset.

Grade nine asked without a class of class who thought they could do a unit.

Told not this year, they began: “moaning and grumbling.”

The principal asked what we did today. He said:

1. Class participating
2. Students thinking
3. Process cannot wait for next day

Secretary did not see to what
In close—

What changes have you encountered in the last 24 hours? Were they pleasant? Do you feel the last 24 hrs. were a happy period? Act of 30.

Are you happy as a social thing—do you enjoy living? By 50% yes & changes grow until cultured differ. What is a culture? You are an individual—yet belong to a family etc. — a culture. Cultured change.

Role play Sarah (Jenny), Abraham (Bryan), Isaac, Sham.
A reaction

If there is a chain of actions what will be true of the reactions?

Racket There will be a chain of reactions.

What do you call these people or forces which do actions?

Change agents! Read, for not few how many there are.

"Can you formulate a thing?"

Yes, given (e) change.

Action agent and action there will be (e) corresponding reactions.

What determines the degree of change?

The degree of action

Take center medium difference action reaction equation change agent.
Two students volunteered to be 20th cent. people, some had regressed in time to Abraham's time. Abraham knows Hebrew, Debbie M. and Cindy J. know English. Each group may talk among themselves but they do not understand each other. We, the audience, understand both.

The travelers are looking for a place to stay all night and they are hungry. They go to the tent and are allowed in. Abraham has his walking stick and bare them from Sarah who is excited. She is making the mistake of walking into the tent with their shoes on. They, by sign language, are ordered to
Take them off and drag imaginative child that he seems to be, track them out. The entertainments on both sides are just and noisy. Finally they decide to rub their tummies to see if they can get food. Abraham seems to understand but the bell catches them before a servant could be summoned to wash their feet—to signify welcome. Quick conversation with grasp revealed they realized that the only universal language is body lang... It alone can bridge cultures.
because tending the
broom to date.

Two weds to eight one
six guys, one for each.

8:45 which each patient passed
on to another student.

To make another
something negative toward
each other. The girls had a
box at the first each girl
was to be brought by a

Nasty remark. Three times
before the group and
times been with the individual
as they went past the first-

Then the order was reversed.

something nice was
said to each at the
past - these represented
speaks in a negative
form in society.

Despite the
known simulation
some were very regret;
this brought a lengthy
discussion about how
much the forces
of
283

3

May 16

In my theater because of
yesterday’s performance
I can’t always control
my actions.

Discuss this today
on what constitutes
a culture—i.e., we want
to break with another
culture—what do we
need to know? What if
our own culture could
we have to change—
students decide to build
cultures—from here—
they must structure
their own cultures. The
students take over on Monday
August 18, and Bellanger—
why can’t we get into our
groups and get started
today—anyone want to

Interview - the next year with a colleague who had watched Study 2:

Mr. H. - Well, I've come for help. I've taught eleven years;
I'm sick and tired of it. I watched you and your kids last
year and everybody participated and everyone enjoyed it.
But can that work and do I use the entire method as you
used it?

C - You're just down, Mr. H. You're really a dedicated teacher.

Mr. H. - But my students tell me how bored they are. If I don't
get some help I'm going into some other field. I'm bored
too; same old thing every year. That method won't work,
say in biology, will it?

C - I don't see why not but first you have to change your
philosophy. You can no longer be an authoritarian ...

.........

And so we took the planning and evaluation parts of the plan,
modified them a bit and he used them in biology. Students began
to say "I like biology; it's not dumb like it used to be."
Then he used it in chemistry. Finally, when spring came he was
so pleased with teaching that he applied and got a position as a
part-time teacher (evening) in a near-by college.
The Kishmiwallamanok

In the deep, dark night of the forest stalks
The terror of the Kishmiwallamanok:
His gaping mouth is like one big cave;
His long, scaly tail, like a big strong wave;
His bloodshot eyes are as big as a dish;
His body reeks of an old dead fish;
His claws are as shiny and as sharp as a sword;
His hair is thick like a strangling cord;
Ugliness shows in his every feature;
He has speed like no other creature;
His teeth are long like very sharp spears;
His looks excite all possible fears.
Yet, you fear him—he seems to grow taller;
But when you ignore him, he really seems smaller.
Control your thoughts and he'll disappear
With all of the terror, the hate, and the fear.
Who is this terror of this, our world?
Who has so many "round his fingers curled?"
This monster with his horrifying head—
This killer—you know him—he is Dread!
He's the Kishmiwallamanok
With a mouth like a cave
And the long scaly tail
Like one big wave.

- Jenny Meyer -
Impressions

I chanced one eve to stroll upon a great stretch of seashore, seeing, as I walked, the imprint of my feet implanted in the sand. How proudly I ceased my pacing to behold it - my mark upon this great windswept, wave-beaten path! But alas! My foolish conceit indeed deceived me. Even as my gaze fastened itself in delight to the outline, the imprint began ever so swiftly to fade as the tide rushed impatiently in, grasping, then sweeping away my footprint. My soul then leapt within me, and I fell, weakened, to my knees, crying unto my Maker in a voice seeming ever so small in the force of the mighty ocean wind.

"Oh God," asked I in anguish, "Shall my life and all contained therein fade, even as the mark of my foot upon the seashore - in swift destruction, when I take leave of this life? Let it not be so - I cannot bear it! Allow me, oh my Father, to live each day as though there were no more to follow it for me on this earth - giving, and shaping my deeds to meet the needs of others. I beg of Thee, allow me to use what resources of mind and body I have been allotted, not for myself, but in service of Thee, my Creator, and of those who would profit by their use here. Then, only then, my God, shall my mark remain both here and with Thee. Time, and the ocean of life shall never then remove what my Maker hath worked through me here."

My heart then was comforted. In humility of body and soul, I rose once more to stand upon the shore, my own hands grasping the unseen ones by the relentless tide, a smile of new understanding upon my lips. For, in the sands of eternity, 'tis not the mark of the foot which shall fall upon the holy shore, but of the heart.

- Jenny Maxwell -
APPENDIX C - STUDY 3

Questionnaire
Students' rough drafts
Students' plans
Student comment

Note Narrative which follows
1. Do you have a project? Write a resume of it.

2. Do you have a questionnaire (sales survey)? If so, please hand in a copy.

3. Do you have an agenda? (a copy, please).

4. Does each person have a responsibility? If so, list.

5. Who is your chairperson?

6. Who is your secretary?

7. On the average, how much time outside of class per day do you spend working on or thinking about this project?

8. Check the skills you have already employed (in this unit):
   a. Conversational
   b. Telephone
   c. Writing
   d. Listening
   e. Leadership
   f. Organizational
   g. Reading
   h. Societal

9. Are you interested in this unit?

10. What do you hope to get out of this unit?

11. Do you speak out in your group or do you wait for others?

12. Do you get along with people in your group?

13. Do you have (a) lazy one(s) in your group?

14. Is someone too bossy?
Planning

Schedule
1. Find out if it's ever been made (survey of the market)
2. Survey of the product
3. Blueprint
4. Cost survey
5. Production
6. Patent
7. Letters

Questions:
1. Do you make powder similar to one you are trying them?
2. Are you making different?
3. Do you think others might buy them?
4. How do you think they powder condition and
   were selected to market?
5. If we made a powder with similar items would you
   buy it?
6. Do you make powder similar to this one?
7. How much do you think the general library for this
   type?

Remarks

We are going to try to make powder similar
products,shades etc. and seeing if ever any we would
like to try and any a small step to add
powder condition and colors.

We are also going to try and make a ready
earn with part clothes and their end.
Questionnaire - The Ultimate Purse

1. Do you have problems with the organization of your personal belongings in your purse?
2. What are some of the problems you have with your purse of today?
3. Do you like the idea of having a better organized purse?
4. What price range would you like for a purse?
5. Would you buy an organized purse if it were priced this way?
6. Do you have any suggestions about what you would like to see in a purse?
7. What size of purse do you prefer - large or small?
8. How large or how small?
9. Which color do you prefer in a purse?
10. Do you think men ought to carry purses?

Chocolate - Seasonal Experiment

2. Do you like it?
3. Would you buy it?
4. Do you think other people would like it?
5. Would you have it in bars if they were just chocolate or else just caramel?
Dear Parents, Friends, and Guests:

We are so pleased to have you here today to share in this momentous event. As your child prepares to graduate, we want to extend our congratulations on their academic achievements and the many accomplishments they have made. Today is a day to celebrate their hard work, dedication, and the road they have traveled to reach this milestone.

Over the past few years, we have witnessed your child grow not only in their academic knowledge but also in their personal development. They have faced challenges, overcome obstacles, and have become the individuals they are today. Your support and guidance have been instrumental in their success, and we cannot thank you enough for your unwavering support.

As they embark on the next chapter of their lives, we hope they remember the lessons they've learned and the values they've carried with them. May they continue to pursue their passions, embrace new opportunities, and make a positive impact on the world.

Thank you for being a part of this special day. Your presence means the world to us.

Sincerely,

[Signature]

Note: They make Candies and sell them.
1. Do you have a project? Write a resume of it.
2. Do you have a questionnaire (sales survey)? If so, please hand in a copy.
3. Do you have an agenda? (a copy, please)
4. Does each person have a responsibility?
   If so list
5. Who is your chairperson?
6. Who is your secretary?
7. On the average, how much time outside of class do you spend working on this project?
8. Check the skills you have already employed:
   a. Conversational
   b. Telephone
   c. Writing
   d. Listening
   e. Leadership
   f. Organizational
   g. Reading
   h. Societal

9. Are you interested in this unit? yes
10. What do you hope to get out of this unit?
11. Do you speak out in your group or do you wait for others? We never speak out in class.
12. Do you get along with people in your group?
   yes
13. Do you have (a) lazy one(s) in your group?
   no
14. Is someone too bossy? no
at first we were thinking of making a hover-board, like a skate board without wheels. That floats along the ground.

However, Garrett called his uncle who is an electrical engineer and said that we will need 3 rotors in stead of one, so, we are thinking about making.

#1

![Diagram 1]

Or

#2

![Diagram 2]

I did not talk to anyone about the grades to give when I got this.
to water with ease." Garrett Fleming you said, "They'll sell like crazy. Everyone finds will soon have a hovercraft."

Floyd Keyton exclaimed, "It's the ultimate!"

The three boys have already made detailed blue prints and tested the hovercrafts motor. All they need now is some light weight material (for the frame), fans, and other supplies. In a matter of months it could be complete. Their future company's name is HoverCo. Keep your eyes peeled for HoverCo's exciting new recreational vehicle—the BFK 3000!
1. Make a questionnaire
2. Take survey
3. Find out about patents
4. Study products
5. Name the product
6. Blueprint
7. Find out about cost (est.)
8. Material
9. Get patent
10. Production
What grade do you think you should have on this unit? Why?

1. Name your company.
2. What is your invention?
3. Approximately how much time have you spent on it?
4. Do you intend to work further on it?
5. Do you plan to do a finished product?
6. What handicaps did you find?
7. Write a speech you could give to a group explaining the steps you have gone through.

You will be graded for: (1) speech, (2) grammar, (3) content.

Parents, Friends and Guests:
APPENDIX D

NARRATIVE
Narrative

Several comments should be made here. In the first place I am not about to perpetrate some "fly-by-night" system for my colleagues to use - one I have not thoroughly tested. I have used this method many, many times anticipating probable questions. Many of these I have tried to answer indirectly in the report - questions such as grading, home work and study time and included a relevant bibliography complete enough that any teacher can easily find sufficient comment to answer still other questions.

The so-called "pilot study" was really the second study done. The first had been started with a shoe supposedly dropped on a tropical island where people existed who had not had contact with anyone in the outside world. The group of students - the same ninth grade as used in the pilot - decided, after much discussion, to research what our culture would resemble in the year 2000. They investigated weather, pollution, probable relationships with other countries, GNP and market trends as well as changes already in motion in our culture. Interestingly enough, they decided, among other changes, to use Velcro for fasteners on shoes. The next year shoes came out with Velcro fasteners. My telephone almost rang off the wall.
After this came what I have given in this report about the pilot and then another - a third with the same students - came in the last four weeks of school - which brings us to the first question: What happens if DORM is the prevailing method over a period of time? And, relevant to that, a second question - what would happen if students were left entirely on their own - aware that school and learning must go on but that the process is their responsibility? These students had not had the IAR Test, so the degree to which they took responsibility for themselves was an unknown quantity.

This third experience with the pilot group showed that I did not really need to give an introduction. They had, however, already had two creative units which they had enjoyed. Interestingly enough, they varied the organization and added some competition. They wanted me, however, to do something to get it started. I promised to act as consultant and did nothing more initially.

They decided shortly that this unit would be creative; that they would work separately and have an oral competition, each sharing what he had done. Busy people! One posed as an executive in an advertising agency; talked with one; came up with a new product, took a survey; did his added research; wrote and drew the ad; and gave the sales pitch in class. Another wrote a play
with a narrator modelled after Our Town; gave out copies; and, after a brief presentation asked for criticism.

In all of this, time was of the essence; the school term would soon end. One student who did not meet the deadline was dropped from competition. One young man posed as a stand-up comic, researched kinds and examples of humor, wrote his own jokes and gave a ten-minute performance. Another studied auctioneering, attended some auctions, talked with actioneers and held a ten-minute auction. And so it went, each inspiring the other yet criticizing each other constructively. One young man who was so taken with what he had done that he wanted more than his share of presentation time was chastised verbally by the group - gently but firmly. In brief, to celebrate the completion of this full semester of creative work they

a. had doughnuts and hot chocolate for breakfast in the classroom;
b. brought me a dozen red roses; and
c. made plans to write a short booklet during the summer for teacher seminars.

All in all, the method was used for seventeen weeks that year, consecutively. Results in all of the studies are very much the same: attitudes are positive; maximum student participation is reached; attendance is excellent; grades improve in class.
and, in other classes grades either remain the same or rise. The positive attitudes carry over into other classes, those taught traditionally. Too, a follow-up was usually done by the students. In the pilot the head of a mannikin was "brought to life" with some paint and a wig. Around the back of the wig are little slips of paper attached, each recording a quality that the students concluded a master teacher should have. The students named her Kristin. Those who could also worked in the summer to put the story of the product in usable form. From the last creative unit that semester, five leaders applied for and were taken into the high school gifted program the next year.

The students at the second school - Study 2 about whom this report is written - did a booklet - The Mustard Seed - a literary booklet with emphasis on poetry. The students set up their editorial staff, selected materials - did all the activities one does to write and publish a school literary magazine. This work they did in the following school year - often at odd times - in addition to their required school assignments. Some typed; some proof-read; some did art work even a cartoon or two; some collated; others marketed. Incidentally, they accepted work from the entire school.
The next group at this school - again, ninth graders, in the report called Study 3, ones with a short unit of time - covered material so very different from that of any of the other students. A survey of the learning modalities of these seventeen showed that twelve of the seventeen were kinesthetic learners and four others were almost, thus accounting, perhaps in part, for the invention project. The other influence was that the section in the English text yet unfinished was a group of essays about certain inventors.

The products were tangible in all instances except one. One group made bears, ultimately called Candi Bears and sold them for fifteen dollars each. Market survey, research, discussions with Ed Dunning - international patent attorney - and other outside contacts including an aerodynamics engineer helped make each day exciting and many evenings far from dull.

DORM was also used with a humanities class, grade twelve in the larger high school. Brainstorming and planning brought a decision to take a novel and study it from the standpoint of religion, politics, art, cultures and philosophies. They divided into groups and organized. The book they used was The Book of the Dun Cow by Walter Wangerin, Jr. The research, the discussions - only one word describes these: fantastic. Some
skipped classes and went to the library to finish discussions. They disrupted other classes, particularly social science classes with "left-over" discussions even getting those teachers involved, sometimes for entire periods. They gathered at each other's houses for potluck and discussion. Fantastic!

Still another question remains: How can you be sure you have taught the basics? This study was designed for only one purpose: to determine the feasibility of using DORM with a heterogeneous language arts class in a suburban community; to see if this method would change the learning climate and produce positive attitudes which in turn will make students want to learn. To follow the work of an individual student is, however, to notice the plethora of material, the scope, depth and sequence of the information shared - material to which each student is exposed. This researcher's students were tested by the Otis-Lennon and the Stanford tests, thus testing both native intelligence and achievements.

As to basics? What are they? The curriculum of the Abecedarian program - a compensatory program in North Carolina, Adler's Paideia in Atlanta? Again, a delineation of that term is not part of this study. Suffice it to say that students take their responsibilities very seriously as well as their responsibilities for each other. Could the basics now have a new responsibility?