This is to certify that the

thesis entitled

A STUDY TO DETERMINE THE EXTENT
OF IMPLEMENTATION OF IGE OUTCOMES AS MEASURED
BY TEACHER OPINION IN IGE AND NON-IGE SCHOOLS

presented by

SISTER EVELYN PICHE

has been accepted towards fulfillment
of the requirements for

PH.D. degree in ADM. & HIGHER ED.

Major professor

Date 10-31-79

O-7639

A STUDY TO DETERMINE THE EXTENT OF IMPLEMENTATION OF IGE OUTCOMES AS MEASURED BY TEACHER OPINION IN IGE AND NON-IGE SCHOOLS

By

Sister Evelyn Piche'

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1979

ABSTRACT

A STUDY TO DETERMINE THE EXTENT
OF IMPLEMENTATION OF IGE OUTCOMES AS MEASURED
BY TEACHER OPINION IN IGE AND NON-IGE SCHOOLS

By

Sister Evelyn Piche'

This dissertation investigated the difference in use of Individually Guided Education (IGE) outcomes in non-IGE and IGE elementary schools in school districts which were committed to the /I/D/E/A/ Change Program for Individually Guided Education and in non-IGE schools in school districts which were not associated with IGE. In these same schools the opinion of teachers concerning appropriateness of use of IGE outcomes in any elementary school were investigated, also.

Acknowledging the potential impact of education on the lives of youth and recognizing the accelerated rate of progress in society, school districts need to implement programs which are educationally sound and meet the challenges of the times. One of the educational innovations which has effected more positive findings than negative ones, is the /I/D/E/A/ Change Program for Individually Guided Education. A nationwide study by Belden Associates

Sister Evelyn Piche'

in 1973 indicated that teachers and principals in IGE schools reacted positively to the IGE approach of individualized instruction, team teaching, and multi-aged grouping.

Since research has been conducted and is being facilitated about Individually Guided Education, it seems important to investigate if there existed a difference in the use of IGE outcomes in non-IGE schools in IGE school districts as compared with non-IGE schools in non-IGE school districts.

Methodology

A structured questionnaire was designed to collect and compare data from teachers in IGE school districts (IGE schools and non-IGE schools) and teachers in non-IGE school districts in twelve states. The sample consisted of teachers from one IGE school and one non-IGE school in the same IGE school district and teachers from a non-IGE school in a contiguous non-IGE school district. From the selected IGE population and contiguous non-IGE school districts, schools were randomly selected. Questionnaires were mailed to 1136 teachers and from 599 responses which resulted, data were analyzed. Data analysis were accomplished using the Chi-square Test of Homogeneity and the hypotheses were tested by using the Statistical Package for Social Sciences.

Findings

Findings indicated that significant differences existed in the three types of schools (IGE, non-IGE, and non-IGE district). Concerning use of outcomes, the following number of outcomes were significant, namely:

1. seven of the twelve - School Decisions,
2. fourteen of the twenty-one - School Organization,
3. twelve of the twenty - Curriculum and Teaching,
4. eleven of the fourteen - Student Responsibility,
5. seventeen of the eighteen - processes of Planning, Analyzing, and Improving.

Differences existed concerning opinion of teachers about appropriateness of outcome use in any elementary school. The following number of outcomes were significant:

1. three of the twelve - School Decisions,
2. seven of the twenty-one - School Organization,
3. two of the twenty - Curriculum and Teaching,
4. four of the fourteen - Student Responsibility,
5. nine of the eighteen - Planning, Analyzing, and Improving.

Conclusions

The following information highlight summary statements about conclusions.

1. In this study many of the outcomes evidenced a higher percentage of use in the IGE school districts (IGE and non-IGE schools) than in the non-IGE school districts (non-IGE district schools).

2. Outcomes concerned with School Decisions, Curriculum and Teaching, and School Organization have a higher percentage of use in all three types of schools than outcomes related to Student Responsibility and processes of Planning, Analyzing, and Improving.

3. Regardless of reported percentage of use of each of the outcomes, the majority of teachers from the three types of schools believe that the outcomes should be used. The category, Planning, Analyzing, and Improving, had the greatest amount of differences of teacher opinion of outcome effectiveness among the three types of schools.

ACKNOWLEDGEMENTS

The writer is indebted to a guidance committee who provided encouragement and support during phases of the doctoral program. Warm and sincere gratitude is extended to Dr. Louis Romano, chairperson, for his insightful guidance, his understanding and sustaining optimism. To Dr. Larry Borsage thanks is given for his continuous encouragement and helpful suggestions. To Dr. Robert Muth acknowledgement is noted for his supportive questions and sincere concern. To Dr. Keith Groty appreciation is stated for his helpful perspectives and practical advice.

Sincere thanks is extended to Dr. Billie Rader who rendered invaluable service with problems of research, technique of design, assistance in organizing the questionnaire, and continuous willingness to share his expertise. Thanks is given to Dr. Fred Ignatovich for technical assistance in computer programming adjustments.

A very special THANKS is extended to Dr. Jon Kingharn for his encouragement and generous positive support of the doctoral program and the dissertation. Special gratitude is expressed to Dr. John Bahner and Dr. Jon Paden for their continuous support of the study.

Unique and warm gratitude is expressed to Linda Bevilacqua for her encouragement and sharing of professional expertise. To the Adrian Dominican Congregation, my sisters, acknowledgement is noted for supporting me during my study efforts.

Thanks is expressed to my dear friends and professional colleagues who advocated the doctoral experience and supported me during that time.

Finally, the researcher extends warm and sincere appreciation to her family, especially her Mother and Father for their continual support of the study endeavor. Her father's serious illness was a great motivation to complete the dissertation and study program in a short period of time.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

In 1965 the Charles F. Kettering Foundation established the Institute for Development of Educational Activities, Inc. (/I/D/E/A/) as its educational affiliate for the purpose of developing new ways to accelerate improvement in education. In that era of unprecedented change it was evident that although many innovative ideas were introduced in schools, the schooling process basically remained constant.

Bloom reported that the process of schooling today is much the same in America as in other developed nations of the world. It is carried out in formally organized schools in which a teacher and graded instructional materials provide instruction to groups of students, typically about twenty to seventy students in each group. Further, students tend to be classified and grouped by age or grade. The age-grade, single teacher organization for instruction and the administrative arrangements in local schools have become institutionalized.[1]

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[1]Benjamin S. Bloom, Human Characteristics and School Learning (New York: McGraw-Hill Book Company, Inc. 1976), pp. 7-8.

During the sixties grants from government and other organizations were issued to assist schools in the process of up-dating. However, many of these programs did not succeed or did not have a sustaining impact on the educational process. As Goodlad and Klein describe the situation, "many of the changes we have believed to be taking place in schooling have not been getting into classrooms; changes were blunted on school and classroom door."[2]

Recognizing this phenomenon /I/D/E/A/ initiated a study in 1966 to determine the conditions under which learning could take place in the classroom most successfully for each individual student. Coordinated by John Goodlad, the five year study, Study of Educational Change and School Improvement, included a group or league of eighteen cooperating schools in California. The philosophy, process, and findings of this study formed the basic structure for the present innovative program, The /I/D/E/A/ Change Program for Individually Guided Education (IGE).

Other factors which influenced the development of the Change Program were insights gleaned from the Ford Foundation sponsored Harvard Teams Project (1959-1964) and the advancements of the Wisconsin Research and Development Center for Cognitive Learning. Today, the development and growth of IGE is traced to the Wisconsin Center and

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[2]John I. Goodlad and M. Frances Klein, Behind the Classroom Door, (Worthing, Ohio: Charles A. Jones Publishing Company, 1970), p. 97.

/I/D/E/A/, but each organization's philosophy and process is markedly distinct.

Wisconsin Research and Development Center, through the work of Herbert Klausmeier, has been identified as the formal initiator of the IGE concept. Succinctly, the Wisconsin model is based on seven components, and it emphasizes curricular materials based upon behavioral objectives, while the /I/D/E/A/ Change Program includes thirty-five outcomes and stresses teacher and staff education through an extensive training program. Regarding in-service Bahner asserts that "Wisconsin's approach was to keep training to three days if possible, and five days at the most."[3]

By 1970-1971, /I/D/E/A/ had established the Change Program for IGE and had developed materials and used select Wisconsin's materials for implementation of the Change Program in schools for the first time. After 1972 /I/D/E/A/ materials for in-service training and other pertinent literature contained distinct terminology and direction from those of the Wisconsin Program.

From these beginnings the /I/D/E/A/ Change Program has expanded from 125 schools participating in 1970 to "1300 elementary schools in 37 states and approximately 100 middle and high schools in about a dozen states."[4]

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[3]Robert J. Krawjewski, John M. Bahner, and Samuel G. Sava, "/I/D/E/A/ Change Program for IGE: A Dialogue," Journal of Teacher Education, 27 (Fall, 1976), p. 211.

[4]Ibid., p. 214.

The /I/D/E/A/ Change Program for Individually Guided Education is based on thirty-five outcomes or performance objectives to be implemented by school personnel. The long range in-service programs for teachers aim to create learning environments appropriate to each student as well as skills and attitudes necessary for continuous improvement in schools serving ages five to twelve, ten to fifteen, and fourteen to nineteen respectively. IGE is a process of individualization and continuous improvement achieved through in-service, implementation, and evaluation.

> IGE calls for teachers to make numerous professional judgments formerly made by textbooks, curriculum guides, and administrative-supervisory personnel. IGE is not a "teacher proof cookbook" that provides decisions, but it is a process for making decisions about instruction as well as for making choices that relate to continuous improvement.[5]

The IGE model brings a number of innovative practices typically used in isolation into a total system designed to facilitate individualized and personalized instruction in elementary and secondary schools. Romano explained that, "teaming, nongradedness, differentiated staffing, decision-making, individualization, and a focus on the uniqueness of each child"[6] are examples of innovative practices used in IGE schools. Its program provides various degrees of structure and choice for students based

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[5] /I/D/E/A/'s Guide to an Improvement Program for Schools (Dayton, Ohio: Institute for Development of Educational Activities, Inc., 1974), p. 12.

[6] Louis Romano, "What is I.G.E.?" Michigan School Board Journal 24 (May, 1977), p. 12.

upon diagnostic data about the learner's needs, interests, skills, learning style, academic ability, and learning strengths and weaknesses. It also considers both student and parent desires and concerns.

Since the development of the IGE Model by the Institute for the Development of Educational Activities and the Wisconsin Research and Development Center, continuous research has been conducted by both groups and other educators; improvement strategies have been designed and implemented. In a recent study of IGE principals Paden reported that although IGE schools are typically innovative and humanistically oriented, they have defied national statistics academically. During four years of collecting data through questioning more than 400 elementary school principals, only one principal in 400 reported a significant decrease in standardized achievement scores. In fact, more than forty percent of the principals surveyed in 1976-1977 said their achievement scores were either slightly or significantly higher than before while thirty-three percent reported slightly lower scores and twenty-five percent had not administered achievement tests in their schools.[7]

The IGE concept incorporates the human values of caring, sharing, cooperation and responsiveness as well as

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[7]Jon S. Paden How Is IGE Doing in the Elementary Schools? A Three-Year Survey of IGE Principals (Dayton, Ohio: Institute for Development of Educational Activities, 1977), pp. 3-4.

achievement and decision-making aspects. Based upon cited research and /I/D/E/A/'s experience with IGE schools, Individually Guided Education process has generated positive and negative feelings during its ten years of implementation but positive findings are more numerous than the negative. These data hold promise for the future.

Need for the Study

Bloom postulates that no institution other than the family in society has the potential power over individuals and their well-being than the schools. This power stems from the fact that students attend school for a number of years and that the ages of students are formative.[8]

Recognizing the potential impact of schooling, it is professionally imperative to identify those components of the education process that are successful. In examining the array of educational innovations of the past two decades one can conclude that many were ineffective. Goodlad makes a significant point when he observes that innovations which were thought to have failed really had not; they really were never implemented.

> Some of the highly recommended and publicized innovations of the past decade or so were dimly conceived and, at best, partially implemented in the school claiming them. The novel features seemed to be blunted in the effort to twist the innovation into familiar conceptual frames or established patterns of schooling.[9]

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[8]Bloom, Human Characteristics and School Learning, p. 213.

[9]Goodlad and Klein, Behind the Classroom Door, p. 72.

While many innovations plateaued and others were not adequately implemented, Individually Guided Education has evidenced continued and positive findings over the past decade. Perhaps the most exciting thing about the IGE model is that the early research data, while limited, indicate that this process has a positive effect on students, teachers, and parents. A nationwide study by Belden Associates in 1973 indicated that teachers and principals in IGE schools reacted positively to the IGE approach to individualized instruction, team teaching and multi-aged grouping. Teachers indicated that this model helped them do a better job and resulted in better teaching by all teachers on their team. They also reported that student academic performance was better and that students enjoyed school more under the IGE program.

After ten years of on-going research and continuous improvement of IGE strategies and expansion of school participation, is it possible that all schools labeled IGE are not implementing the process? If innovative concepts of the past were not fully implemented and, therefore, were ineffectual, could this be true of Individually Guided Education?

Acknowledging the potential impact of education on the lives of youth, school districts need to implement programs which are educationally sound and meet the challenges of the times. The school, being a part of a larger social system, receives and is a part of the influence of

other subsystems. Conceding this, it seems logical to conclude that schools in a school district could have influence on other schools in the system. Even when one innovative practice is introduced into a school, such as team teaching, other parts of the school milieu adjust. Klein reported that "an innovation can rarely be introduced as a single entity since it will have an impact upon the system by affecting other parts which then may need modification."[10]

This being true, there is a need to investigate the comprehensiveness of IGE implementation in a school district. Does implementation of IGE practices in one or more schools in a district have a relationship to IGE implementation in non-IGE schools in the same district? If school districts are to be responsible for improving education, they must have suitable knowledge about innovations and the scope of their impact, and appropriately involve schools in the implementation of programs consistent with present and future societal conditions.

Purpose of the Study

The purpose of this study is two-fold. First, to determine the extent of implementation of Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts

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[10]M. Frances Klein, "Tyler and Goodlad Speak on American Education: A Critique," Educational Leadership 33 (May, 1976), p. 568.

with only non-IGE schools. Second, to determine the opinion of teachers concerning Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools.

Significance of the Study

If education is to progress at a rate consistent with the accelerated rate of progress in the general technology in society, it must find or create options that provide flexibility to deal with needed changes in an effective way. With the advent of Sputnik, improvement of education became for many one of the important tasks of survival. Many innovations during the 50's and 60's emerged, such as, computer assisted instruction, personalized learning, humanized schooling, career education, and new structural arrangements, such as, team-teaching, non-grading, and year-round schools.

Intrinsic to these innovations are philosophical modes which can be categorized simply as static and dynamic. Static structures are based upon conventional concepts of schooling, such as, the proper role of elementary education, the nature of the education process, and the role of teachers and students. B. J. Benham describes the static mode as "the traditional-deterministic world view which has been the predominant social outlook

for most of the present century."[11] Many dynamic reforms were placed in the context of a teacher planned and dominated environment.

Dynamic philosophical modes often termed, contemporary-relativistic, are rooted in the belief that change in groups is brought about through processes whereby groups can deal effectively with its own problems and effect its own change. In the late 1960's and early 1970's educators began to discover that innovations which were dynamic in nature were being implemented in schools of static philosophic beliefs, therefore, they were not implemented as designed.

Educators began to realize that the process of change was as important as its substance. Tye and Benham describe strategies which were planned to assist schools to cope effectively with its changing environment.

> Networking, organizational development, linkage, and problem solving are some of the terms used to describe the more successful change strategies that have been employed in recent years. All have certain things in common: (a) the school is assumed to be the appropriate target unit; (b) the focus is upon developing conscious problem-solving abilities within the staff; (c) open communication and participatory decision-making are employed; (d) goal clarification is an initial phase in the process; (e) conscious linkage is made with resources outside of the school; (f) the principal is seen as a key leadership person; and (g) there

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[11]B. J. Benham "Thoughts on the Failure of Curriculum Reform," Educational Leadership 35 (December, 1977), p. 205.

> is constant evaluation of the problem-solving process itself.[12]

One of the innovations of the 60's, Individually Guided Education encompasses the above characteristics. Research demonstrates that IGE implementation has effective positive results. The Belden report, a national study designed to evaluate the Change Program for IGE during the 1972-1973 and 1973-1974 school years, evaluated many phases of the IGE program. Achievement, academic performance, attitude toward school, student behavior, and student responsibility were reported as showing increased improvements. Parent and teacher attitude about IGE is reflected in the report.

> A majority of parents (88%) were positive in their feelings about their children's progress in school. Eight percent are somewhat dissatisfied. (One percent did not answer) ... a significantly larger number of teachers feel that students are learning and performing better since IGE was initiated. Seventy-six percent of the teachers in the high implementing schools feel that student academic performance has improved while none feel it is "poorer."[13]

Other studies have measured the effect of IGE outcomes in IGE schools on achievement, school climate, finance, parent involvement and other variables in the school community. The studies of Gresso, Babcock, Prince

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[12]Kenneth A. Tye and Barbara J. Benham, "The Realities of Curriculum Change: Into an Era of Uncertainty," Educational Leadership (October, 1978), pp. 35-36.

[13]Jon S. Paden, A National Evaluation of the /I/D/E/A/ Change Program for IGE (Dayton, Ohio: The Institute for the Development of Educational Activities, Inc., 1975), p. 19.

and Parsons evidenced findings that indicated a significant increased effectiveness in school climate, student achievement, reading and math performance, and adjustment to new situations respectively in schools implementing most of the IGE outcomes or high implementing schools.[14]

Supportive data of the positive results of schooling in IGE schools indicate that its implementation in the environments studied has made a difference in the quality of education and the attitude of students and teachers toward school. This attitude of confidence is not reflected nationwide as the "Back to the Basics Movement" of late manifested the concern for student achievement solely. Goodlad's viewpoint is that schooling cannot be totally measured by traditional accountability standards, achievement scores. That achievement is only a portion of the schooling process. Other factors in the environment assist in mastering learning competencies and other valuable skills and attitudes. He declared:

> Too many researchers are preoccupied with research on single instructional variables that rarely account for more than 5% of the variance in student outcomes. Too few study the complex phenomena of schooling in their natural environment, developing the needed new methodologies instead of seeking to adapt the old.[15]

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[14]Jon S. Paden, Reflections for the Future (Dayton, Ohio: The Institute for Development of Educational Activities, Inc., 1978), p. 7.

[15]John I. Goodlad, "Can Our Schools Get Better?" Phi Delta Kappan 60 (January, 1979), p. 347.

Since the /I/D/E/A/ Change Program for IGE continues to exhibit effectiveness in schools, it is important to determine if the implementation of one or more schools in a school district makes a difference in other schools in the district in terms of IGE implementation. If the findings indicate that there is a difference then school districts should seriously consider a commitment to the /I/D/E/A/ Change Program. Further, the opinion toward the implementation of the IGE practices could provide direction for in-service emphasis, especially toward dynamic philosophic modes of behavior.

Definition of Terms

Facilitator: A person trained by /I/D/E/A/ to coordinate communication and the cooperative implementation efforts in a league of IGE schools.

/I/D/E/A/: An abbreviation for the Institute for the Development of Educational Activities, Inc. It is the educational affiliate of the Charles F. Kettering Foundation.

/I/D/E/A/ Change Program: A term designated by /I/D/E/A/ to classify a program designed to facilitate the implementation of research findings more rapidly than by natural evolution.

Individually Guided Education (IGE): A researched education process encompassing the coordination of many innovations (e.g. team teaching, continuous progress learning, and multiage grouping) aimed at creating learning

environments appropriate to each student as well as skills and attitudes necessary for continuous improvement through a program of in-service for school staff.

IGE Outcome: The term used for performance expectations. The thirty-five outcomes pertain either to individualized instruction or continuous improvement.

IGE School: The appropriate reference to a school striving to achieve all outcomes associated with Individually Guided Education.

Individualized Instruction: An educational process in which decisions related to the learning task and the behavior of the teacher emerge from the diagnosis of each learner. It should not be confused with independent study or tutorial situations.

In-Service: A planned and continuous educative process utilizing IGE materials and other appropriate resources related toward the implementation of specific outcomes.

League: A group of schools working cooperatively with a Facilitator to implement IGE outcomes.

Learning Community (L.C.): The organizational structure that facilitates the /I/D/E/A/ Change Program for IGE. Each L.C. consists of a leader, teachers, aides and 75-100 students. The L.C. contains a heterogeneous group of staff members and students of two or more age ranges or "grades".

Learning Community Leader: A teacher responsible for organizing, coordinating, and leading the L.C. to carry out its function of educating students and providing staff development programs.

Non-IGE School: A school not associated with IGE either through /I/D/E/A/ or Wisconsin R & D. In this study they are labeled non-IGE regardless of their organizational structure or educational practices.

Program Improvement Council (PIC): A decision-making and advisement committee composed of the principal and learning community leaders concerned with school-wide policies and operational procedures. Instructional Improvement Committee (IIC) or steering committee are synonymous terms.

School District: The legal entity created for the purpose of operating and maintaining education within boundaries.

Assumptions

1. The IGE outcomes implemented in a system of inter-relatedness constitute a process of effective schooling.

2. Responses to the instrument are accurate expressions of what is actually practiced as perceived by teachers.

3. The instrument used to measure the implementation and opinion of the IGE outcomes is appropriate.

Limitations

1. This study is confined to IGE school districts that have a commitment to the /I/D/E/A/ Change Program for IGE.

2. Only IGE school districts in which IGE Facilitators have association with both IGE and non-IGE schools will be included in the study.

3. School districts in agreement with the /I/D/E/A/ Change Program for Individually Guided Education (IGE) demonstrate varying degrees of support toward IGE implementation.

4. Teachers who are staff members of the sample schools are participants in this study.

Research Objectives and Hypotheses

The research hypotheses of the dissertation are:

1. Is there a difference in the degree of implementation of IGE in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district?

   a) There is no significant difference in the degree of implementation of IGE outcomes labeled School Decisions in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

   b) There is no significant difference in the degree of implementation of IGE outcomes labeled School Organization in the three types of schools, IGE school and non-IGE school in the same district and non-IGE school in a non-IGE school district.

c) There is no significant difference in the degree of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

d) There is no significant difference in the degree of implementation of IGE outcomes labeled Student Responsibility in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

e) There is no significant difference in the degree of implementation of IGE outcomes labeled Planning, Analyzing and Improving in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

2. Is there a difference in the opinion of implementation of IGE outcomes in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district?

a) There is no significant difference in the opinion of implementation of IGE outcomes labeled School Decisions in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

b) There is no significant difference in the opinion of implementation of IGE outcomes labeled School Organization in the three types of schools, IGE school and non-IGE school in the same district and non-IGE school in a non-IGE school district.

c) There is no significant difference in the opinion of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

d) There is no significant difference in the opinion of implementation of IGE outcomes

labeled Student Responsibility in three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

e) There is no significant difference in the opinion of implementation of IGE outcomes labeled Planning, Analyzing and Improving in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Procedures for Data Collection

Type of Study

This study utilized the descriptive method of research. Sax described the goal of descriptive analysis:

> The purpose of descriptive research is to show conditions as they exist without being influenced by the investigator. Descriptive research encompasses a number of different techniques, including correlational analyses, case studies, surveys, and interviews as well as direct observation.[16]

A questionnaire has been devised to indicate the extent of implementation of IGE outcomes and the opinion or belief of implementing IGE practices in schools.

Instrument

A questionnaire was designed by the researcher for the collection of the data. (see Appendix) A review of the literature pertaining to Individually Guided Education was examined. Researchers at the Kettering Foundation (/I/D/E/A/) and experts at Michigan State University critiqued and verified the appropriateness of the

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[16]Gilbert Sax, Empirical Foundations of Educational Research (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968), p. 36.

questionnaire. The format and design of the questionnaire was enhanced through the assistance of a professor from the Department of Secondary Education and Curriculum. The questionnaire was devised to indicate levels of implementation of Individually Guided Education practices in schools and to obtain the opinion status of these IGE practices.

The thirty-five IGE outcomes, the basic structure of IGE, served as a guideline for the questionnaire. Language is generic in nature so that terminology could be identified by non-IGE participants. The outcomes were clustered in five categories for ease of interpretation.

Population

The total IGE population consists of sixty-nine school districts located in thirty-seven states throughout the United States. By 1976 more than "1300 elementary schools have used the IGE support materials" for in-service purposes. The population for this study consisted of teachers in school districts located in twelve states geographically near Michigan and including Michigan which have association with the /I/D/E/A/ Change Program for Individually Guided Education and teachers in school districts contiguous to the /I/D/E/A/ districts.

Sample and Sampling Methodology

The sample included teachers in one IGE and one non-IGE school in school districts committed to the /I/D/E/A/ Change Program for Individually Guided Education

as well as teachers in one non-IGE school located in a non-IGE school district contiguous to the IGE school district.

Schools within the districts were randomly selected using a table of random numbers. A list of IGE schools was provided by /I/D/E/A/. School Universe Data Book was used in the random selection of the non-IGE schools in both the IGE school districts and the non-IGE school districts.

Mechanics of Gathering Data

The principals of randomly selected schools completed the School Data Form, introduced the study to staff members, distributed questionnaires and envelopes to teachers, and coordinated the procedure whereby teachers returned questionnaires in sealed envelopes to the principal for mailing.

In order for the above transactions to be actualized the following procedures were implemented, namely:

1. An appropriate letter describing the study was sent to all IGE Facilitators in school districts associated with the /I/D/E/A/ Change Program for IGE in twelve states. The intent was to introduce the study, to identify facilitators who associated with IGE and non-IGE schools, and to identify contiguous non-IGE school districts. An identification form and stamped, self-addressed envelope was enclosed in the mailing.

2. Non-respondents were mailed a reminder letter and identification form.

3. The superintendents of the designated contiguous non-IGE school district were sent an appropriate letter introducing the study, the name of the randomly selected school, a copy of the principal's letter, and a copy of the questionnaire.

4. The identified IGE facilitators of school districts who associate with IGE and non-IGE schools were sent an appropriate letter introducing the study, the names of the randomly selected schools (one IGE school and one non-IGE school), a copy of the principal's letter and a copy of the questionnaire.

5. The superintendents of non-IGE school districts and the IGE facilitators of the IGE school districts were phoned to ensure participation of schools.

6. A suitable letter was mailed to principals of randomly selected schools describing the study and explaining procedures of participation. Questionnaires and envelopes for each teacher were included in the mailing.

7. Schools which did not return questionnaires were mailed a post card reminder.

Overview of the Organization of the Study

Chapter I contains an outline for the entire study. It includes the introduction which provides the background for the study. A statement of need, the purpose, and significance of the study are described. Definition of terms are identified and limitations of the study are explained. General assumptions are made as well as a

statement of the hypotheses to be tested. Research methods are cited and procedures for data collection are stated.

Chapter II contains a review of pertinent literature. The method of investigation was explored in Chapter III, while Chapter IV contains the analyses and discussion of the data with respect to the research questions. Chapter V includes a summary of findings, conclusions, implications, and recommendations for future research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

More than a decade ago /I/D/E/A/ launched its Change Program for Individually Guided Education by combining successfully strategies, based on a five year Study of Educational Change, with additional change concepts developed in cooperation with other research organizations. Since IGE's eclectic process demanded an examination of these concepts associated with the Program, the literature was reviewed from the following perspective: the change process and educational innovations, the Study of Educational Change, and a description of the /I/D/E/A/ Change Program for Individually Guided Education and contemporary studies concerning Individually Guided Education.

The Change Process and Educational Innovations

Early studies of innovation indicated that change in American school systems came about through a very slow process. Mort asserted that "between insights into a need and the introduction of a way of meeting the need that is destined for general acceptance there is typically

a lapse of a half-century."[1]

Studies coordinated by Mort and Cornell in the late 1930's revealed the diffusion rate of educational innovations or adaptability. Although extremely slow in implementation, school systems with high adaptability were those where teachers participated in in-service or training programs and were more understanding of new school practices.[2]

At this time in history the typical pattern of innovation was to decide on the manner of meeting a need and then waiting for another fifty years for the instillment or diffusion of a productive innovation. Mort's findings verified that a positive relationship existed between the speed of adopting innovation and the financial support provided by the community.[3]

Mort's studies reported in the 1930's on the rate of diffusion did substantiate observations from P. H. Coombs' study. Coombs reported a survey in which six out of twenty-seven innovations that were investigated had been adopted in school systems throughout the country

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[1]Paul R. Mort, "Studies in Educational Innovation," in Innovation in Education ed. Matthew Miles (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 318.

[2]Paul R. Mort and F. G. Cornell, American Schools in Transition (New York: Teachers College, Columbia, 1941).

[3]Mort, "Studies in Educational Innovation," Innovation in Education, 1964.

within about ten years.[4]

In 1953 Mort predicted that society could soon expect an outpouring of important new designs in education. He postulated:

> These designs will spring from the combination of hundreds of innovations which have been stimulated during the present half-century by new insights into educational psychology and social change.[5]

He stated that the major discovery in education theory was that formal disciplines were untenable. This fact would lead to long periods of adjustment which would be characterized by thousands of innovations; and these in turn would provide composites for newer inventions and innovations.

Recognizing the slow rate of acceptance and use of new ideas in educational systems, it has been established that educators lag behind those of the medical, agricultural and industrial systems, Miles delineates three reasons for this situation.

1. There is an absence in education of any body of valid scientific research findings.
2. There is a lack of change agents in order to promote new educational ideas.
3. Very little economic incentive exists to adopt even those ideas and innovations

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[4]P. H. Coombs, The World Educational Crisis (New York: Praeger, 1968), pp. 118-119.

[5]Mort, "Studies in Educational Innovation," Innovation in Education, p. 324.

> which have been explored, and which on the face of it appear to have some logical validity.[6]

As time progresses, diffusion rates increase in implementations. Miles describes the change process as involving stages of exploration, namely:

> The development of awareness and interest concerning the innovation; evaluation (in the sense of reaching a judgmental decision about the potential rewards and costs of the innovation); actual trial of the innovation in the local system. This process results in a decision to adopt, adapt, or reject the innovation.[7]

In summarizing the studies of change, Mackenzie concluded that many forces outside the school situation greatly influenced the rate of change and appeared to be the dominant initiators in the studies. These included the following: non-educationists, foundations, academicians, business and industry, educationists, and the federal government.[8] Change in education is shaped by a number of forces, some of which facilitate and some of which impede the process.

Motivating forces which foster acceptance of a change program are the following: dissatisfaction with

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[6]Matthew B. Miles, "Innovation in Education: Some Generalizations," in Innovation in Education ed. Matthew Miles, (New York: Bureau of Publications, Teachers College, Columbia University, 1964), pp. 631-62.

[7]Ibid., p. 650.

[8]Gordon N. Mackenzie, "Curricular Change: Participants, Power, and Process," in Innovation in Education ed. Matthew Miles, (New York: Bureau of Publications, Teachers College, Columbia University, 1964), pp. 414-415.

the present situation, external pressures toward compliance, momentum toward change, and motivation by consultant or change facilitator.

Because of its complexity, resistance to planned change is a complex rather than simple problem. Observations and studies on the topic are numerous.

Miller reported three general inhibiting elements in an individual's resistance to depart from the known. The first is traditionalism, which is related to stability and in some situations supports continuity. The second element is laziness. Innovations involve added energies. Related to laziness is indifference and rationalization. Fear and insecurity is the last general element. Other elements more essentially related to schools are: administrative reticence, educational bureaucracy, inadequate finances, community indifference and resistance, insufficient knowledge concerning the process of change, and inadequate teacher education programs.[9]

Carlson projects three barriers to change, namely: (1) lack of officials who perform as change agents, (2) the weak base of professional knowledge, and (3) the domesticated nature of the school organization.[10]

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[9]Richard I. Miller, "An Overview of Educational Change," in Perspectives on Educational Change ed. Miller, (New York: Appleton-Century-Crofts, 1967), pp. 8-19.

[10]Richard O. Carlson et.al. Change Processes in the Public School (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965).

Bentzen and Tye also reported that many factors impede the bringing about of desirable change in elementary schooling. They are inadequate finance, value dilemmas, vested interests, bureaucracy and adherence to norms, confusion in decision-making, leadership vacuum and the lack of strategies.[11]

One reason that norms sometimes act as a source of both individual and group resistance to change is that, as blueprints for behavior, they often substitute for thinking. By presenting solutions to basic social problems they help to outline actions, but they can also impede ability to reason when new problems and situations arise.

Resistance to change will be minimal if teachers are allowed to participate in the decision-making process. This is substantiated by Goodwin Watson, who concluded that:

1. Resistance will be less if participants in the change process have worked together to diagnose a situation and agree on a basic problem and feel it is important.

2. Resistance will be less if the goals are adopted by consensual group decision.

3. Resistance will be reduced if proponents are able to empathize with opponents to recognize valid objections and to take steps to relieve unnecessary fears.

4. Resistance will be reduced if individuals experience acceptance, support, trust,

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[11]Mary M. Bentzen and Kenneth A. Tye, "Effecting Change in Elementary Schools," The Seventy-second Yearbook of the National Society for the Study of Education ed. John I. Goodlad and Harold G. Shane (Chicago, Illinois: The University of Chicago Press, 1973), pp. 352-359.

> and confidence in their relations with one another.[12]

Teachers have the need to sustain a sense of personal worth. An important source of satisfaction for this need is the response they receive from friends and colleagues whose approval and support they are eager to have.

Cartwright and Zander support the idea that change will meet with little resistance in schools where the individual is motivated to: (1) accept the goals and decisions of the group; (2) seek to influence these groups and decisions so they are consistent with his own goals and experiences; (3) communicate fully to the members of the group; and (4) behave in a way calculated to receive support and recognition from members of the group and particularly from individuals whom he sees as having more power and status than himself.[13]

Change is a complex phenomenon. Change in any system will create pressure on and tensions in other related systems. In view of the fact that any major change in society will effect stress on other subsystems, school leaders need to anticipate, identify, and deal realistically with changing situations. The change process needs recognition in schools.

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[12]Goodwin Watson, ed., Concepts for Social Change (Washington, D.C.: National Training Laboratories, 1967), p. 23.

[13]D. Cartwright and A. Zander, eds., Group Dynamics Research and Theory (Evanston, Illinois: Row and Peterson, 1960).

Lewin describes change as a three-step procedure of unfreezing, moving, and refreezing the organization.[14] The unfreezing process means reducing the forces keeping the organization at its present level. Unfreezing brings the organization to a new level. This step involves the development of new values, behaviors, or attitudes through internalization, identification, or change in structure. The third step, refreezing, involves stabilizing the change at a new "quasi-stationary equilibrium" through the use of supporting mechanisms, e.g., changes in group norms, or modification of organization policy or reward structures.

Hollingsworth and Hass utilized Lewin's ideas.

> Once efforts are exerted to disrupt equilibrium for change, steps must be taken to maintain the new state, thus establishing a state of equilibrium at a different level. This process can be divided into three distinct steps: unfreezing, changing and refreezing. If change is to have any probability of permanence, there must be a "locking in" effect, that is, the structural environment should be modified to lend permanence to the psychological changes.[15]

The psychological, technological, and structural aspects of an organization are all involved with change; and to neglect any segment, is to lower the probability of successfully implementing a change program. The lack of a systematic approach to organizational change causes a lack

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[14]Kurt Lewin, Field Theory in Social Science (New York: Harper and Row, 1951).

[15]A. T. Hollingsworth and Jane W. Hass, "Structural Planning in Organizational Development: An Often Neglected Aspect," Personnel Journal 54 (December, 1975), p. 613.

of change permanence or the establishment of a desired situation.

There are many strategies of planned change. Bushnell enumerates six factors of planned change as:

(1) diagnosing the problem;

(2) formulating objectives, and criteria of effectiveness;

(3) identifying constraints and needed resources;

(4) selecting potential solutions;

(5) evaluating these alternatives; and

(6) implementing the selected alternative with the school system.[16]

Today a great variety of change techniques are in use; methods of grouping and categorizing these techniques are also numerous. One such method which is potentially useful is to distinguish between efforts which seek to alter individuals' personal characteristics and others which aim to change the conditions under which they operate. This distinction is often a difficult one, Katz and Kahn describe the situation:

> The confusion between individual and organizational change is due in part to the lack of precise terminology for distinguishing between behavior determined largely by structural roles within a system and behavior determined more directly by personality needs and values. The behavior of people in organizations is still the

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[16]David S. Bushnell and Donald Rappaport, eds., Planned Change in Education: A Systems Approach (New York: Harcourt, Brace, Jovanovich, Inc., 1971), p. 10.

> behavior of individuals, but it has a different set of determinants than behavior outside of organizational roles.[17]

In studying educational reform and renewal the institutional characteristics of schooling need consideration. Schools have underlying patterns of conduct, belief, and values which provide meaning to the ongoing activities of learning. These patterns and assumptions of school life have tended to produce standardized educational experiences to emphasize certain knowledge which is technical rather than imaginative, and to maintain noncritical and protective professional activities.

Baldridge summarizes results from a series of research projects on organizational change that were sponsored at Stanford. Those results indicated that large, complex school districts with a turbulent, changing and heterogeneous environment will probably be much more innovative than a small, simple district with a relatively stable, homogeneous environment. The fundamental logic concerns structure:

> (1) Size make a series of demands about coordination, control, and complexity to which a district must respond.
>
> (2) Differentiation and structural complexity produce cadres of specialists concerned about the task demand within their specialized realms. Consequently, these specialists search for new ways of handling the demands within their specialized units.

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[17]Daniel Katz and Robert Kahn, The Social Psychology of Organizations (New York: John Wiley & Sons, 1966), pp. 390-391.

(3) The environment surrounding a district makes numerous demands because of its heterogeneity and change.[18]

These structural elements of school districts are insightful explainers of innovative behavior.

Schools are in a very real sense living organizations, and, accordingly, they respond to new or modified patterns of operation in much the same way as a living organism would. L. Hilfiker, in his study of eight school systems, has demonstrated that the innovativeness of a given school system is amenable to measurement by the type of interpersonal relationships and norms observed to exist in that system.[19]

Internally, the school is a composite of goals or expectations, personal needs, group norms, and sensitive processes. They are in constant interaction and cannot be treated independently by change agents. Anyone who wishes to change the goals of a school must at the same time be willing to invest time in changing norms and processes which might impede goal accomplishment. Also, one must be alert to how the new goals relate to personal needs of

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[18]J. Victor Baldridge, "Political and Structural Protection of Educational Innovations," What Do Research Findings Say About Getting Innovations into Schools: A Symposium eds., Sandford Temkin and Mary V. Brown (Pennsylvania: Research for Better Schools, Inc., 1975), p. 37.

[19]L. R. Hilfiker, "Relationship of School System Innovativeness to Selected Dimensions of Interpersonal Behavior in Eight School Systems," Technical Report (Madison, Wisconsin: Center for Cognitive Learning, 1969), pp. 20-21.

staff members. An open climate with its participatory modes of decision making, most often allows for successful integration of goals, needs, and norms. Creation of such a climate might be the first focus of the change agent's efforts.

Chris Argyris has suggested the characteristics associated with an effective intervention of a change agent: (a) the establishment of valid information, (b) the development of independence on the part of the client, and (c) the development of client commitment to change.[20] These guidelines imply that the change agent and the client must perceive conditions as they actually exist through reality testing. Further, the change agent must behave in a manner which helps the client become a fully functioning individual, making his own choices and being responsible for his own behavior. When the client determines his own solution to problems, he is more likely to achieve and maintain lasting changes.

Another insight on elements of change considerations are those from Tye and Novotney. They stated that:

> Schools have the characteristics of all complex organizations to one degree or another. Research into such organizations suggests that the areas which offer the most potential for improving schools are those which involve training staff, decentralizing decision making, minimizing role

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[20]Chris Argyris, Intervention Theory and Method: A Behavioral Science View (Reading, Massachusetts: Addison-Wesley Publishing Company, 1970).

> distinctions, improving staff morale, and the like.[21]

The Rand Study of Educational Change reported numerous findings. One of the effective findings toward educational change supports the idea of participation at the local level.

> One finding that merits attention involves implementation strategies that promote mutual adaptation and, we believe, lead to effective implementation. The following strategies operating together promoted mutual adaptation:
>
> - Adaptive planning.
> - Staff training keyed to the local setting.
> - Local materials development.
> - The establishment of a critical mass of project participants.[22]

Innovations using these strategies in concert were likely to result in significant teacher change that appeared to have been incorporated by the participating staff.

Not only in federally supported programs but also with educational change that stems from other sources: innovations which are the most successful are those which provide teachers with optimal opportunities to learn the new programs.

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[21] Kenneth A. Tye and Jerrold M. Novotney, Schools in Transition: The Practitioner as Change Agent (New York: McGraw-Hill Book Company, 1975), p. 49.

[22] Paul Berman, et.al., Federal Programs Supporting Educational Change: Vol. V: Executive Summary (Santa Monica, California: Rand Corporation, 1975), p. 15.

> Whereas initial faculty reaction to the proposed change is not critical in determining its success, the amount of help provided is critical. . . . An innovation which falters is more likely to be suffering from simple staff inability than from conscious or unconscious sabotage.[23]

There is ample documentation to support the view that teacher participation in decision-making has desirable consequences. Studies researched in industry, dating from the famous Western Electric Studies at Hawthorne, Illinois,[24] to later studies, such as Coch and French,[25] Vroom,[26] Maier,[27] and Wickert[28] reveal the value of staff involvement.

In education, Chase's study involving 1800 teachers in 216 systems in 43 states, indicated that "teachers who report opportunity to participate regularly and actively in making policies are more likely to be enthusiastic

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[23]Henry Brickell, "State Organization for Educational Change: A Case Study and a Proposal," Innovation in Education ed. Miles (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 318.

[24]Fritz J. Roethlisberger and William J. Dickson, Management and the Worker (Cambridge, Massachusetts: Harvard University Press, 1939).

[25]L. Coch and J. R. P. French, Jr., "Overcoming Resistance to Change," Human Relations I 1948, pp. 512-32.

[26]Victor H. Vroom, Some Personality Determinants of the Effects of Participation (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1960).

[27]N. R. F. Maier and R. A. Maier, "An Experimental Test of the Effects of Developmental vs. Free Discussions on the Quality of Group Decisions," Journal of Applied Psychology 41 1957, pp. 320-323.

[28]R. F. Wickert, "Turnover and Employees Feelings of Ego-Involvement in the Day-to-Day Operations of a Company," Personnel Psychology 4 1951, pp. 185-197.

about their school systems than those who report limited opportunity to participate."[29]

Involvement of staff in the change process is basically a management and leadership problem. Change agents are literally both managers and leaders. Although schools are not factories, schools are composed of people operating in a variety of organizational relationships. The findings of management research offers a source of guidance in staff development.

Likert explains that managers who are highly productive tend to exhibit certain common characteristics:

1. They are guided by the fact that any new practice must give promise for improving both attitudes and productivity.

2. They rapidly sense any unfavorable shift in attitude among their subordinates and promptly change or stop the activity responsible for the undesirable shift.

3. They avoid putting greater hierarchical pressures on workers to increase production.

4. They tend to use principles and practices of management which yield better communication and better decisions.[30]

In essence, the effective leaders are acutely concerned about staff. Bellows has shown that when an accountant, engineer, or teacher enters the field of work, eighty percent of his job revolves around technical skills

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[29]Francis S. Chase, "The Teacher and Policy Making," Administrator's Notebook 1 (May, 1952), pp. 1-4.

[30]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, 1961), p. 78.

and twenty percent on ability to get along with people. As a person moves in the hierarchy, the technical component decreases while the human component increases.[31]

The principal of a school is in the position of public relations and is challenged especially in the change process.

In Brickell's New York report it is found that instructional programs and rearrangements of organizational structures depends "almost exclusively" upon administrative initiative.

The administrator is a key element in the change process. Brickell postulates that:

> The administrator may promote or prevent innovation. . . . He is powerful . . . simply because he has the authority to precipitate a decision. Authority is a critical element in innovation, because proposed changes generate mixed reactions which can prevent concensus among peers and result in stagnation.[32]

Lieberman conducted a study of more than 700 teachers in thirty-one elementary schools about the characteristics of principals. Lieberman discovered that the principal can be the key agent for change in the school when performing the role of the leader. She found that when the principal shares decision making with staff and involves both the principal and the teachers in organizing

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[31]Roger Bellows, Thomas Q. Gilson, and George S. Odiorne, Executive Skills for Dynamics and Development (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962), p. 229.

[32]Henry Brickell, "State Organization for Educational Change," Innovations in Education, ed. Miles, p. 503.

the school to deal with its problems, the teachers respond with higher morale and greater professionalism. Under such leadership, teachers become more willing to engage in the processes of bringing about change in the school.[33]

Problem-solving on a school-wide basis is essential to change. However, change is usually implemented by selecting a new alternative and installing it.

Concerning the lack of appropriate strategies for elementary schools, Janowitz, in his studies about change in slum schools, revealed that prior to 1969 most change efforts were segmental in nature. Efforts were generally directed toward the development of model demonstration projects rather than the planning of fundamental institution building.[34]

Other traditional strategies or efforts toward the institutionalization of change in schools which lack permanence are those strategies proposed by Havelock such as, research, development, and diffusion; social interaction; and problem-solving. One concept that provides the necessary ingredients of improvement is that of self-renewal systems or strategy for planned change described by Miles and Lake. They describe such a process as:

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[33]Ann Lieberman, "The Power of the Principal: Research Findings," in The Power to Change: Issues for the Innovative Educator eds., Carmen M. Culver and Gary J. Hoban (New York: McGraw-Hill Book Company, 1973).

[34]Morris Janowitz, "Alternative Models of Institutional Change in the Slum School," Phi Delta Kappan 52 (February, 1971), pp. 334-37.

> A self-renewing school system would have the ability to continuously sense and adapt to its changing external and internal environment in such a manner as to strengthen itself and optimally fulfill its goal of providing quality education for children.[35]

The emergence of new planning tools and change strategies in education offers the hope of more rapid adaptation of public schools to the demands of modern society.

From the contemporary change literature used by John Goodlad in his five year study and others cited in this review, it is clear that a change program is embraced when a commitment to the change program is made by the professionals in the school setting. Willis summarizes this phenomenon:

> Among the many lessons learned about educational improvement one thing stands out above all the rest: If teachers are expected to change their methods of behaving to ones considered desirable for better instruction, they must be given the freedom to elect that change; attempts to impose change upon them may yield some short-term, superficial success, but will fail in the long run.[36]

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[35]M. B. Miles and D. G. Lake, "Self-Renewal in School Systems: A Strategy for Planned Change," in Concept for Social Change ed., Goodwin Watson (Washington, D.C.: National Training Laboratory, 1967), p. 82.

[36]Charles L. Willis, Report on What We Have Learned about the /I/D/E/A/ Change Program for Individually Guided Education (Dayton, Ohio: Institute for Development of Educational Activities, Inc., 1974), p. 25.

/I/D/E/A/ Change Program for IGE and the Five Year Study of Educational Change

In the United States the years from 1957 to 1967 could be described as the Schooling or Educational Decade. It was initiated by Sputnik and terminated with the realization that education is a long term response to society's problems and should not be confused with social engineering. Curriculum revision, reforms, innovations, and the ushering in of the federal government into schools as never before through the Elementary and Secondary Act of 1965, characterized education during this decade.

Goodlad and associates observed that innovations were used in schools with the same common expectations of schooling.[37] A major expectation is coverage of a predetermined body of material by all students within a specified period of time, ordinarily a year and a grade.

Recently Goodlad described the function of schooling:

> The functions of schooling must be twofold: to enable the student to possess and shape the culture and to live effectively and satisfyingly within culture. Efforts to fulfill such function through coverage of content are anachronistic.[38]

Although innovations which gave promise of change such as nongradedness and team teaching were used, these

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[37]John I. Goodlad, M. Frances Klein, and Associates, Looking Behind the Classroom Door (Charles A. Jones: Worthington, Ohio, 1974).

[38]John I. Goodlad, Facing the Future (New York: McGraw-Hill Book Company, 1976), p. 106.

were essentially operating in a conventional system.

The /I/D/E/A/ Change Program for IGE was in its embryonic stage when the /I/D/E/A/ Research Division under the direction of John I. Goodlad embarked upon a five year study.

The Study of Educational Change was an attempt both to introduce change into schools and to study the process by which change takes place. The strategy selected to provide opportunities for actual change in the school came from the belief situation of the persons involved in the study. One major belief guiding the study is succinctly described by Shiman and associates:

> The faculties of individual schools know best what needs to be done in their own situation. Therefore, they should decide where, when, and how innovations should be introduced. A major corollary of this belief is that within any group of schools there exists a number of individuals who have faced the problems of schooling and have come up with innovative and workable solutions. These teachers and administrators can provide help and advice to others who are facing the same problems.[39]

A dominant strategy of the Study of Educational Change was the establishment of the League of Cooperating Schools. The League consisted of eighteen schools in distinct school districts committed to be involved in a study which initially focused on implementing the concept of individualization and change in schools. The linking

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[39]David A. Shiman, Carmen M. Culver, and Ann Lieberman eds., Teachers on Individualization: The Way We Do It (New York: McGraw-Hill Book Company, 1974), p. 2.

elements consisted of three components: each school, a network or potentially new social system embracing the schools, and the /I/D/E/A/ research office with relationship with UCLA. The schools represented a cross-section of American public elementary education.

Other major beliefs which were recognized, agreed upon, and became guideposts for intervention strategies were the following:

1. The individual school is a strategic unit of educational change, that is, each school, with its students, principal, teachers, parents, and residents of the surrounding community, is a strategic and significant vehicle for effecting educational improvement.[40]

/I/D/E/A/ reports that the study showed that the individual teacher who wants to try new patterns of instruction rarely succeeds unless the school supports these efforts.

2. The culture of the school is central both to understanding and to effecting educational improvement. Bahner and Willis postulate that the belief system held by a critical mass of the individuals who compose the staff greatly influences the performance of the school. . . . Change efforts must be directed toward obtaining agreement from a critical mass of the school staff that they can do

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[40] /I/D/E/A/'s Guide to an Improvement Program for Schools (Dayton, Ohio: Institute for Development of Educational Activities, Inc., 1975), insert.

a better job, and toward stimulating them to reach out for help.[41]

3. Each school needs a process by which it can deal effectively with its own problems and effect its own change. Willis explained that /I/D/E/A/ planned that, partly through participation in the League, each school would develop an improvement process: a systematic procedure for discussing and diagnosing its own problems, formulating solutions, taking action on recommended solutions, and trying to obtain evidence about the effects of such action. The process, refined after many experiments was termed DDAE - Dialogue, Decision-making, Action, Evaluation.[42]

4. Some screening, legitimizing, and communicating of ideas beyond what individual schools might do informally must be built into the new social system.

The League itself became an increasingly powerful resource for staff development with each passing year.[43]

5. Individuals asked to take risks are more willing to do so when some elements of success are already built into the structure.

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[41]John M. Bahner and Charles L. Willis, "Selected Concepts for Individually Guided Education," Theory into Practice 13 (April, 1974), p. 100.

[42]Willis, Report on What We Have Learned about the /I/D/E/A/ Change Program for Individually Guided Education, p. 2.

[43]Bahner and Willis, Theory into Practice, p. 43.

When careers or familiar patterns of behavior are at stake, most people prefer to be associated with a winner. For this reason, the League's relationship with /I/D/E/A/ and UCLA loomed large at the beginning of the study.[44]

From these cooperative belief statements and lived experiences processes for institutionalizing change were learned. Bahner and Willis reported learnings about the study.

> In summary, change takes place most effectively when expectations for change become the new social standard through association with others of similar intentions. Interaction among small groups, first within the school and subsequently within a consortium of schools, must be a part of the change process. And finally, the "way of life" for these small group members must be to take action based on their discussions, assess that action, and interact once again to decide on modifications to their plans. When this occurs in an atmosphere of mutual support, creative solutions to existing problems emerge. Staff members provide learning environments appropriate for individual students. They also engage in process which lead to continuous improvement of those learning environments and their own professional competency.[45]

The conceptualization guiding the League is a rationale, not a theory. In its initial formulation, Goodlad was influenced in part by Parsons, Getzels, Griffiths, Clark, Guba, and Brickell, to name only a few. None of them is so closely identified with the formulation,

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[44]Willis, Report on What We Have Learned about the /I/D/E/A/ Change Program for Individually Guided Education, p. 3.

[45]Bahner and Willis, Theory into Practice, pp. 101-102.

however, as to be identified with the formulation. Some of them may disagree with part or even all of it. The rationale guiding the League, the dominant strategy of the five year study is:

1. The key unit for educational change is the individual school.

2. The principal is the designated responsible leader of this unit.

3. The "systems" of which the school is a part exercise enormous constraints which serve to discourage change and innovation.

4. If change is to occur at a reasonable rate, the existence of a counter-cyclical or redirecting system of considerable importance will be critical.

5. The new changes posed by the countervailing system will demand new behaviors for those involved.

6. Threat and insecurity for those traditionally oriented will surface.

7. If threat and insecurity are strong, then the countercyclical system must persist in determined behaviors.

8. The countercyclical system must employ self-renewing facilities.

9. Any signigicant change needs access to both conceptual and operating models of the change condition

and to opportunities to learn new behaviors.[46]

The dominant concept underlying IGE is individualization. This resulted from a philosophy which not only recognized individual differences but also insisted that differences were to be considered in planning and instruction. The need to incorporate the philosophy of individual differences in schools with teachers, administrators, students, and parents; and at the same time not substantially increase expenditures of money was one basic consideration in the development of IGE. It was believed that changes in organization, method, and materials could more effectively meet individual differences given the same dollar support.

Specifically, /I/D/E/A/'s philosophy is summarized in a description of the ideal school which should meet students' differences in at least these basic ways:

- by helping each student to progress through his learning program at his own pace;
- by varying the medium of instruction (textbooks, audiovisual materials, demonstrations);
- by varying the instructional mode (large group, small group, tutorial, independent study);
- by varying time, space, and place for learning;

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[46]John I. Goodlad, "Educational Change: A Strategy for Study and Action," The National Elementary Principal 48 (January, 1969), pp. 6-13.

> ·by matching each student with the person best suited to that student for a specific learning task.[47]

Because of this philosophy a plan for Individually Guided Education began to develop. The challenge was to include the importance of the individual and the need for communication among persons in the school community in a systematic, comprehensive program. The program based on sound principles, proven strategies, and accepted processes of education would enable schools to implement positive and continuous improvement while meeting individual needs. The /I/D/E/A/ Change Program for IGE can be traced to the study which began in 1966 for the specific mission of accelerating the pace of change in education. This study examined the total context in which change took place rather than advocating a collection of innovations based on the best insight available. Literature of change and innovation, the Ford Foundation sponsored Harvard Teaching Teams Project, and the work accomplished by Wisconsin Research and Development Center for Cognitive Learning made valuable contributions toward the development of /I/D/E/A/'s Change Program.

In 1968 a study called the Enhancing Difference Project sponsored by /I/D/E/A/ was initiated to integrate emerging findings from the Study of Change with specific strategies to individualize learning programs for students in the context of continuous improvement of staff and

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[47]Willis, Report on What We Have Learned about the /I/D/E/A/ Change Program for Individually Guided Education, p. 5.

school. Rather than a set of packaged course outlines, the focus of the project was on developing processes that could be applied to any goals that a school might choose to implement. This study of more than two years included twenty schools in Ohio, Florida, New York, and Michigan. Results of the Enhancing Difference Projects were combined with research and development from several cooperating educational institutions into the /I/D/E/A/ Change Program of Individually Guided Education.

Chase defines IGE as a system of many interrelated components, but it is also a strategy incorporating many tactics for attaining educational objectives; and when fully implemented, it takes on an institutional character as a new kind of school. It offers distinctive patterns for the organization and management of instruction and learning environments; it fosters new sets of relationships to other education agencies and to supporting community; it incorporates coordinated strategies for continuing evaluation, refinement, and renewal; and it stimulates staff development and curricular innovation.[48]

The /I/D/E/A/ Change Program for Individually Guided Education is aimed at two basic goals: (1) individualizing learning programs for students, and (2) continuous improvement of the staff and school. The IGE Change Program coordinates and integrates a number

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[48]Francis S. Chase, "IGE as a Focus for Educational Reform and Renewal," Journal of Teacher Education 27 (Fall, 1976), p. 196.

of innovative practices, typically used in isolation, into a dynamic total system designed to facilitate personalized instruction in elementary and secondary schools. It is a program which provides various degrees of structure and choice for students based upon diagnostic data about the learner's needs, interests, skills, learning style, academic ability, and learning strengths and weaknesses. It also takes into account both parent and student desires and concerns.

Coakley's description of IGE is:

> IGE is not a status or condition that a school attains once and for all, as one attains citizenship or the age of 21. It is, rather, a way of life for a school, a process rising out of the constant evaluation of current practices and the development of a school staff of a growing capacity to improve their own efforts.[49]

The Change Program for Individually Guided Education is based on thirty-five outcomes (see appendix) to be achieved by school personnel. In their entirety the outcomes are the specific definition of IGE and guide a staff engaged in the change process. They encompass the approach, the philosophy and the activities that can change a school and bring the IGE way of life into classrooms.

Of the thirty-five outcomes the first two outcomes deal with commitment process and other conditions necessary for beginning the IGE program in schools. The remaining thirty-three describe the conditions in the ideal but

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[49] Jean A. Coakley, The School (Dayton, Ohio: Institute for Development of Educational Activities, Inc., 1975), p. 4.

realistic IGE school. The Implementation Guide provided numerous suggestions for implementing each outcome.[50]

One of the salient attributes of the IGE program is that through the intervention of a facilitator and with the IGE in-service materials, school faculties learn the many techniques and processes through an initial two week clinical or experienced based workshop, learning by doing. Through a process of diagnosing, planning, implementing, evaluating, and critiquing which leads to a rediagnosis, teachers become familiar with the thirty-five outcomes. Later, through short and long range planning, local schools decide which outcomes they will implement first, and through a long range plan eventually implement all thirty-five outcomes in an interactive dynamic fashion.

The /I/D/E/A/ IGE Program is not a research, development, and diffusion model for change. Goodlad states the following regarding this concept:

> The League approach represents an alternative to R.D. and D. as a strategy for school change and improvement. It does not rule out the usefulness of R.D. and D. and its products, but these become meaningful after, not before, the people in a school begin to examine themselves and their settings through the process of D.D.A.E. (dialogue, decision-making, action, evaluation.) This approach does not rule out, either, the presence of interested, outside parties; in fact, they are essential. When those with the school begin to stir, they need to establish a relationship with sympathetic, constructive, critical elements on the outside. Forces on the inside and forces on the outside establish

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[50]Kenneth M. Schultz, Implementation Guide (Dayton, Ohio: Institute for Development of Educational Activities, 1974).

> a productive tension conducive to change. Perhaps the entire process is best left unnamed; but, if we must, "S.S. and S." will suffice - symbiosis, synergy, and serendipity.[51]

The concept of IGE is associated with /I/D/E/A/ and with the Wisconsin Research and Development Center. Although implementation strategies of both organizations are compatible, the focus or philosophy of each are distinct. /I/D/E/A/ concentrates on the processes of commitment for implementation and staff development, while a major investment of energies of Wisconsin Center lies in the development of curricular meterials according to single subjects. /I/D/E/A/ encourages the interdisciplinary approach. Bahner explains /I/D/E/A/'s position, "We don't think materials make the difference; it's what you do with the materials that makes the real difference."[52]

Wisconsin's IGE concept is composed of seven components. Klaismeier names the following:

(1) multi-unit organizational-administrative arrangements;

(2) instructional programming for the individual student;

(3) evaluation for educational decision making;

(4) compatible curriculum materials;

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[51]John I. Goodlad, "Schools Can Make a Difference," Educational Leadership 33 (November, 1975), p. 116.

[52]Robert J. Krajewski, John M. Bahner, and Samuel G. Sava, "The /I/D/E/A/ Change Program for IGE: A Dialogue," Journal of Teacher Education 27 (Fall, 1976), p. 212.

(5) home-school-community relations;

(6) facilitative environments; and

(7) continuing research and development.[53]

Contemporary Studies - Individually Guided Education

The Study of Educational Change and School Improvement concentrated on the process of educational change with the purpose of developing new ways to accelerate improvements in education. The guidelines for action were verified during the five years of the project. Briefly stated, the findings were:

1. The individual school, made up of students, principal, teachers, parents, and residents, is a strategic unit of educational change and an individual teacher rarely succeeds in innovation either working in opposition to or without the support of other members of the school family.

2. The culture (beliefs and practices) of a school is central both to understanding and to affecting educational improvement and rarely will a school change its pattern if the staff feels present practices work well.

3. Given existing social and educational restraints, most individual schools are not strong enough to overcome the inertia against change built into the typical school district and thus need the emotional and professional backing of other change-minded schools.

4. Each school needs a process by which it can deal effectively with its own problems. A process which meets this need is DDAE (dialogue, decision making, action, evaluation).

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[53]Herbert Klausmeier, Individually Guided Education in Elementary and Middle Schools: A Handbook for Implementors and College Instructors. (Reading, Massachusetts: Addison-Wesley Publishing Company, 1977), p. 17.

5. Some screening, legitimizing, and communicating of ideas beyond what individual schools might do informally must be built into the new social system, and committees with representatives from the cooperating schools can perform this function.

6. Individuals asked to take risks are more willing to do so when some elements of success are already built into the structure, and affiliation with a program and/or other schools with recognized success offers this security.[54]

These findings were instrumental in the development of a "Change Program for Individually Guided Education".

During the early years of the Change Program, /I/D/E/A/ staff members conducted a study with twenty-one IGE schools. Observations were made by /I/D/E/A/ staff members in pairs so that observer reliability could be evaluated. Questionnaires were distributed to principals, teachers, facilitators, and learning community leaders. A follow-up was conducted the following year. The findings were:

1. Teachers in first-year IGE schools feel that their principals use instructional and self-improvement processes to a greater degree than teachers before they participate in Individually Guided Education.

2. Teachers in first-year IGE schools feel that learning Community Leaders initiate instructional and self-improvement processes to a greater degree than teachers before they participate in Individually Guided Education.

3. Teachers in first-year IGE schools feel that they use instructional and self-improvement processes to a greater degree than teachers

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[54]Willis, Report on What We Have Learned about the /I/D/E/A/ Change Program for Individually Guided Education, pp. 1-3.

before they participate in Individually Guided Education.

4. Though teachers in first-year IGE schools feel that the instructional and self-improvement processes are used to a greater degree than teachers who have not yet participated in the program, the IGE outcomes are only partially implemented during the first year.[55]

In another /I/D/E/A/ study, Paden found that teacher perceptions on implementation were very similar whether they had been involved with IGE for three months or fifteen months. Paden offered the following explanations:

1. The implementation strategies used during the fall of 1972 were sufficiently improved over those used prior to that time to allow the 1972 teachers to move into the program more quickly than was possible using the strategies employed with the 1971 teachers.

2. As IGE teachers are involved with the Change Program and become more knowledgeable of the thirty-five outcomes, they may have a tendency to judge themselves more critically. This phenomenon would reveal an apparent lack of progress.

3. The questionnaire may not be sensitive to the kinds of changes that occur in IGE schools between the third and fifteenth months of implementation.

4. The implementation strategies utilized with schools after the third month of implementation may not be effective in terms of bringing about sustained continuous change, i.e. there is a large initial change but very small long-range change.[56]

These beginning /I/D/E/A/ studies were complemented by studies involving the multi-unit orientation.

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[55]Ibid., p. 17.

[56]Ibid., p. 18.

The United States Office of Education commissioned the Educational Testing Service to conduct a nationwide study on the effectiveness of the installation of the multiunit organizational component in first-year IGE schools. Ironside's main conclusion was:

> The multiunit organizational and instructional changes have taken hold in the majority of schools. Apparently attrition has been slight if existent at all, and many schools have come closer to institutionalizing the two areas of innovation, namely organizational arrangement and instructional programming model. It can also be concluded that "success" in one arena does not imply success in the other. The expressed needs for assistance with appropriate instructional programming are so numerous as to suggest that this is a difficult practice for schools to adopt and put into use, even in the second year. The organizational and facilitating aspects of MUSE, on the other hand, appear to have been generally implemented in all groups.[57]

Another early national study of IGE was conducted by Belden Associates for /I/D/E/A/ to evaluate the /I/D/E/A/ Change Program for IGE during the 1972-1973 and 1973-1974 school years. The conclusions were statements about schools in the process of changing. Study conclusions are as follows:

1. General attitudes of administrators, teachers, parents, and students are positive toward IGE. They support the in-service training, the educational concepts, the organization, and the overall effects of the program.

2. Implementation strategies for initiating IGE are improving. Attitudes of administrators, teachers, and students toward methods of

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[57] Roderick A. Ironside, The 1971-72 Nationwide Installation of the Multi-unit/IGE Model for Elementary Schools: A Process Evaluation (Princeton, New Jersey: Educational Testing Service, 1973), pp. 5-6.

orienting and training are more positive in schools that use the more recent strategies than in those who used earlier procedures.

3. Administrators and students in schools that have participated in IGE for three or more years feel more positive about the educational concepts of IGE than those in the program only one or two years.

4. Administrators, teachers, parents, and students are more positive about the program in schools that have implemented most of the IGE outcomes. The degree of implementation is consistently related to positive feelings, effects on students, acceptance, and commitment to the program.

5. In general, the attitudes of administrators, teachers, parents, and students in urban and non-urban schools are equally positive.

6. The majority of teachers believe IGE processes work equally well for slow and fast learners and for culturally advantaged and culturally different learners.

7. Attitudes of parents and students toward the program and its effects are more positive where students have attended an IGE school for more than one year.

8. In general, reactions to the program are equally positive in schools that have primarily white students and those that are primarily non-white.

9. Implementing IGE can result in perceived administrator and teacher overloads especially when the rate of change, the level of support, or the sequence of adoption are not appropriate to the capabilities and resources of participating schools.[58]

A three-year survey of IGE principals was coordinated by /I/D/E/A/. The general trends reported are consistently favorable. The responses are very positive; with few exeptions, the attitudes expressed evidence a

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[58]Jon S. Paden, A National Evaluation of the /I/D/E/A/ Change Program for IGE (Dayton, Ohio: Institute for Development of Educational Activities, 1975), p. 21.

greater degree of positiveness each year. Ten generalizations are supported by the principals' responses reported in the study:

1. Most IGE principals report that their school budgets are no larger than the budgets for non-IGE schools in their districts.

2. Approximately three out of every ten principals report "slightly higher" or "significantly higher" scores in reading and/or verbal achievement during the 1975-1976 school year.

3. Approximately one out of every four principals reports "slightly higher" or "significantly higher" mathematics achievement scores.

4. Principals responses about achievement scores are more positive for 1975-1976 than they were for 1973-1974 and 1974-1975. However, no year did more than two principals out of three hundred report a "significant decrease" in achievement scores.

5. About one of every three principals reports less frequent student vandalism. They at least partially attribute this change to their involvement with IGE.

6. About one of every four principals reports lower student absence rates. They attribute this improvement at least partially to their involvement with IGE.

7. About one of every five principals reports fewer teacher absences which they attribute, at least partially, to their involvement in IGE.

8. Most principals report increased involvement of students in planning for their own learning and their greater acceptance of the responsibilities that accompany this involvement.

9. Most principals report greater involvement of the teachers in issues that affect their roles.

10. Most principals report increased use of the League concept to provide support and

stability to implementation.[59]

Studies concerning implementation were researched on a smaller scale also.

Based on the investigation of the relationship between selected personal attributes of school personnel and the nature and extent of problems educators perceived when considering the implementation of IGE, Heffernan revealed the following implication for the coordination of staff development.

First, IGE facilitators/implementors must be trained as highly sophisticated strategists with skills in problem identification, problem analysis and resolution, human relations, and program planning. These facilitators must move out of the role of salesperson and into a consultative position, assisting school staffs to develop the necessary skills for renewal. Second, schools cannot follow pre-established sequence of activities, time lines, pre-determined objectives, and training programs. Each school is unique in its strengths and weaknesses, knowledge, human and financial resources, skills, needs, and problems. The in-service program must be designed specifically for each local school.[60]

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[59] Jon S. Paden, How is IGE Doing in the Elementary Schools? A Three-Year Survey of IGE Principals (Dayton, Ohio: Institute for the Development of Educational Activities, 1977), pp. 10-11.

[60] J. Heffernan, "Personal Variables and Perceived Problems Encountered in Implementing IGE," Unpublished Ph.D. Dissertation (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, 1976).

Recognizing the uniqueness of each school, Goodridge conducted a study designed to identify those who were responsible for the final decision to implement IGE and the factors that influence the decision to adopt. He used field methodology to conduct the study in eight geographically distributed schools which adopted IGE in the preceding twelve-month period. Following are major conclusions:

1. Principals were the major decision makers concerning the decision to implement IGE. In a majority of the schools this decision was shared with staff teachers.

2. Board members, office personnel, and parents were minimally involved in the adoption decision process.

3. Individualization of instruction related to the IGE program was the major reason for the adoption of IGE.

4. There was a lack of awareness on the part of some teachers regarding the seven components of IGE.

5. The most influential and successful external change agents were teachers from other IGE schools who were viewed as credible.

6. In none of the cases was decision making shared among board members, superintendents, principal, staff and parents. When decision making was shared, it was between not more than two levels in the organization.

7. When the research data were collected, many decision makers considered that the amount of information available to them had been inadequate, although at the time of adoption they had considered themselves well informed concerning IGE.

8. Where visits to IGE schools were arranged they had a positive effect on the decision to adopt IGE.[61]

Paden conducted a study designed to investigate how students from IGE elementary schools adjust when they enter non-IGE junior high schools in a specific school district. The researcher asked junior high teachers to rate their students in the following areas:

- Decision Making-Makes wise use of time; asks relevant questions; uses good judgment; selects wisely from alternatives
- Responsibility-Completes assignments; works well independently; follows directions; is prepared; is punctual
- Self-Concept-Accepts criticism; can be trusted; appears happy in school; shows individuality; openly expresses beliefs; adjusts well to new situations
- Interpersonal Relations-Respects authority; helps others; works well in a group; takes part in school activities; respects peers; enjoys being with others.[62]

IGE students scored higher than non-IGE students in every area, with significantly higher ratings in decision making, responsibility and self-concept.

In response to those concerned about the consequences of IGE in schools, studies were conducted which compared specific variables in IGE and non-IGE schools.

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[61]C. G. Goodridge, "Factors that Influence the Decision to Adopt an Educational Innovation: IGE technical Report" (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, 1974).

[62]Jon S. Paden and /I/D/E/A/ Staff, Reflections for the Future (Dayton, Ohio: Institute for Development of Educational Activities, Inc., 1978), p. 9.

Lipham summarized these studies.

> IGE schools, as compared with non-IGE schools, are significantly higher in open communication networks and essential interdependence relationships (Pellegrin, 1969); organizational adaptiveness and flexibility (Walter, 1976); teacher motivation and morale (Herrick, 1974); and school learning climate (Nelson, 1972). In IGE schools, teachers feel that they are involved in making potent instructional decisions (Feldman, 1976; Holmquist, 1976; Wright, 1976) that their values and viewpoints are represented appropriately (Nerlinger, 1975); that they experience job satisfaction (Mendenhall, 1976); and that their principals provide both instrumental and supportive leadership (Gramenz, 1974).[63]

Academic achievement is one measurement among others which collectively can be used as indicators of effective schooling. Traditionally and presently the majority of population believe that the criteria of an effective school can be measured by pupil achievement. Numerous studies have been conducted concerning the many factors of achievement.

A number of studies concerning cognitive achievement indicated that there is essentially no difference in the achievement of students from a traditional or individualized school. /I/D/E/A/'s evaluation based on comparisons of student achievement scores on standardized tests after two years in IGE, indicated no significant differences. These findings were consistent with /I/D/E/A/ expectations in light of the relatively short time of program development and operation.

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[63]James M. Lipham, "The Leadership Role of the IGE Principal: Implications for Professional Programs for Preparing Principals," Journal of Teacher Education 27 (Fall, 1976), p. 227.

Two doctoral studies conducted in IGE schools in Michigan were related to pupil achievement. In 1972 Bradford compared an IGE elementary school with a traditional self-contained elementary school in the Westwood Community. Mean scores in mathematics showed significantly higher gains in the IGE school than in the traditional self-contained school while in reading the mean scores were higher in the IGE school, but not significantly.

Specifically, Bradford's study indicated that students in the IGE school achieved a mean gain level of 1.69 in reading and a mean gain level of .8 in mathematics, while the students in the self-contained school demonstrated a mean gain level of .4 in reading and a .2 in mathematics.

The conclusions of Bradford's research are:

1. Children in the IGE program may not show significant gains in reading as compared with children in a traditional self-contained classroom.

2. Children in the IGE program show significant gains in mathematics as compared with children in a traditional self-contained classroom.

3. Children in the IGE program show significant gains in growth in self-concept as compared with children in traditional self-contained classrooms.

4. There are mixed feelings among teachers on various aspects of an IGE program. Written comments by participating teachers show that they are very positive about the IGE program.

5. There are mixed feelings among parents on various aspects of an IGE program. Written and oral comments by parents show that they are very positive about the IGE program.

6. There are mixed feelings of children on various aspects of an IGE program.[64]

Two years later, Burtley replicated the Bradford study. He compared an IGE school with a conventional self-contained school in the Grand Rapids Schools. His study reflected the reading and mathematics achievement of students of second and third grade over a two year period. Both groups of students in the IGE school achieved significantly higher mean gain scores in reading and mathematics when compared to the students in the self-contained school.[65]

Babcock's investigation of schools in his school district revealed that schools with more individualized programs and greater implementation of IGE showed more significant gains in student achievement than schools with less individualization.[66]

Joyal examined changes in student learning patterns as schools implemented IGE. His findings showed that learning patterns in the IGE schools were characterized by

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[64]Equilla Bradford, "A Comparison of Two Methods of Teaching in the Elementary School as Related to Achievement in Reading, Mathematics and Self-Concept of Children: Unpublished Ph.D. Dissertation, Michigan State University, 1972, pp. 122-123.

[65]Nathel Burtley, "A Comparison of Teacher Characteristics and Student Achievement in Individually Guided Education and Traditional Inner City Elementary Schools, Unpublished Ph.D. Dissertation, Michigan State University, 1974.

[66]Emery J. Babcock, "IGE and the Stevens Point Elementary Schools," Board of Education Report, Stevens Point, Wisconsin, December, 1976.

(1) increased use of different instructional and audio-visual materials, (2) instructional groups of varying sizes, and (3) students showing greater self-direction in terms of learning activities.[67]

Another study attempted to discover if instructional personnel in IGE schools spend their time in ways different from instructional personnel in non-IGE schools. Data for the study were obtained from a sample consisting of fifteen pairs of matched IGE and non-IGE schools drawn from nine states. A total of ninety-six teachers and twenty-six principals participated in the study. According to the data, the IGE teachers devoted two hours more per week to direct instruction of pupils than did the non-IGE teachers.

In addition, the two groups of teachers differed in the amount of time they spent in different modes of instruction. Teachers in IGE schools spent an average of 6.34 hours a week in one-to-one instruction, whereas teachers in non-IGE schools spent 2.55 hours in that mode. On the other hand, the reported times for instruction in the large group mode were .26 hours a week in IGE schools and 1.27 hours in non-IGE schools. With regard to specific curricular areas, the allocated times by teachers for reading on a one-to-one basis were 1.66 hours in IGE schools and .73 hours in non-IGE schools; for math on a one-to-one basis, 1.70 and .67

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[67]Lloyd H. Joyal, Jr., "A Comparison of the Types of Learning Patterns of Students in a Self-Contained and Multiunit Elementary School," Unpublished Ph.D. Dissertation, University of Wisconsin-Madison, 1973.

hours; and for math on a large-group basis, .00 and .55 hours respectively. During a typical school week IGE teachers allocated significantly more time to one-to-one instruction, especially in reading and math, and significantly less time to large-group instruction.[68]

If one assumes that a relationship exists between pupil achievement and the amount of time a teacher spends in instructional activities, or between pupil achievement and the amount of time a student is actually exposed to instruction, one can assume that IGE schools are creating a more favorable learning environment than non-IGE schools.

One of the difficulties in studying the effectiveness of IGE is to determine to what degree the concepts of IGE are being implemented in the school. There are high implementing IGE schools which indicate a higher degree of implementation of IGE principles than in low implementing IGE schools. Sava offers this explanation:

> Our problem is that many schools will identify themselves as IGE schools, when, in fact, within these schools the process does not exist or if it does, only in a very small way. We hope that researchers in the future avoid the label on the door. There are schools in this country not in the program which are probably very high on the IGE principles. Conversely, we know that there are some schools in our program not yet exhibiting those principles in the classroom. We think the former should be in the experimental group, even though not labeled as IGE schools; and the latter should be in the control group, even if they do

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[68] Terry Geske and Richard Rossmiller, "Teachers in IGE Schools Spend More Time Teaching," IGE News 8 (Spring, 1977), p. 21.

> happen to bear the IGE label. It's what they are doing that's important, not what the label is on the school.[69]

David Price reported that schools identified as high implementers of IGE processes compared to schools identified as low implementers are associated with high achievement scores in reading, mathematics, and more positive attitudes toward schooling. Results that supported high implementation of IGE processes were most significant for students with low aptitude scores, students with high composite achievement scores, and for girls.[70]

High and low implementing IGE schools were studied to determine school climate. Donn Gresso contrasted those schools most comprehensively using the concepts of IGE (high) with schools using the concepts least (low). He found that high implementing schools were more open, more autonomous; the teachers had higher morale; and the principals demonstrated strong leadership and greater consideration toward teachers. Low implementing schools had a more paternal, closed climate in which teachers felt organizational constraints or control for the sake of control; teachers experienced more hindrance in

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[69] Krajewski, Journal of Teacher Education, p. 212.

[70] David Aldwyn Price, "The Effects of Individually Guided Education (IGE) Processes on Achievement and Attitudes of Elementary School Students." Unpublished Ph.D. Dissertation, University of Missouri-Columbia, 1977.

accomplishing their tasks; and principals were more aloof.

Pellegrin found a higher degree of decision making by teachers in IGE schools and also greater job satisfaction and higher morale.[71]

Kelley, Wood, and Joekel investigated teacher perceptions of climate in five hundred and forty-five schools using the Organizational Climate Index. The investigators categorized schools by degree and length of implementation. Information on the degree of implementation was received from /I/D/E/A/ based on results obtained from their monitoring with the IGE Implementation Questionnaire. The investigators concluded that there were no differences in teacher perception of school climate between IGE schools and the national norms for all schools or between IGE schools of high rank and IGE schools of lower rank.[72]

When new or innovative programs are considered by school districts, decision makers and taxpayers are seriously concerned about the cost element. Paden in a recent study with IGE principals found that the overall budgets of seven out of ten IGE schools are identical with the

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[71]Roland Pellegrin, Professional Satisfaction and Decision Making in the Multiunit School (Washington, D.C.: U.S. Department of Health, Education and Welfare: Educational Resources Information Center (ERIC) ED049552, 1969.

[72]Edgar A. Kelley, Fred H. Wood, and Roland Joekel, Teacher Perceptions of School Climate and the Implementation of Individually Guided Education (IGE) (Washington, D.C.: U.S. Department of Health, Education and Welfare: Educational Resources Information Center (ERIC), ED083229, 1973.

budgets of the non-IGE schools in their districts. Only one out of fifty schools had a budget larger by as much as eight percent. About one-sixth of the IGE principals had instructional materials budgets that were one to ten percent larger than those of non-IGE schools.[73]

> An /I/D/E/A/ publication reveals that although IGE can make a substantial difference in the quality of education a school offers, its financial allocations need not increase. We also looked for possible effects of special budget allocation on the quality and degree of IGE implementation. We found that schools with high implementation scores have not had larger budgets to participate in IGE. Instead principals of schools with high implementation more frequently reported their budgets were "no larger" than did principals from schools with low levels of implementation. While this finding does not prove that IGE is a way for schools to save money, it certainly supports the point of view that implementing IGE, and implementing it well, does not necessarily cost more.[74]

Another consideration of any educational change is the possibility of becoming a part of common expectations of the system.

Investigating the change elements related to the institutionalization of an IGE school, Howes reported that there were six factors affecting institutionalization: open and supportive environments, user liking for the multiunit school; user cost-benefit; use of open communication channels; supportive services and resources; and flexibility of the change process. She discovered that the successful

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[73]Paden, How is IGE Doing in the Elementary Schools: A Three-Year Survey of IGE Principals.

[74]Paden, Reflections for the Future, p. 14.

adoption and institutionalization of IGE was directly and systematically related to the clearly perceived advantages of IGE, the degree to which individuals were informed and able to communicate with others engaged in making the change, and the extent to which individuals were involved in and supported the change process.[75]

In 1977 Howes reported that to insure successful institutionalization, "managers of change should organize their activities around (1) the preparation of the organization to accept the proposed change, and (2) assistance to the organization for the implementation of the change."[76] Well designed plans for both of these activities should be appropriately organized before the change is initiated. She further stated that individuals who will be using the innovative project must be involved with the innovation for the change effort to take place.

A suggested process of learning about the /I/D/E/A/ Change Program and using shared decision-making with staff to determine its implementation is the IGE Clinical Workshop.

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[75] Nancy Howes, "Change Factors Related to the Institutionalization of the Multiunit Elementary School," Technical Report No. 319, (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, 1974.

[76] Nancy Howes, "A Contingency Model for Predicting Institutionalization of Innovations across Divergent Organizations," Paper presented at AERA Annual Meeting, (New York, New York, April, 1977), p. 8.

Wood's study of 116 facilitators who had participated in the /I/D/E/A/ IGE training sessions, Clinical Workshop, revealed that (1) participants, whether university personnel, school administrator, or classroom teacher, demonstrated an increased understanding of IGE outcomes, as well as increased commitment to their use, and (2) participants regardless of the amount of knowledge about IGE concepts prior to workshop, evidenced significant increases in commitment to the IGE outcomes.

In this study Wood reported that:

> The /I/D/E/A/ Clinical Workshop has a dramatic effect on those who participate in it. He also observed that the Clinical presents school administrators with evidence concerning the value of involving their staff . . . even when they are not certain they want to adopt the /I/D/E/A/ Change Program of IGE. The study suggested also that the clinical approach used by /I/D/E/A/ provides a model that could be effectively applied in other workshops designed around different in-service goals and objectives.[77]

In addition, clinical workshop participants recorded substantial gains in their ability to solve problems in small groups, plan instruction in teams, develop and manage individualized instruction, counsel and advise students, and improve their instructional skills and plans.

Significant increases also were found in participants' ability to plan and manage individualized programs. At the end of the workshop participants were better equipped to provide and manage a wide range of learning options and to manage students during both scheduled and unscheduled

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[77]Paden, Reflections for the Future, p. 35.

time. Their ability to facilitate goal setting and small group learning experiences with students also evidenced substantial growth.

Those involved in this experientially based in-service training became substantially more committed to implementing the following educational concepts, all of which facilitate individualization in elementary and secondary schools:

Team teaching
Role specialization and division of labor
Multi-aged grouping and non-gradedness
Teachers as counselors/advisors
Goal and objective oriented instruction
Use of a variety of instructional media and modes
Diagnostic teaching strategies
Use of community resources in the curriculum
Increased communication with parents
Student involvement in planning and assessing learning
Teacher involvement in school-wide decisions
Continuous assessment and improvement of professional performance.[78]

Summary

Schools have patterns of conduct, beliefs, and values which give meaning to the teaching/learning process. However these same patterns also standardize and routinize educational experiences and outcomes. Thus, the introduction and implementation of new and innovative educational ideas, principles, and practices have been a slow process. This is particularly true for innovations based on individual differences of students and professionals. Given

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[78] Fred H. Wood, and John F. Neill, "Experiential Learning: An Alternative Approach to Staff Development," Texas Tech Journal of Education 2 (Spring, 1978), pp. 118-119.

the conventional organization and established norms of schools, often such dynamic changes are viewed as suspect and when implemented are a pseudo representation of innovation.

Many factors shape the change process, some of which facilitate while others impede. Resistance to change, even to planned change, is a complex phenomenon. Researchers claim, and have substantiated the fact, that resistance can be minimized if teachers or those at the local school level participate in the decision-making process of the school.

The five year Study of Educational Change, coordinated by Goodlad and supported by /I/D/E/A/, for the purpose of accelerating the pace of change in education, looked at the total context involved in introducing a change. The positive experiences and findings of the Study, as well as other outside influences, shaped the /I/D/E/A/ Change Program for Individually Guided Education. Basically, the IGE Change Program coordinates and integrates a number of innovative practices typically used in isolation into a dynamic system designed to facilitate personalized instruction in elementary, middle, and secondary schools.

Pertinent literature and many research studies indicated that IGE has positive effects on such school factors as school climate, academic achievement, teacher morale, organizational adaptiveness and flexibility, teacher job satisfaction, and attitudes of parents, students, and teachers.

CHAPTER III

DESIGN OF THE STUDY

Introduction

This chapter provides a description of the survey procedures and research methods used in conducting the study. The following specific areas will be described:

1. Type of study
2. Population and sampling method
3. Instrumentation
4. Collection of the data
5. Treatment of the data
6. Testable hypotheses

Type of Study

The study utilized the descriptive method of research. Sax defines the goal of descriptive analysis:

> The purpose of descriptive research is to show conditions as they exist without being influenced by the investigator. Descriptive research encompasses a number of different techniques, including correlational analyses, case studies, surveys, and interviews as well as direct observation.[1]

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[1]Gilbert Sax, Empirical Foundations of Educational Research (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968), p. 36.

The main purpose of the study was two-fold: first, to determine the extent of implementation of Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools; second, to investigate the opinion of teachers concerning Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools.

Comparisons were made among teachers in IGE and non-IGE schools in the same district and teachers in a non-IGE school in a non-IGE school district. Each participant responded to the same questionnaire devised to determine levels of use of IGE outcomes and the opinion of teachers about the use of each IGE outcome in any elementary school.

Population and Sampling Methods

The total /I/D/E/A/ IGE population consisted of teachers in sixty-nine school districts located in thirty-seven states throughout the United States. "IGE" states which were geographically proximate to Michigan and had school districts which were associated with the /I/D/E/A/ Change Program for Individually Guided Education were the selected population for the study. The following met this criteria: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, Tennessee, Virginia, and Wisconsin. The primary determinants influencing the selected population of states proximate to Michigan were: time of distribution of questionnaire, use of telephone

communication, and cost. The brochure, "Where to Write for Information about the /I/D/E/A/ Change Program for Individually Guided Education"[2] and a list provided by /I/D/E/A/ were used as the resources to locate participating IGE school districts.

IGE facilitators who worked with IGE and non-IGE schools within the same school district, as well as the name of a contiguous "non-IGE" school district, were identified. This information was procured through a letter and form sent to IGE facilitators in the selected population.

From a list of IGE schools provided by /I/D/E/A/, schools within the IGE districts were randomly selected using a table of random numbers. Likewise, the non-IGE schools from both the IGE and non-IGE school districts were randomly selected using a table of random numbers.

The School Universe Data Book[3] supplied information concerning the listing of these schools. If IGE facilitators did not identify a contiguous school district initially the information was found in the School Universe Data Book.

Forty-two IGE school districts were located in twelve states. From the forty-two IGE facilitators who responded to the identification form, the following

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[2] Where to Write for Information about the /I/D/E/A/ Change Program for Individually Guided Education, (Dayton, Ohio: Institute for the Development of Educational Activities, March, 1979).

[3] School Universe Data Book: School Year 1977-78 (Denver, Colorado: Curriculum Information Center, Inc., 1977).

information was ascertained: there were twenty-seven IGE facilitators who worked with IGE and non-IGE schools in their school districts; five facilitators served only IGE schools; and three IGE districts did not have IGE schools. Seven districts did not respond to the inquiry.

The sample for this study consisted of teachers from one IGE school and one non-IGE school in an IGE school district and teachers from one non-IGE school in a non-IGE school district. There were eighty-one schools in total; fifty-four from the twenty-seven IGE districts (one IGE and one non-IGE school), and twenty-seven from twenty-seven non-IGE school districts (one school per district).

Instrument

The specific instrument used to gather the data necessary to fulfill the purposes of the study was a structured questionnaire designed by the researcher. The advantages of the questionnaire survey pertinent to this study have been summarized by Sax:

1. The major advantage of questionnaires is one of economics: the time and expense involved in questionnaires sent through the mail has practical ramifications over other types of survey, such as the interview.

2. Each respondent receives the same set of questions phrased in exactly the same way; the job of summarizing and comparing responses is reduced.

3. The use of the mails in sending out the questionnaires means that a larger variety of persons can be contacted.[4]

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[4]Sax, Empirical Foundations of Educational Research, pp. 214-15.

The design and format of the questionnaire was of considerable importance. Claire Selltiz cites five ingredients of an answerable questionnaire:

1. The questionnaire length
2. The attractiveness of the questionnaire
3. The ease with which the questionnaire can be completed and returned
4. Coding and quality printing
5. Offering the sample population an abstract of the study.[5]

These factors were considered in the development of the instrument.

A review of the literature pertaining to Individually Guided Education was examined prior to designing the questionnaire. Researchers at the Kettering Foundation (/I/D/E/A/) and experts at Michigan State University critiqued and verified the appropriateness of the questionnaire. Generic language was used so that the IGE and non-IGE schools could have recourse to common terminology. Two elementary schools field tested the instrument, and their comments and editing were reviewed and analyzed. As a consequence, minor revisions were made. The final copy of the questionnaire may be found in the Appendix. Because the revisions were of a minor nature, the questionnaire did not require another approval. This decision was made in

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[5]Claire Selltiz, et.al., Research Methods in Social Relations (New York: Holt, Rinehart and Winston, 1967), pp. 237-41.

consultation with the writer's advisor, a professor of research in the College of Education, and the Michigan State University Office of Research Consultation.

An appropriate letter of explanation was written to accompany the questionnaire. The letter was addressed to the principal of each sample school and adequate instructions for completion of the questionnaires were described. Each school in the sample was mailed questionnaires for the teachers during the week of May 13 to 19, 1979. A number coding on the last page of each questionnaire was used to ensure the identification of the school so that the questionnaires could be categorized appropriately: IGE school, non-IGE school in an IGE district, or non-IGE school in a non-IGE district. A School Data Form consisting of five items was sent to the principal for information pertinent to each participating school.

The questionnaire was designed so that each variable would receive two responses: degree of implementation and teacher's opinion about the appropriateness of each outcome or practice in any elementary school. Outcomes were organized in five clusters: school decisions, school organization, curriculum and teaching, student responsibility, and processes of planning, analyzing, and improving.

A Likert scale was used for the response codes. Six categories identified the degree of implementing IGE outcomes in the local school:

5 -- Always

4 -- Frequently

3 -- Sometimes

2 -- Seldom

1 -- Never

0 -- I don't know

Three categories identified teacher's opinion about the appropriateness of implementing the IGE outcomes in any elementary school:

Y -- Yes

N -- No

O -- No Opinion

Collection of the Data

Data collection was accomplished through the following organized plan:

1. On April 4, 1979 an appropriate letter introducing the study, an identification form, and a stamped self-addressed envelope were mailed to forty-two IGE facilitators of school districts in twelve states proximate to Michigan. The intent of the mailing was to introduce the study, identify facilitators who worked with IGE and non-IGE schools, and to obtain the name of a contiguous non-IGE school district.

2. On April 23, 1979 non-respondents were mailed a reminder letter, an identification form, and a stamped self-addressed envelope.

3. On May 10, 1979 twenty-seven superintendents of the designated contiguous non-IGE school districts were mailed an appropriate letter which introduced the study and named the randomly selected school. A copy of the principal's letter and a copy of the questionnaire were included in the mailing.

4. On May 10, 1979 the identified twenty-seven IGE facilitators of school districts who associated with IGE and non-IGE schools were mailed an appropriate letter which introduced the study and named the randomly selected schools (one IGE school and one non-IGE school). A copy of the principal's letter and a copy of the questionnaire were included in the mailing.

5. On May 10, 11, and 14, 1979 superintendents of non-IGE school districts and the IGE facilitators of the IGE school districts of the sample were telephoned to ensure participation of schools.

6. A suitable letter was mailed on May 16, 1979 to principals of randomly selected schools introducing the study and explaining procedures for participation. Questionnaires and envelopes for each teacher were included in the mailing. A large stamped self-addressed envelope was included for return mailing.

7. Principals who did not return teacher questionnaires by May 25, 1979 were mailed a post card reminder.

All written communication concerning the collection of data is contained in the Appendix. A table listing the

responses of each of the teacher groups surveyed and the final total for the collectivity of the sample follows.

TABLE ONE

FREQUENCY AND PERCENTAGE PROFILE DATA OF SCHOOL PARTICIPATION IN THE STUDY BY TYPE OF SCHOOL

(N=81)

	SCHOOL PARTICIPATION		
TYPE OF SCHOOL	INVITED	RESPONDED	PERCENT SCHOOL PARTICIPATION
IGE	27	17	63
NON-IGE	27	17	63
NON-IGE DISTRICT	27	25	93
TOTAL	81	59	73

TABLE TWO

FREQUENCY AND PERCENTAGE PROFILE DATA OF QUESTIONNAIRE DISTRIBUTION BY TYPE OF SCHOOL

(N=599)

	QUESTIONNAIRE DISTRIBUTION		
TYPE OF SCHOOL	MAILED	RETURNED	PERCENT RETURNED
IGE	361	159	44
NON-IGE	369	174	47
NON-IGE DISTRICT	406	266	66
TOTAL	1136	599	53

To obtain descriptive information about each school, a form was included with the questionnaires for the principal to complete. The returns for these data are illustrated in Table Three.

TABLE THREE

FREQUENCY AND PERCENTAGE PROFILE DATA OF SCHOOL DATA FORMS BY TYPE OF SCHOOL

(N=59)

TYPE OF SCHOOL	SCHOOLS PARTICIPATING	NUMBER RETURNED	PERCENT RETURNED
IGE	17	14	82
NON-IGE	17	14	82
NON-IGE (NON-IGE DISTRICT)	25	23	92
TOTAL	59	51	86

Treatment of the Data

The responses to the questionnaire were coded, key punched, and verified by the Michigan State University Computer Center. The hypotheses in the study were tested by using the Statistical Package for Social Sciences on the University's Control Data Corporation 3600 computer. Data analysis was accomplished using the nonparametic Chi-square Test of Homogeneity yielding a chi-square statistic with a .05 significance level with various degrees of freedom.

Testable Hypotheses

To ascertain whether significance existed among responses from teachers in IGE schools, in non-IGE schools in IGE school districts, and in non-IGE schools in non-IGE districts, it was necessary to test the null hypothesis based on the degree of use of IGE practices in these schools and teachers' opinions about the appropriateness of these practices. The research hypotheses of the study are:

1. Is there a difference in the degree of implementation of IGE outcomes in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district?

Hypothesis 1: There is no significant difference in the degree of implementation of IGE outcomes labeled School Decisions in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 2: There is no significant difference in the degree of implementation of IGE outcomes labeled School Organizations in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 3: There is no significant difference in the degree of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 4: There is no significant difference in the degree of implementation of IGE outcomes labeled Student Responsibility in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 5: There is no significant difference in the degree of implementation of IGE outcomes labeled Planning, Analyzing, and Improving in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

2. Is there a difference in the opinion of implementation of IGE outcomes in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district?

Hypothesis 6: There is no significant difference in the opinion of implementation of IGE outcomes labeled School Decisions in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 7: There is no significant difference in the opinion of implementation of IGE outcomes labeled School Organization in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 8: There is no significant difference in the opinion of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 9: There is no significant difference in the opinion of implementation of IGE outcomes labeled Student Responsibility in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Hypothesis 10: There is no significant difference in the opinion of implementation of IGE outcomes labeled Planning, Analyzing, and Improving in the three types of schools, IGE school and non-IGE school in the same school district and non-IGE school in a non-IGE school district.

Summary

This study utilized the descriptive survey method of research and the chapter contained an explanation of the planning and implementation of the study. Fifty-nine schools from twelve states participated in this study to determine a two-fold purpose. First, to investigate the extent of implementation of Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools. Second, to investigate teachers' opinions about the appropriateness of use of Individually Guided Education outcomes in any elementary school.

There were 599 teachers represented who responded to the identical questionnaire, that is, 159 teachers from IGE schools, 173 teachers from non-IGE schools in IGE school districts, and 267 teachers from non-IGE schools in non-IGE school districts. Each principal was requested to complete a School Data Form concerning descriptive school information.

The hypotheses in the study were tested by using the Statistical Package for Social Sciences on Michigan State's Control Data Corporation 3600 computer.

CHAPTER IV

ANALYSIS OF RESULTS

Introduction

The main purpose of this study was two-fold: first, to determine the extent of implementation of Individually Guided Education outcomes in school districts with both IGE and non-IGE schools, and in school districts with only non-IGE schools; second, to determine the opinion of teachers concerning Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools.

Each participant responded to the same questionnaire devised to determine levels of use of IGE outcomes and opinions of teachers about the use of each IGE outcome in any elementary school.

The analysis of data is presented in the following manner:

1. Restatement of each of the original hypotheses of the study with appropriate data and explanation are provided. The eighty-six outcomes are clustered in five categories. Five hypotheses are concerned with teacher use of the outcomes in the local school; five hypotheses are directed toward teacher opinion about the appropriateness of outcome use in any elementary school.

2. Tables are provided of specific data for the following significant outcomes: those with a chi-square of 25.000 and above which are concerned with the degree of implementation, since these outcomes have distinguishable differences; and those outcomes with a significance level of .05 that are concerned with teachers' opinions. The degree of implementation and teachers' opinions are reported according to row percentages of the cross tabs computer program.

3. Statement of each of the five questions on School Data Form are provided with appropriate data and explanation.

4. For ease of understanding IGE schools are identified as IGE schools, non-IGE schools in an IGE school district are identified as non-IGE schools, and non-IGE schools in a non-IGE district are identified as non-IGE district schools.

The chapter concludes with a summary of findings.

Hypothesis 1: There is no significant difference in the degree of implementation of IGE outcomes labeled School Decisions in the three types of schools: IGE school and non-IGE school in the same school district, and a non-IGE school in a non-IGE school district.

Outcomes one to twelve were included in the category of school decisions. The obtained chi-square was significant for outcomes 1, 2, 4, 5, 6, 9, 10; therefore, the null hypothesis for these statements was rejected. As shown in Table Four, there is no significant difference on the

proportion of the degree of implementation for outcomes 3, 7, 8, 11, and 12 among the three types of schools.

Specific data on five significant School Decision outcomes revealed differences in the degree of implementation for teachers in the three types of schools.

Figure 1: Pattern of Degree of Implementation by type of school for significant School Decision outcomes with a chi-square of 25.000 and above.

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
1	X			6.3	6.5	14.2	21.9	24.5	26.5
1		X		5.5	12.1	11.5	21.2	21.2	28.5
1			X	4.2	22.5	24.8	27.5	15.3	6.7
4	X			10.8	.6	8.3	23.6	23.6	33.1
4		X		19.1	1.2	2.3	16.8	24.9	35.8
4			X	13.4	.8	3.1	8.8	30.7	43.3
6	X			0.	.6	3.8	10.3	28.2	57.1
6		X		.6	5.8	7.0	15.1	31.4	40.1
6			X	1.9	8.0	5.3	16.0	38.5	30.2
9	X			5.8	16.8	16.1	37.4	16.1	7.7
9		X		12.0	31.3	18.7	15.1	12.7	10.2
9			X	5.8	42.8	20.2	16.7	10.5	3.9
10	X			.6	1.9	2.5	15.3	39.5	40.1
10		X		2.3	4.7	5.2	19.2	40.7	27.9
10			X	.4	5.7	8.4	18.4	49.0	18.0

Legend:
0 -- I don't know
1 -- Never
2 -- Seldom
3 -- Sometimes
4 -- Frequently
5 -- Always

The significance of implementation of School Decision outcomes is found in Table Four.

TABLE FOUR

DIFFERENCE AMONG TYPE OF SCHOOLS AND DEGREE OF USE OF IGE SCHOOL DECISION OUTCOMES

	Outcome	Chi-Square	Significance
1.	Staff members develop written statements of agreement concerning their educational beliefs.	76.206	.000*
2.	Staff members examine the goals of a new program before using the new program.	21.056	.020*
3.	When a new program is being considered, staff examine their own goals and the new program's goals for consistency.	15.561	.112
4.	Central Office administration reviews new programs and gives approval of programs through financial and Central Office support for its use.	32.894	.000*
5.	Central Office administration approves a staff's decision to adopt a new program before it is implemented.	24.576	.006*
6.	Teachers make decisions that affect the scheduled blocks of time for teaching and learning.	38.838	.000*
7.	Teachers make decisions that affect flexible use of space assigned to them.	9.394	.495

*Significant at .05 level

Outcome	Chi-Square	Significance
8. Teachers make decisions that affect the selection of materials they use.	10.726	.379
9. As a result of interview, teachers affect recommended replacements and additions to professional staff.	59.724	.000*
10. Teachers make most decisions that affect the students assigned to them.	34.849	.000*
11. Students are involved in decision-making regarding many school-wide activities.	6.917	.733
12. Students are involved in decision-making regarding school-wide policies that affect them.	13.158	.215

*Significant at .05 level

Hypothesis 2: There is no significant difference in the degree of implementation of IGE outcomes labeled School Organizations in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district.

To test this hypothesis outcomes thirteen through thirty-four of the questionnaire were included in the category, School Organization. The obtained chi-square was significant for outcomes 13, 14, 15, 16, 18, 19, 20, 25, 26, 28, 29, 32, 33, and 34; therefore, the null hypothesis for these outcomes was rejected. However, outcomes 17, 21, 22, 23, 24, 27, and 31 were found not to be significant at the .05 level of significance. As shown

in Table Five, the null hypothesis was accepted for these outcomes.

In regard to data for School Organization outcomes, the questionnaire directed the participant to skip outcomes fourteen through twenty-six inclusive if the school was not organized in teams.

For outcomes fourteen to twenty-six the following cases were missing from each type of school:

1) fourteen cases of the 159 teachers in IGE schools,
2) eighty-seven cases of the 174 teachers in non-IGE schools, and
3) one hundred and seventy-six cases of the 266 teachers of the non-IGE district schools.

Specific data on the nine significant School Organization outcomes with a chi-square of 25.000 and above, revealed differences in the proportion of implementation for teachers in the three types of schools.

Figure 2: Pattern of Degree of Implementation by type of school for significant School Organization outcomes with a chi-square of 25.000 and above.

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
13	X			0.	.6	.6	5.2	16.2	77.3
13		X		1.3	19.5	10.4	17.5	16.9	34.4
13			X	.9	25.9	23.3	18.4	14.3	16.1
*15	X			2.1	27.0	9.9	9.9	7.8	43.3
15		X		1.2	27.1	12.9	15.3	15.3	28.2
15			X	2.2	30.0	13.3	28.9	2.2	23.3
*16	X			0.	0.	.7	5.6	11.1	82.6
16		X		3.4	9.2	3.4	12.6	9.2	62.1
16			X	5.7	11.5	12.6	14.9	20.7	34.5
*18	X			0.	0.	.7	24.1	29.7	45.5
18		X		1.1	0.	3.4	21.8	35.6	37.9
18			X	2.2	0.	2.2	16.9	57.3	21.3
*20	X			.7	4.8	2.8	13.1	20.0	58.6
20		X		1.2	10.8	8.4	21.7	19.3	38.6
20			X	5.6	18.9	11.1	11.1	23.3	30.0
*25	X			2.1	2.8	3.4	8.3	31.0	52.4
25		X		0.	2.4	1.2	20.0	38.8	37.6
25			X	5.5	6.5	7.7	19.8	31.9	29.7
28	X			0.	0.	7.7	28.8	44.2	19.2
28		X		.6	1.2	7.7	30.2	42.6	17.8
28			X	0.	.4	3.4	42.2	44.9	9.1
32	X			4.5	5.2	10.3	15.5	23.9	40.6
32		X		7.6	8.8	22.8	17.5	19.9	23.4
32			X	8.0	15.3	9.9	21.4	25.2	20.2
34	X			9.1	9.7	11.0	17.5	26.0	26.6
34		X		16.3	18.1	16.9	17.5	18.1	13.3
34			X	13.5	23.1	17.7	21.9	16.2	7.7

*Significant number of cases missing from non-IGE and non-IGE district schools.

The significance of implementation of School Organization outcomes is found in Table Five.

TABLE FIVE

DIFFERENCES AMONG TYPE OF SCHOOL AND DEGREE OF USE OF IGE SCHOOL ORGANIZATION OUTCOMES

	Outcome	Chi-Square	Significance
13.	Your school is organized in teams.	177.546	.000*
14.	A team includes teachers and students.	22.009	.015*
15.	A team includes teachers, students and aides.	29.767	.000*
16.	One teacher of a team acts as the coordinator and representative of the group.	70.191	.000*
17.	Teachers who team together possess collectively a diversity of strengths, backgrounds, and ideas.	9.057	.337
18.	Team members are professionally compatible.	26.684	.000*
19.	Team members are personally compatible.	15.620	.048*
20.	Teachers who team together serve students whose ages span at least two years.	38.877	.000*
21.	Teachers who team together each share in planning of student's learning program according to teacher's talents.	9.414	.493
22.	Teachers who team together agree on what content areas each will teach and an evaluation of this teaching arrangement is conducted.	5.884	.824
23.	Teachers who team together share in the planning of content.	9.493	.486

	Outcome	Chi-Square	Significance
24.	Teachers who team together share in the teaching and assessing of the learning program.	13.708	.089
25.	Ordinarily students are taught by a small group of teachers except when unique learning needs of student can only be met by others within the school building.	27.757	.002*
26.	Ordinarily students are taught by a small group of teachers except when unique learning needs of student can only be met by out-of-school learning opportunities.	24.050	.007*
27.	Teacher-to-student relationships evidence trust, respect for one another, and open communication.	15.180	.125
28.	Student-to-student relationships evidence trust, respect for one another, and open communication.	25.228	.004*
29.	Teachers cultivate open communication with parents.	13.447	.036*
30.	Teachers cultivate open communication with community.	16.276	.092
31.	Student evaluation conferences are held with parent, student, and teacher participating.	8.538	.576
32.	A steering committee make school building policies.	45.724	.000*
33.	A steering committee formulates school-wide operational procedures.	28.921	.001*
34.	The steering committee resolves school building problems referred to it.	46.478	.000*

*Significant at .05 level

Hypothesis 3: There is no significant difference in the degree of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools: IGE school and non-IGE school in the same district, and a non-IGE school in a non-IGE school district.

To test this hypothesis outcomes thirty-five through fifty-four of the questionnaire were included in the category, Curriculum and Teaching. The obtained chi-square was significant for outcomes 35, 37, 40, 41, 43, 44, 45, 48, 49, 50, 53, and 54; therefore, the null hypothesis for these outcomes was rejected. However, outcomes 36, 38, 39, 42, 46, 47, 51, and 52 were found not to be significant at the .05 level of significance. As indicated in Table Six, the null hypothesis was accepted for these outcomes.

Specific data on the five significant Curriculum and Teaching outcomes revealed differences in the proportion of implementation for teachers in the three types of schools.

Figure 3: Pattern of Degree of Implementation by type of school for significant Curriculum and Teaching outcomes with a chi-square of 25.000 and above.

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
40	X			1.3	0.	2.5	32.1	37.7	26.4
40		X		2.3	1.2	7.0	18.7	37.4	33.3
40			X	3.9	2.7	6.6	22.3	43.4	21.1
43	X			.6	0.	3.2	28.0	40.1	28.0
43		X		5.7	1.7	5.7	26.4	33.3	27.0
43			X	3.1	1.5	4.6	25.8	49.2	15.8

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
48	X			.6	1.9	4.4	33.3	40.3	19.5
48		X		.6	.6	11.0	32.6	34.9	20.3
48			X	.4	2.7	11.0	43.3	33.5	9.1
53	X			3.2	2.5	5.7	19.1	33.1	36.3
53		X		11.4	9.0	9.6	10.2	22.8	37.1
53			X	10.0	14.3	11.6	15.8	30.1	18.1
54	X			6.4	2.5	7.0	11.5	37.6	35.0
54		X		12.7	8.4	8.4	12.0	22.3	36.1
54			X	9.8	14.1	10.6	16.1	27.5	22.0

The significance of implementation of Curriculum and Teaching outcomes is found in Table Six.

TABLE SIX

DIFFERENCES AMONG TYPE OF SCHOOL AND DEGREE OF USE OF IGE CURRICULUM AND TEACHING OUTCOMES

	Outcome	Chi-Square	Significance
35.	Each student identifies with a specific teacher who is viewed as a warm, supportive person concerned with the student's self-concept.	22.544	.012*
36.	Each student identifies with a specific person who shares accountability for the student's learning program.	17.806	.058

*Significant at .05 level

	Outcome	Chi-Square	Significance
37.	The staff participates in in-service programs concerned with supportive role.	19.464	.034*
38.	Teachers select or establish broad educational goals to emphasize with students.	17.166	.070
39.	Student's learning program is based on specified behavioral objectives.	17.061	.073
40.	For each behavioral objective there is a variety of alternative learning activities.	25.182	.005*
41.	Learning programs include alternative learning activities that use diverse media.	19.478	.034*
42.	Students have opportunities to learn in various sizes of groups.	11.113	.348
43.	Teachers and/or students consider peer relationships when selecting a student's learning activities.	26.126	.003*
44.	Teachers and/or students consider achievement when selecting a student's learning activities.	22.705	.011*
45.	Teachers and/or students consider learning styles when selecting a student's learning activities.	19.905	.030*
46.	Teachers and/or students consider interest in subject areas when selecting learning activities.	14.604	.147
47.	Teachers and/or students consider self-concept when selecting a student's learning activities.	9.291	.504

*Significant at .05 level

	Outcome	Chi-Square	Significance
48.	People in the local community are used as resources.	25.035	.005*
49.	Places in the local community are used as learning resources.	20.809	.022*
50.	Useful information about each student's interests, abilities and achievement is recorded.	19.242	.037*
51.	There exists a systematic method of gathering useful information about students.	16.614	.083
52.	Useful student information is used when personalized learning programs are planned.	17.742	.059
53.	The steering committee ensures that educational goals of the school are consistent with those of the school system.	50.367	.000*
54.	The steering committee ensures that the learning objectives of school are consistent with goals of school system.	36.672	.000*

*Significant at .05 level

Hypothesis 4: There is no significant difference in the degree of implementation of IGE outcomes labeled Student Responsibility in the three types of schools: IGE school and non-IGE school in the same school district, and a non-IGE school in a non-IGE school district.

To test this hypothesis outcomes fifty-five through sixty-eight of the questionnaire were included in the category, Student Responsibility. The obtained chi-square was significant for outcomes 55, 56, 58, 59, 61, 62, 63, 64, 65, 67, and 68; therefore, the null hypothesis for these

outcomes was rejected. However, outcomes 57, 60, and 66 were found to be not significant at the .05 level of significance. As indicated in Table Seven, the null hypothesis is supported for these outcomes where no significance is shown between type of school and the various responses.

Specific data on the six significant Student Responsibility outcomes revealed differences in the proportion of implementation for teachers in the three types of schools.

Figure 4: Pattern of Degree of Implementation by type of school for significant Student Responsibility outcomes with a chi-square of 25.000 and above.

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
58	X			3.8	10.3	30.8	37.2	9.6	8.3
58		X		4.1	8.2	27.6	38.8	15.9	5.3
58			X	2.0	19.8	35.6	31.6	8.7	2.4
61	X			3.8	7.0	15.2	44.9	22.2	7.0
61		X		5.8	5.8	22.2	32.2	25.7	8.2
61			X	4.7	14.7	22.5	46.5	10.5	1.2
62	X			4.5	17.3	39.1	28.2	5.1	5.8
62		X		8.8	16.4	33.9	25.7	12.3	2.9
62			X	4.3	29.6	40.1	22.2	3.5	.4
64	X			4.5	12.1	36.9	31.2	9.6	5.7
64		X		5.3	14.0	33.9	28.7	13.5	4.7
64			X	3.8	18.4	42.5	30.7	3.8	.8
65	X			5.1	10.9	30.1	35.9	10.3	7.7
65		X		8.8	9.4	27.1	31.2	18.2	6.3
65			X	6.9	13.1	38.6	32.8	7.3	1.2
67	X			4.5	4.5	16.0	32.7	30.1	12.2
67		X		4.0	6.9	10.4	30.6	29.5	18.5
67			X	3.4	5.4	22.6	39.8	23.8	5.0

The significance of implementation of Student Responsibility outcomes is found in Table Seven.

TABLE SEVEN

DIFFERENCES AMONG TYPE OF SCHOOL AND DEGREE OF USE OF IGE STUDENT RESPONSIBILITY OUTCOMES

Outcome	Chi-Square	Significance
55. When evaluating what a student has learned, a variety of sources are used.	23.149	.010*
56. Students increasingly demonstrate greater ability for self-assessment of their learning.	22.804	.011*
57. Learning is assessed by teachers and students.	16.146	.095
58. Students evaluate and plan their programs toward educational goals.	29.778	.000*
59. Students and teachers are included in the process of evaluating and planning toward each student's learning goals.	27.584	.002*
60. Students, teachers and parents evaluate and plan progress toward each student's learning goals.	14.026	.171
61. Students can state the learning objective for the activity in which they are engaged.	47.399	.000*
62. Students elect their learning/behavioral objectives.	41.072	.000*

*Significant at .05 level

Outcome	Chi-Square	Significance
63. Students increasingly accept more responsibility for selecting their learning objectives.	26.136	.003*
64. Students select their learning activities.	26.955	.002*
65. Students increasingly accept more responsibility for selecting or developing learning activities.	30.091	.000*
66. There are a number of learning activities available for each objective.	17.415	.065
67. Students know the parts of a learning program.	33.094	.000*
68. The degree of student decision-making increases according to demonstrated ability.	18.707	.044*

*Significant at .05 level

Hypothesis 5: There is no significant difference in the degree of implementation of IGE outcomes labeled Planning, Analyzing, and Improving in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE district.

To test this hypothesis, outcomes sixty-nine through eighty-six of the questionnaire were included in the category, Planning, Analyzing, and Improving. The obtained chi-square was significant for outcomes 69, 70, 71, 72, 73, 74, 75, 76, 78, 79, 80, 81, 82, 83, 84, 85, and 86; therefore, the null hypothesis for these outcomes was rejected. However, outcome 77 was found to be not

significant at the .05 level of significance. As indicated in Table Eight, the null hypothesis is supported for this outcome where no significance is shown between type of school and the various responses.

Specific data on the thirteen significant Planning, Analyzing, and Improving outcomes revealed differences in the proportion of implementation for teachers in the three types of schools.

Figure 5: Pattern of Degree of Implementation by type of school for significant Planning, Analyzing, and Improving outcomes with a chi-square of 25.000 and above.

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
70	X			3.8	13.4	22.9	34.4	15.3	10.2
70		X		2.9	12.6	30.5	18.4	17.8	17.8
70			X	5.1	24.9	34.2	23.3	8.9	3.5
72	X			.6	7.7	7.1	21.2	26.3	37.2
72		X		4.1	8.8	14.7	24.7	19.4	28.2
72			X	4.3	17.6	25.0	24.2	15.6	13.3
73	X			.6	15.5	12.9	32.9	21.9	16.1
73		X		4.2	16.2	18.6	24.6	13.2	23.4
73			X	6.6	20.5	31.0	22.1	14.0	5.8
74	X			8.4	9.1	13.0	30.5	20.8	18.2
74		X		14.0	14.6	17.1	23.8	18.3	12.2
74			X	12.9	21.6	14.5	24.3	20.4	6.3
75	X			4.5	10.2	16.6	29.3	26.1	13.4
75		X		15.8	14.0	15.8	22.8	14.0	17.5
75			X	13.4	21.7	17.4	26.5	13.0	7.9
76	X			2.6	6.1	22.4	27.6	29.5	12.8
76		X		6.6	4.2	11.4	27.5	25.7	24.6
76			X	12.5	7.8	15.2	28.4	24.9	11.3

TYPE OF SCHOOL				DEGREE OF IMPLEMENTATION					
OUTCOME	IGE	NON-IGE	NON-IGE DISTRICT	0	1	2	3	4	5
78	X			.6	1.9	12.8	37.2	27.6	19.9
78		X		1.2	1.7	10.4	31.8	34.1	20.8
78			X	1.9	2.7	25.4	36.2	24.2	9.6
79	X			3.2	2.5	10.1	44.9	24.1	15.2
79		X		1.2	5.2	27.7	31.2	20.2	14.5
79			X	4.7	11.4	25.5	36.9	18.0	3.5
80	X			3.2	.6	10.8	38.9	26.8	19.7
80		X		8.9	4.1	18.9	29.0	22.5	16.6
80			X	14.5	8.0	18.5	35.7	18.5	4.8
82	X			11.0	4.5	18.8	33.8	21.4	10.4
82		X		20.0	17.5	16.9	19.4	12.5	13.7
82			X	23.9	20.7	21.9	20.7	9.2	3.6
83	X			3.2	13.3	34.8	27.8	10.1	10.8
83		X		4.6	26.0	24.3	24.3	15.0	5.8
83			X	3.5	48.4	32.9	11.2	3.1	.8
84	X			3.2	29.5	28.8	25.6	7.1	5.8
84		X		6.9	37.6	25.4	19.1	7.5	3.5
84			X	4.3	59.7	27.5	6.6	1.6	.4
85	X			2.5	15.9	36.3	28.7	14.6	1.9
85		X		1.7	13.3	30.1	32.4	17.3	5.2
85			X	3.1	34.5	35.6	19.9	4.6	2.3

The significance of implementation of Planning, Analyzing, and Improving outcomes is found in Table Eight.

TABLE EIGHT

DIFFERENCES AMONG TYPE OF SCHOOL AND DEGREE OF USE OF IGE PLANNING, ANALYZING, AND IMPROVING OUTCOMES

	Outcome	Chi-Square	Significance
69.	Teachers develop and implement a plan for in-service experience.	22.926	.011*
70.	Each staff member plans and implements a plan for in-service based on professional needs.	54.855	.000*
71.	Staff members plan and implement in-service programs based upon school goals or goals of a new program.	21.023	.020*
72.	Teachers who work together have common time to plan and work together.	64.543	.000*
73.	Teachers who work together have sufficient time to plan and work together.	58.820	.000*
74.	The steering committee coordinates school-wide in-service programs for total staff.	27.375	.002*
75.	The school has a formal procedure to exchange ideas and resolve problems with other schools in the district.	39.281	.000*
76.	Consultants from Central Office assist the school.	34.521	.000*
77.	Schools in the district that are working on the same project meet to exchange ideas or resolve problems.	15.804	.105

*Significant at .05 level

Outcome	Chi-Square	Significance
78. Teachers in the district have opportunities for exchange of ideas and/or participation in workshops.	33.008	.000*
79. Teachers constructively critique/evaluate the way they function and make decisions as a group.	54.567	.000*
80. Teachers who work together constructively critique the group's learning program plans.	54.393	.000*
81. Teachers constructively critique learning program plans for individual students.	24.794	.005*
82. Steering Committee periodically analyzes and improves the way its members work together.	59.190	.000*
83. Teachers observe each other informally during instruction time and provide feedback to each other.	99.516	.000*
84. Teachers observe one another using formal procedures and constructively critique performance.	71.886	.000*
85. Teachers from other schools observe at the school during instruction time.	55.605	.000*
86. Students provide feedback/ evaluation of the learning program.	22.732	.011*

*Significance at .05 level

Hypothesis 6: There is no significant difference in the opinion of implementation of IGE outcomes labeled School Decisions in the three types of schools: IGE school and non-IGE school in the same district and non-IGE school in a non-IGE school district.

To test this hypothesis, outcomes one to twelve of the questionnaire were included in the category, School Decisions. The obtained chi-square with four degrees of freedom was significant for outcomes 1, 9, and 10; therefore, the null hypothesis for these outcomes was rejected. As recorded in Table Nine, the other nine outcomes supported the null hypothesis and were found to be not significant at the .05 level of significance.

Specific data on the three significant School Decision outcomes revealed differences in the proportion of teachers' opinions for the three types of schools.

Figure 6: Pattern of teachers' opinions by type of school for significant School Decision outcomes.

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
1	X			82.8	7.9	9.3
1		X		70.3	21.2	8.5
1			X	59.9	22.9	17.2
9	X			74.0	12.7	13.3
9		X		55.6	23.1	21.2
9			X	61.2	19.6	19.2
10	X			94.7	3.3	2.0
10		X		90.9	3.7	5.5
10			X	89.5	8.2	2.3

Teachers' opinions of outcomes one through twelve regarding the category School Decisions are reflected in Table Nine.

TABLE NINE

DIFFERENCES AMONG TYPE OF SCHOOL AND TEACHER OPINIONS FOR SCHOOL DECISION OUTCOMES

	Outcome	Chi-Square	Significance
1.	Staff members develop written statements of agreement concerning their educational beliefs.	27.698	.000*
2.	Staff members examine the goals of a new program before using the new program.	2.655	.617
3.	When a new program is being considered, staff examine their own goals and the new program's goals for consistency.	2.367	.668
4.	Central Office administration review new programs and give approval of programs through financial and Central Office support for its use.	6.719	.151
5.	Central Office administration approves a staff's decision to adopt a new program before it is implemented.	8.309	.080
6.	Teachers make decisions that affect the scheduled blocks of time for teaching and learning.	7.530	.110
7.	Teachers make decisions that affect flexible use of space.	2.581	.630
8.	Teachers make decisions that affect the selection of materials they use.	4.792	.309
9.	As a result of interview, teachers affect recommended replacements and additions to professional staff.	11.996	.017*

*Significant at .05 level

Outcome	Chi-Square	Significance
10. Teachers make most decisions that affect the students assigned to them.	9.842	.043*
11. Students are involved in decision-making regarding many school-wide activities.	4.294	.367
12. Students are involved in decision-making regarding school-wide policies that affect them.	6.160	.187

*Significant at .05 level

Hypothesis 7: There is no significant difference in the opinion of implementation of IGE outcomes labeled School Organization in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district.

To test this hypothesis, outcomes thirteen through thirty-four of the questionnaire were included in the category of School Organization. The obtained chi-square with four degrees of freedom was significant for outcomes 13, 16, 20, 21, 25, 32, and 34; therefore, the null hypothesis for these outcomes was rejected. As recorded in Table Ten, the remaining fifteen outcomes supported the null hypothesis and were found to be not significant at the .05 level of significance.

Specific data on the seven significant School Organization outcomes indicated differences in the proportion of teachers' opinions for the three types of schools.

Figure 7: Pattern of teachers' opinions by type of school for significant School Organization outcomes.

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
13	X			92.7	2.0	5.3
13		X		71.7	16.6	11.7
13			X	74.2	12.9	12.9
16	X			93.0	2.8	4.2
16		X		85.9	9.4	4.7
16			X	79.5	9.1	11.4
20	X			82.6	6.3	11.1
20		X		81.7	11.0	7.3
20			X	65.6	14.4	20.0
21	X			90.2	5.6	4.2
21		X		85.7	6.0	8.3
21			X	73.6	9.9	16.5
25	X			90.3	2.8	6.9
25		X		100.0	0.	0.
25			X	81.3	5.5	13.2
32	X			88.1	4.6	7.3
32		X		84.2	10.3	5.5
32			X	82.6	5.8	11.6
34	X			85.9	4.7	9.4
34		X		75.3	6.3	18.4
34			X	69.4	12.2	18.4

Teachers' opinions of outcomes thirteen through thirty-four regarding the category School Organization are reflected in Table Ten.

TABLE TEN

DIFFERENCES AMONG TYPE OF SCHOOL AND TEACHER OPINIONS FOR SCHOOL ORGANIZATION OUTCOMES

	Outcome	Chi-Square	Significance
13.	Your school is organized in teams.	26.607	.000*
14.	A team includes teachers and students.	1.818	.769
15.	A team includes teachers, students and aides.	1.525	.822
16.	One teacher of a team acts as the coordinator and representative of the group.	11.089	.025
17.	Teachers who team together possess collectively a diversity of strengths, backgrounds and ideas.	3.272	.513
18.	Team members are professionally compatible.	1.023	.906
19.	Team members a personally compatible.	4.537	.338
20.	Teachers who team together serve students whose ages span at least two years.	12.230	.015*
21.	Teachers who team together each share in planning of student's learning program according to teacher's talents.	13.044	.011*
22.	Teachers who team together agree on what content areas each will teach and an evaluation of this teaching arrangement is conducted.	3.308	.507
23.	Teachers who team together share in the planning of content.	4.641	.326

*Significant at .05 level

	Outcome	Chi-Square	Significance
24.	Teachers who team together share in the teaching and assessing of the learning program.	2.016	.732
25.	Ordinarily, students are taught by a small group of teachers except when unique learning needs of students can only be met by others within the school building.	17.222	.001*
26.	Ordinarily, students are taught by a small group of teachers except when unique learning needs of student can only be met by out-of-school learning opportunities.	3.050	.549
27.	Teacher-to-student relationships evidence trust, respect for one another, and open communication.	3.795	.434
28.	Student-to-student relationships evidence trust, respect for one another, and open communication.	.483	.975
29.	Teachers cultivate open communication with parents.	5.334	.254
30.	Teachers cultivate open communication with community.	7.284	.121
31.	Student evaluation conferences are held with parent, student, and teacher participating.	5.405	.248
32.	A steering committee make school building policies.	9.576	.048*
33.	A steering committee formulates school-wide operational procedures.	4.449	.348
34.	The steering committee resolves school building problems referred to it.	16.323	.002*

*Significant at .05 level

Hypothesis 8: There is no significant difference in the opinion of implementation of IGE outcomes labeled Curriculum and Teaching in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district.

To test this hypothesis, outcomes thirty-five through fifty-four of the questionnaire were included in the category of Curriculum and Teaching. The obtained chi-square with four degrees of freedom was significant for outcomes 42 and 48; therefore, the null hypothesis for these outcomes was rejected. As recorded in Table Eleven, the remaining eighteen outcomes supported the null hypothesis and were found to be not significant at the .05 level of significance.

Specific data on the two significant Curriculum and Teaching outcomes evidenced differences in the proportion of teachers' opinions for the three types of schools.

Figure 8: Pattern of teachers' opinions by type of school for significant Curriculum and Teaching outcomes.

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
42	X			97.4	0.	2.6
42		X		95.2	2.4	2.4
42			X	98.8	.9	.5
48	X			96.8	0.	3.2
48		X		94.6	3.	2.4
48			X	96.9	0.	3.1

Teachers' opinions of outcomes thirty-five through fifty-four regarding the category Curriculum and Teaching are reflected in Table Eleven.

TABLE ELEVEN

DIFFERENCES AMONG TYPE OF SCHOOL AND TEACHER OPINIONS FOR CURRICULUM AND TEACHING OUTCOMES

	Outcome	Chi-Square	Significance
35.	Each student identifies with a specific teacher who is viewed as a warm, supportive person concerned with the student's self-concept.	8.596	.072
36.	Each student identifies with a specific person who shares accountability for the student's learning program.	7.548	.109
37.	The staff participates in in-service programs concerned with supportive role.	6.393	.171
38.	Teachers select or establish broad educational goals to emphasize with students.	5.769	.217
39.	Student's learning program is based on specified behavioral objectives.	8.653	.070
40.	For each behavioral objective there is a variety of alternative learning activities.	7.175	.126
41.	Learning programs include alternative learning activities.	4.591	.331
42.	Students have opportunities to learn in various sizes of groups.	11.401	.022*

*Significant at .05 level

	Outcome	Chi-Square	Significance
43.	Teachers and/or students consider peer relationships when selecting a student's learning activities.	6.103	.191
44.	Teachers and/or students consider achievement when selecting a student's learning activities.	1.004	.909
45.	Teachers and/or students consider learning styles when selecting a student's learning activities.	6.662	.154
46.	Teachers and/or students consider interest in subject areas when selecting learning activities.	1.692	.792
47.	Teachers and/or students consider self-concept when selecting a student's learning activities.	7.922	.094
48.	People in the local community are used as resources.	12.772	.012*
49.	Places in the local community are used as learning resources.	2.617	.623
50.	Useful information about each student's interests, abilities, and achievement is recorded.	6.469	.166
51.	There exists a systematic method of gathering useful information about students.	.914	.922
52.	Useful student information is used when personalized learning programs are planned.	6.888	.141
53.	The steering committee ensures that educational goals of the school are consistent with those of the school system.	7.948	.093
54.	The steering committee ensures that learning objectives of school are consistent with goals of school system.	6.768	.148

*Significant at .05 level

Hypothesis 9: There is no significant difference in the opinion of implementation of IGE outcomes labeled Student Responsibility in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district.

To test this hypothesis, outcomes fifty-five through sixty-eight of the questionnaire were included in the category of Student Responsibility. The obtained chi-square with four degrees of freedom was significant for outcomes 61, 62, 64, and 65; therefore, the null hypothesis for these outcomes was rejected. As recorded in Table Twelve, the remaining ten outcomes supported the null hypothesis and were found to be not significant at the .05 level of significance.

Specific data on the four significant Student Responsibility outcomes revealed differences in the proportion of teachers' opinions for the three types of schools.

Figure 9: Pattern of teachers' opinions by type of school for significant Student Responsibility outcomes.

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
61	X			83.6	7.9	8.6
61		X		79.3	7.9	12.8
61			X	69.1	16.8	14.1
62	X			56.6	26.3	17.1
62		X		60.1	24.5	15.3
62			X	44.5	30.3	25.2
64	X			63.6	25.8	10.6
64		X		50.7	22.1	17.2
64			X	50.0	27.9	22.1

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
65	X			70.0	18.7	11.3
65		X		71.7	12.6	15.7
65			X	61.0	16.2	22.4

Teachers' opinions of outcomes fifty-five through sixty-eight regarding the category Student Responsibility are reflected in Table Twelve.

TABLE TWELVE

DIFFERENCES AMONG TYPE OF SCHOOL AND TEACHER OPINIONS FOR STUDENT RESPONSIBILITY OUTCOMES

	Outcome	Chi-Square	Significance
55.	When evaluating what a student has learned, a variety of sources are used.	7.837	.097
56.	Students increasingly demonstrate greater ability for self-assessment of their learning.	.192	.995
57.	Learning is assessed by teachers and students.	1.675	.795
58.	Students evaluate and plan their programs toward educational goals.	3.344	.501
59.	Students and teachers are included in the process of evaluating and planning toward each student's learning goals.	7.705	.103

	Outcome	Chi-Square	Significance
60.	Students, teachers, and parents evaluate and plan progress toward each student's learning goals.	3.277	.512
61.	Students can state learning objective for the activity in which they are engaged.	14.778	.005*
62.	Students elect their learning/ behavioral objectives.	12.500	.014*
63.	Students increasingly accept more responsibility for selecting their learning objectives.	4.980	.289
64.	Students select their learning activities.	12.252	.015*
65.	Students increasingly accept more responsibility for selecting or developing learning activities.	11.000	.026*
66.	There are a number of learning activities available for each objective.	6.484	.165
67.	Students know the parts of a learning program.	6.124	.190
68.	The degree of student decision-making increases according to demonstrated ability.	6.702	.152

*Significant at .05 level

Hypothesis 10: There is no significant difference in the opinion of implementation of IGE outcomes labeled Planning, Analyzing, and Improving in the three types of schools: IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district.

To test this hypothesis, outcomes sixty-nine through eighty-six of the questionnaire were included in the category of Planning, Analyzing, and Improving. The obtained chi-square with four degrees of freedom was significant for outcomes 70, 74, 78, 79, 80, 82, 83, 84, and 85; therefore, the null hypothesis for these outcomes was rejected. As recorded in Table Thirteen, the remaining nine outcomes supported the null hypothesis and were found to be not significant at the .05 level of significance.

Specific data on the nine significant Planning, Analyzing, and Improving outcomes indicated differences in the proportion of teachers' opinions for the three types of schools.

Figure 10: Pattern of teachers' opinions by type of school for significant Planning, Analyzing, and Improving outcomes.

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
70	X			82.4	9.2	8.5
70		X		72.1	17.0	10.9
70			X	65.9	18.0	16.1
74	X			84.7	6.0	9.3
74		X		70.4	11.3	18.2
74			X	70.0	10.0	20.0
78	X			96.7	.7	2.6
78		X		95.8	2.4	1.8
78			X	90.4	3.1	6.5
79	X			90.9	1.3	7.8
79		X		87.4	6.0	6.6
79			X	82.2	5.0	12.8

OUTCOME	TYPE OF SCHOOL			TEACHER OPINIONS		
	IGE	NON-IGE	NON-IGE DISTRICT	YES	NO	NO OPINION
80	X			92.2	1.3	6.5
80		X		84.2	4.2	11.5
80			X	77.9	5.9	16.2
82	X			82.8	4.6	12.6
82		X		68.8	5.7	25.5
82			X	62.0	6.4	31.6
83	X			77.1	7.2	15.7
83		X		69.1	12.1	18.8
83			X	53.5	26.2	20.4
84	X			67.8	13.8	18.4
84		X		59.6	22.3	18.1
84			X	39.5	37.2	23.3
85	X			80.0	5.3	14.7
85		X		74.5	12.1	13.3
85			X	59.7	20.9	19.4

Teachers' opinions of outcomes sixty-seven through eighty-six regarding the category Planning, Analyzing, and Improving are reflected in Table Thirteen.

TABLE THIRTEEN

DIFFERENCES AMONG TYPE OF SCHOOL AND TEACHER OPINIONS FOR PLANNING, ANALYZING, AND IMPROVING OUTCOMES

Outcome	Chi-Square	Significance
69. Teachers develop and implement a plan for in-service experiences.	2.256	.688

	Outcome	Chi-Square	Significance
70.	Each staff member plans and implements a plan for in-service based on professional needs.	13.791	.008*
71.	Staff members plan and implement in-service programs based upon school goals or goals of a new program.	5.012	.286
72.	Teachers who work together have common time to plan and work together.	7.852	.097
73.	Teachers who work together have sufficient time to plan and work together.	1.871	.759
74.	The steering committee coordinates school-wide in-service programs for total staff.	12.456	.014*
75.	The school has a formal procedure to exchange ideas and resolve problems with other schools in the district.	8.037	.090
76.	Consultants from Central Office assist the school.	8.616	.071
77.	Schools in the district that are working on the same project meet to exchange ideas.	7.387	.116
78.	Teachers in the district have opportunities for exchange of ideas and/or participation in workshops.	9.759	.044*
79.	Teachers constructively critique/evaluate the way they function and make decisions as a group.	10.351	.034*
80.	Teachers who work together constructively critique the group's learning program plans.	14.567	.005*

*Significant at .05 level

Outcome	Chi-Square	Significance
81. Teachers constructively critique learning program plans for individual students.	3.606	.461
82. The steering committee periodically analyzes and improves the way its members work together.	20.190	.000*
83. Teachers observe each other informally during instruction time and provide feedback to each other.	34.011	.000*
84. Teachers observe one another using formal procedures and constructively critique performance.	39.578	.000*
85. Teachers from other schools observe at the school during instruction time.	26.090	.000*
86. Students provide feedback/ evaluation of the learning program.	4.542	.337

*Significant at .05 level

General Characteristics of the Three Types of Schools

Enclosed with the questionnaire for each school was a School Data Form. This form, to be completed by the principal, was designed to obtain descriptive data about each participating school. However, not all participating schools returned the form. In the IGE and non-IGE schools from the same district, fourteen forms of the seventeen participating schools were returned for each type of school. Of the twenty-five participating non-IGE district schools,

twenty-three forms were returned. The data in this section were summarized from the responses obtained from the School Data Form.

Profile of Grades by Type of School

Table Fourteen is a descriptive profile of grades in a school by type of school. Frequencies and percentages are shown for forty-nine cases.

The K-6 graded schools have the largest total column frequency and the largest number of schools for each type of school: 6 IGE schools, 6 non-IGE schools, and 11 non-IGE district schools. The smallest total column frequency is the 1-8 graded schools. There is one IGE school, two non-IGE schools; non-IGE district schools are not represented in this category.

Forty-nine schools responded to this question: 14 IGE schools, 14 non-IGE schools, and 21 non-IGE district schools.

TABLE FOURTEEN

DESCRIPTIVE PROFILE OF GRADES BY TYPE OF SCHOOL

(N=49)

TYPE OF SCHOOL		K-3	K-6	K-8	1-8	OTHER	TOTAL
IGE	F	1	6	2	1	4	14
	%	2.0	12.2	4.1	2.0	8.2	8.2
NON-IGE		2	5	2	2	2	14
		4.1	12.2	4.1	4.1	4.1	28.6

TYPE OF SCHOOL	K-3	K-6	K-8	1-8	OTHER	TOTAL
NON-IGE DISTRICT	1 2.0	11 22.4	2 4.1	0 0	7 14.3	21 42.9
TOTAL	4 8.2	23 46.9	6 12.2	3 6.1	13 26.5	49 100.0

Legend: F -- Frequencies
% -- Percentage

Profile of Student Enrollment by Type of School

Table Fifteen is a descriptive profile of student enrollment by type of school. Frequencies and percentages are shown for fifty-one cases.

The 300-449 student enrollment category has the largest total column frequency and the largest number of schools for each type of school: 7 IGE schools, 5 non-IGE schools and 9 non-IGE district schools. The smallest total column frequency is the 600-749 student enrollment category: one IGE school and one non-IGE district school. Non-IGE schools are not represented in this category.

Fifty-one schools responded to this question: 14 IGE schools, 14 non-IGE schools and 23 non-IGE district schools.

TABLE FIFTEEN

DESCRIPTIVE PROFILE OF STUDENT ENROLLMENT BY TYPE OF SCHOOL

(N=51)

TYPE OF SCHOOL	150-299	300-449	450-599	600-749	TOTAL
IGE	5 9.8	7 13.7	1 2.0	1 2.0	14 27.5
NON-IGE	5 9.8	5 9.8	4 7.8	0 0	14 27.5
NON-IGE DISTRICT	7 13.7	9 17.6	6 11.8	1 2.0	23 45.1
TOTAL	17 33.3	21 41.2	11 21.6	2 3.9	51 100.0

Profile of Teachers Employed Full-Time by Type of School

Table Sixteen is a profile of full-time teachers by type of school. Frequencies and percentages are shown for fifty-one cases.

The number of full-time teachers ranges from seven to forty in the participating schools. The largest total row frequency (5) represents thirteen teachers employed full-time in two IGE schools, one non-IGE school, and two non-IGE district schools.

The smallest total row frequency (1) represents 19, 24, 26, 28, and 40 teachers employed full-time in six non-IGE district schools.

A total of 51 schools responded to this question: 14 IGE schools, 14 non-IGE schools, and 23 non-IGE district schools.

TABLE SIXTEEN

DESCRIPTIVE PROFILE OF TEACHERS FULL-TIME BY TYPE OF SCHOOL (N=51)

TEACHERS FULL-TIME	TYPE OF SCHOOL IGE		NON-IGE		NON-IGE DISTRICT		TOTAL	
	F	%	F	%	F	%	F	%
7	1	2.0	0	0	1	2.0	2	3.9
8	2	3.9	1	2.0	0	0	3	5.9
9	0	0	0	0	2	3.9	2	3.9
11	1	2.0	1	2.0	2	3.9	4	7.8
12	1	2.0	3	5.9	0	0	4	7.8
13	2	3.9	1	2.0	2	3.9	5	9.8
14	1	2.0	0	0	2	3.9	3	5.9
15	0	0	2	3.9	2	3.9	4	7.8
16	1	2.0	1	2.0	0	0	2	3.9
17	1	2.0	0	0	2	3.9	3	5.9
18	1	2.0	1	2.0	1	2.0	3	5.9
19	0	0	0	0	1	2.0	1	2.0
20	1	2.0	1	2.0	1	2.0	3	5.9
21	1	2.0	1	2.0	1	2.0	3	5.9
22	0	0	1	2.0	1	2.0	2	3.9
23	0	0	1	2.0	1	2.0	2	3.9
24	0	0	0	0	1	2.0	1	2.0
25	0	0	0	0	1	2.0	1	2.0
26	0	0	0	0	1	2.0	1	2.0
28	0	2.0	0	0	1	2.0	1	2.0
40	1	2.0	0	0	0	0	1	2.0
TOTAL	14	27.5	14	27.5	23	45.1	51	100.0

Profile of Teachers Employed Part-Time by Type of School

Table Seventeen is a profile of part-time teachers by type of school. Frequencies and percentages are shown for twenty-eight cases.

The number of part-time teachers ranges from one to six in the participating schools. The largest total column frequency (8) represents two non-IGE schools and six non-IGE district schools each with two part-time teachers. The smallest total column frequency (1) represents one non-IGE school with six part-time teachers.

A total of 28 schools responded to this question: 5 IGE schools, 9 non-IGE schools, and 14 non-IGE district schools.

TABLE SEVENTEEN

DESCRIPTIVE PROFILE OF TEACHERS PART-TIME BY TYPE OF SCHOOL

(N=28)

TYPE OF SCHOOL	1	2	3	4	5	6	TOTAL
IGE	1 3.6	0 0	2 7.1	2 7.1	0 0	0 0	5 17.9
NON-IGE	3 10.7	2 7.1	2 7.1	1 3.6	0 0	1 3.6	9 32.1
NON-IGE DISTRICT	2 7.1	6 21.4	3 10.7	1 3.6	2 7.1	0 0	14 50.0
TOTAL	6 21.4	8 28.6	7 25.0	4 14.3	2 7.1	1 3.6	28 100.0

*Part-time teachers = e.g. - art, music, physical education

Profile of Teacher Specialists by Type of School

Table Eighteen is a profile of teacher specialists by type of school. Frequencies and percentages are shown for forty-six cases.

The number of teacher specialists ranges from one to eight in the participating schools. The largest total column frequency (13) represents four IGE schools, four non-IGE schools, and five non-IGE district schools each having three specialists. The smallest total column frequency (2) represents one non-IGE and one non-IGE district school each having eight specialists.

A total of 46 schools responded to this question: 12 IGE schools, 13 non-IGE schools and 21 non-IGE district schools.

TABLE EIGHTEEN

DESCRIPTIVE PROFILE OF TEACHER SPECIALISTS BY TYPE OF SCHOOL

(N=46)

TYPE OF SCHOOL	1	2	3	4	5	6	7	8	TOTAL
IGE	2 4.3	0 0	4 8.7	3 6.5	1 2.2	1 2.2	1 2.2	0 0	12 26.1
NON-IGE	1 2.2	2 4.3	4 8.7	2 4.3	1 2.2	2 4.3	0 0	1 2.2	13 28.3
NON-IGE DIS-TRICT	4 8.7	1 2.2	5 10.9	5 10.9	1 2.2	0 0	4 8.7	1 2.2	21 45.7
TOTAL	7 15.2	3 6.5	13 28.3	10 21.7	3 6.5	3 6.5	5 10.9	2 4.3	46 100.0

Profile of Location of School by Type of School

Table Nineteen is a profile of location of school by type of school arranged in a crosstabulation table. Frequencies and percentages are shown for fifty cases.

Location is categorized as rural, suburban, or urban. Suburban schools represent the largest total column frequency (22): six IGE schools, three non-IGE schools, and thirteen non-IGE district schools. Rural schools represent the smallest total column frequency (11): three IGE schools, three non-IGE schools, and five non-IGE district schools.

A total of 50 schools responded to this question: 14 IGE schools, 13 non-IGE schools, and 23 non-IGE district schools.

TABLE NINETEEN

PROFILE OF SCHOOL LOCATION BY TYPE OF SCHOOL

(N=50)

TYPE OF SCHOOL	RURAL	SUBURBAN	URBAN	TOTAL
IGE	3 6.0	6 12.0	5 10.0	14 28.0
NON-IGE	3 6.0	3 6.0	7 14.0	13 26.0
NON-IGE DISTRICT	5 10.0	13 26.0	5 10.0	23 46.0
TOTAL	11 22.0	22 44.0	17 34.0	50 100.0

Profile of Socio-economic Status by Type of School

Table Twenty is a profile of socio-economic status of students by type of school arranged in a crosstabulation table. Frequencies and percentages are shown for fifty-one cases.

Socio-economic status is described as lower class, working class, middle-class, and upper-middle class. Middle class has the largest total column frequency (20) in six IGE schools, seven non-IGE schools, and seven non-IGE district schools. The smallest total column frequency (5) represents the lower class category for one IGE school, two non-IGE schools and two non-IGE district schools.

A total of 51 schools responded to this question: 14 IGE schools, 14 non-IGE schools, and 23 non-IGE district schools.

TABLE TWENTY

PROFILE OF SOCIO-ECONOMIC STATUS BY TYPE OF SCHOOL

(N=51)

TYPE OF SCHOOL	LOWER	WORKING	MIDDLE	UPPER-MIDDLE	TOTAL
IGE	1 2.0	5 9.8	6 11.8	2 3.9	14 27.5
NON-IGE	2 3.9	5 9.8	7 13.7	0 0	14 27.5
NON-IGE DISTRICT	2 3.9	8 15.7	7 13.7	6 11.8	23 45.1
TOTAL	5 9.8	18 35.3	20 39.2	8 15.7	51 100.0

Summary

In Chapter IV analysis of data has been presented by the following procedure:

1. Analysis of results of the five hypotheses tested concerning the degree of implementation of IGE outcomes in the three types of schools.

2. Analysis of the results of the five hypotheses tested concerning teachers' opinions in the three types of schools about the use of IGE outcomes in any elementary school.

3. Summary of results of descriptive data concerning the participating schools.

The chi-square Test of Homogeneity was used in testing the significance of each of the ten hypotheses. The test of significance was based on the .05 level for all tests of homogeneity.

There were sixty-one significant outcomes for the five hypotheses concerned with the degree of implementation; twenty-five significant outcomes for the five hypotheses concerned with the opinion of teachers about the use of IGE outcomes in any elementary school.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

In the final chapter a summary of the purposes and design of the study is presented first. The conclusions generated from analysis, followed by interpretations and recommendations for further research, conclude the chapter.

Summary

The purpose of this study was two-fold: first, to determine the extent of implementation of Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools; second, to determine the opinion of teachers concerning Individually Guided Education outcomes in school districts with both IGE schools and non-IGE schools, and in school districts with only non-IGE schools.

Research Procedures

The population in this study included forty-two IGE school districts located in twelve states proximate to Michigan. Twenty-seven of these IGE school districts met the criteria of having IGE and non-IGE schools and having

a facilitator who worked with both types of schools.

A questionnaire was designed to collect the data for this descriptive study. The questionnaire was organized so that each variable or outcome would generate two responses: degree of implementation and teachers' opinion about the appropriateness of use of each outcome in any elementary school. Outcomes were clustered in five categories: School Decisions, School Organization, Curriculum and Teaching, Student Responsibility, and Planning, Analyzing and Improving.

The sample for this study consisted of teachers from one IGE school and one non-IGE school in the same IGE school district and teachers from a non-IGE school in a contiguous non-IGE school district. The participants in the study consisted of the following: seventeen IGE schools with 159 teachers, seventeen non-IGE schools with 174 teachers, and twenty-five non-IGE district schools with 266 teachers.

All schools in the study were randomly selected using a table of random numbers. Questionnaires were sent to each school with a letter of explanation addressed to the principal with adequate instructions for completion and return of the questionnaire. Each principal was requested to complete a School Data Form concerning descriptive school information.

Because questionnaires were mailed at the end of the school year, superintendents of non-IGE school districts and facilitators of IGE school districts were telephoned to

ensure participation of schools.

A copy of the questionnaire, a copy of the letter sent to the principal, and an appropriate letter were mailed to the IGE facilitator in the IGE school district and to the superintendent in the non-IGE school district.

A follow-up post card was mailed to principals who did not return teacher questionnaires.

Responses to the questionnaires were coded, key punched, and verified by the Michigan State University Computer Center. The hypotheses in the study were tested by using the Statistical Package for Social Sciences. Data Analysis was accomplished using the nonparametic Chi-Square Test of Homogeneity yielding a chi-square statistic at the .05 significance level with various degrees of freedom.

The ten research hypotheses of the study were structured in the null form and were related to two questions. Five hypotheses are associated with the question: Is there a difference in the degree of implementation of IGE outcomes in the three types of schools; IGE school and non-IGE school in the same school district, and non-IGE school in a non-IGE school district? The other five hypotheses are related to the question: Is there a difference in the opinion of implementation of IGE outcomes in the three types of schools; IGE school and non-IGE school in the same district, and non-IGE school in a non-IGE school district?

Findings

1. Implementation of School Decision Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 1--Staff members develop written statements concerning their educational beliefs. Teachers in IGE and non-IGE schools reported higher percentages of use than teachers in non-IGE district schools. Notable differences were found in all categories except the category "sometimes".

Outcome 4--Central Office administration reviews new programs and gives approval of programs through support of their use. Teachers in non-IGE district schools reported higher percentages of use than teachers in IGE and non-IGE schools of the same district.

Outcome 6--Teachers make decisions that affect the scheduled blocks of time for teaching and learning. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools.

Outcome 9--As a result of interview, teachers affect recommended replacements and additions to professional staff. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Notable differences were found in the category "sometimes" (IGE 37.4, non-IGE 15.1, and non-IGE district 16.7).

Outcome 10--Teachers make most decisions that affect the students assigned to them. Teachers in IGE schools

reported higher percentage of use than teachers in the other two types of schools. Notable differences were found in the category "always" (IGE 40.1, non-IGE 27.9, and non-IGE district 18.0).

2. Implementation of School Organization Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 13--Your school is organized in teams. Teachers in IGE schools reported higher percentage of use than those in non-IGE and non-IGE district schools. Differences are notable for the following categories: "always" (IGE 77.3, non-IGE 34.4, and non-IGE district 16.1); "seldom" (IGE .6, non-IGE 10.4, and non-IGE district 23.3); and "never" (IGE .6, non-IGE 19.5, non-IGE district 25.9).

Outcome 15--A team includes teachers, students and aides. Teachers in IGE schools reported a higher percentage of use than those in non-IGE and non-IGE district schools. Differences are notable for the category "always" (IGE 43.3, non-IGE 28.2, and non-IGE district 23.3); and for "sometimes" (IGE 9.9, non-IGE 15.3, and non-IGE district 13.3).

Outcome 16--One teacher of a team acts as the coordinator and representative of the group. Teachers in IGE schools reported a higher percentage of use than teachers in non-IGE and non-IGE district schools. Differences are notable for the category "always" (IGE 82.6, non-IGE 62.1, and non-IGE district 34.5).

Outcome 18--Team members are professionally compatible. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the following categories: "always" (IGE 45.5, non-IGE 37.9, and non-IGE district 21.3); "frequently" (IGE 29.7, non-IGE 35.6, non-IGE district 57.3); and "sometimes" (IGE 24.1, non-IGE 21.8, and non IGE district 16.9).

Outcome 20--Teachers who team together serve students whose ages span at least two years or grade levels. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the category "always" (IGE 58.6, non-IGE 38.6, and non-IGE district 30.0), and "never" (IGE 4.8, non-IGE 10.8, and non-IGE district 18.9).

Outcome 25--Ordinarily, students are taught by a small group of teachers except when unique learning needs of students can only be met by out-of-school learning opportunities. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the category "always" (IGE 52.4, non-IGE 37.6, and non-IGE district 29.7).

Outcome 28--Student-to-student relationships evidence trust, respect for one another, and open communication. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools. Differences are notable

for the category "always" (IGE 19.2, non-IGE 17.8, and non-IGE district 9.1).

Outcome 32--A steering committee makes school building policies. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the category "always" (IGE 40.6, non-IGE 23.4, and non-IGE district 20.2).

Outcome 34--The steering committee resolves school building problems referred to it. Differences are notable for the categories "always" (IGE 26.6, non-IGE 13.3, and non-IGE district 7.7); and "never" (IGE 9.7, non-IGE 18.1, and non-IGE district 23.1).

3. Implementation of Curriculum and Teaching Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 40--For each behavioral objective, there is a variety of alternative learning activities. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools.

Outcome 43--Teachers and/or students consider peer relationships when selecting a student's learning activities. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools. Differences are notable for the following categories: "always" (IGE 28.0, non-IGE 27.0, and

non-IGE district 6.9); "frequently" (IGE 40.1, non-IGE 33.3, and non-IGE district 21.7); and "sometimes" (IGE 28.0, non-IGE 26.4, and non-IGE district 11.3).

Outcome 48--People in the local community are used as resources. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the non-IGE district schools.

Outcome 53--The steering committee ensures that educational goals of the school are consistent with those of the school system. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools. Differences are notable for the category "always" (IGE 36.7, non-IGE 37.1, and non-IGE district 18.1).

Outcome 54--The steering committee ensures that the learning objectives of the school are consistent with goals of the school system. Teachers in IGE schools reported a higher percentage of use than teachers in the other two types of schools.

4. Implementation of Student Responsibility Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 58--Students evaluate and plan their programs toward educational goals. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools.

Differences are notable for the following categories: "seldom" (IGE 30.8, non-IGE 27.6, and non-IGE district 35.6); and "never" (IGE 10.3, non-IGE 8.2, and non-IGE district 19.8).

Outcome 61--Students can state the learning objective for the activity in which they are engaged. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the non-IGE district schools.

Outcome 62--Students elect their learning/behavioral objectives. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in non-IGE district schools. Differences are notable for the category "never" (IGE 17.3, non-IGE 16.4, and non-IGE district 29.6).

Outcome 64--Students select their learning activities. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the non-IGE district schools.

Outcome 65--Students increasingly accept more responsibility for selecting or developing learning activities. Teachers in IGE and non-IGE schools in the same school district reported higher percentage of use than teachers in the non-IGE district schools. Differences are notable for the category "seldom" (IGE 30.1, non-IGE 27.1, and non-IGE district 38.6).

Outcome 67--Students know the parts of a learning program - objectives, activities, assessment, record keeping. Teachers in IGE and non-IGE schools reported

higher percentage of use than teachers in the non-IGE district schools.

5. Implementation of Planning, Analyzing, and Improving Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 70--Each staff member plans and implements a plan for in-service based on professional needs. Teachers in IGE schools reported a higher percentage of use than teachers in the other two types of schools. Differences are notable for the categories: "sometimes" (IGE 34.4, non-IGE 18.4, and non-IGE district 23.3); and "never" (IGE 13.4, non-IGE 12.6, and non-IGE district 24.9).

Outcome 72--Teachers who work together have common time to plan and work together. Teachers in IGE schools reported a higher percentage of use than those in the other two types of schools. Differences are notable for the following categories: "always" (IGE 37.2, non-IGE 28.2, and non-IGE district 13.3); "frequently" (IGE 26.3, non-IGE 19.4, and non-IGE district 15.6); "seldom" (IGE 7.1, non-IGE 14.7, and non-IGE district 25.0); and "never" (IGE 7.7, non-IGE 8.8, and non-IGE district 17.6).

Outcome 73--Teachers who work together have sufficient time to plan and work together. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the other two types of schools.

Outcome 74--The steering committee coordinates school-wide in-service programs for total staff. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools.

Outcome 75--The school has a formal procedure to exchange ideas and resolve problems with other schools in the district. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the other two types of schools.

Outcome 76--Consultants from Central Office assist the school. Teachers in non-IGE schools reported higher percentage of use than teachers in IGE and non-IGE district schools. Differences are notable for the category "always" (IGE 12.8, non-IGE 24.6, and non-IGE district 11.3).

Outcome 78--Teachers in the district have opportunities for exchange of ideas and/or participation in workshops. Teachers in non-IGE schools reported higher percentage of use than teachers in IGE and non-IGE district schools. Differences are notable for the categories: "always" (IGE 19.1, non-IGE 20.8, and non-IGE district 9.6); and "frequently" (IGE 27.6, non-IGE 34.1, and non-IGE district 24.2).

Outcome 79--Teachers constructively critique/evaluate the way they function and make decisions as a group. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools.

Outcome 80--Teachers who work together

constructively critique the group's learning program plans. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in the non-IGE district schools. Differences are notable for the category "always" (IGE 19.7, non-IGE 16.6, and non-IGE district 4.8).

Outcome 82--The steering committee periodically analyzes and improves the way its members work together. Teachers in IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the categories: "sometimes" (IGE 33.8, non-IGE 19.4, and non-IGE district 20.7); and "never" (IGE 4.5, non-IGE 17.5, and non-IGE district 20.7).

Outcome 83--Teachers observe each other informally during instruction time and provide feedback to each other. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in non-IGE district schools. Differences are notable for the categories: "sometimes" (IGE 27.8, non-IGE 24.3, and non-IGE district 11.2); and "never" (IGE 13.3, non-IGE 26.0, and non-IGE district 48.4).

Outcome 84--Teachers observe one another using formal procedures and constructively critique performance. Teachers in IGE and non-IGE schools reported higher percentage of use than teachers in non-IGE district schools. Differences are notable for the categories: "sometimes" (IGE 25.6, non-IGE 19.1, and non-IGE district 6.6); and "never" (IGE 29.5, non-IGE 37.6, and non-IGE district 59.7).

Outcome 85--Teachers from other schools observe at the school during instruction time. Teachers in non-IGE schools reported higher percentage of use than teachers in the other two types of schools. Differences are notable for the categories: "sometimes" (IGE 28.7, non-IGE 32.4, and non-IGE district 19.9); and "never" (IGE 15.9, non-IGE 13.3, and non-IGE district 34.5).

6. Teachers' Opinions about Use of School Decision Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 1--Staff members develop written statements of agreement concerning their educational beliefs. Teachers in IGE schools reported higher percentage for the category "yes" (82.8) than teachers in non-IGE schools (70.3) and non-IGE district schools (59.9). IGE teachers reported lower percentage (7.9) for the category "no" than non-IGE teachers (21.2) and teachers in non-IGE district schools (22.9).

Outcome 9--As a result of interview, teachers affect recommended replacements and additions to professional staff. Teachers in IGE schools reported higher percentage for the category "yes" (74.0) than teachers in non-IGE schools (55.6) and non-IGE district schools (61.2).

Outcome 10--Teachers make most decisions that affect the students assigned to them. Teachers in IGE schools (94.7), non-IGE schools (90.9), and non-IGE district

schools (89.5) reported about the same percentage for the category "yes". Differences are reported for the category "no" (IGE 3.3, non-IGE 3.7, and non-IGE district 8.2).

7. Teachers' Opinion about Use of School Organization Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 13--Schools are organized in teams. Teachers in IGE schools reported higher percentage for the category "yes" (92.7) than teachers in non-IGE schools (71.7) and non-IGE district schools (74.2). Teachers in non-IGE schools (16.6) and non-IGE district schools (12.9) reported higher percentage for "no" than the teachers in IGE schools (2.0). The following differences were reported for the category "no opinion" (IGE 5.3, non-IGE 11.7, and non-IGE district 12.9).

Outcome 16--One teacher of a team acts as the coordinator and representative of the group. Differences are notable for the category "no" (IGE 2.8, non-IGE 9.4, and non-IGE district 9.1) and for the category "no opinion" (IGE 4.2, non-IGE 4.7, and non-IGE district 11.4)

Outcome 20--Teachers who team together serve students whose ages span at least two years and grade levels. Teachers in IGE schools (82.6) and non-IGE schools (81.7) reported higher percentages for "yes" than teachers in non-IGE district schools (65.6). Differences are notable for

the category "no opinion" (IGE 11.1, non-IGE 7.3, and non-IGE district (20.0).

Outcome 21--Teachers who team together each share in planning of student's learning program according to teacher's talents. Differences are notable for the category "no opinion" (IGE 4.2, non-IGE 8.3, and non-IGE district 16.5).

Outcome 25--Ordinarily, students are taught by a small group of teachers except when unique learning needs of students can only be met by others within the school building. Teachers in non-IGE schools reported higher percentage for the category "yes" (100.0) than teachers in IGE schools (90.3) and non-IGE district schools (81.3). Differences are notable for the category "no opinion" (IGE 6.9, and non-IGE district 13.2).

Outcome 32--A steering committee makes school building policies. Differences are notable for the categories "no" (IGE 4.6, non-IGE 10.3, and non-IGE district 5.8) and "no opinion" (IGE 7.3, non-IGE 5.5, and non-IGE district 11.6).

Outcome 34--The steering committee resolves school building problems referred to it. Teachers in IGE schools reported a higher percentage for the category "yes" (85.9) than teachers in non-IGE schools (75.3) and non-IGE district schools (69.4).

8. Teachers' Opinion about Use of Curriculum and Teaching Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 42--Students have opportunities to learn in various sizes of groups. Differences are shown for the categories "no" (IGE 0., non-IGE 2.4, and non-IGE district .9) and "no opinion" (IGE 2.6, non-IGE 2.4, and non-IGE district .5).

Outcome 48--People in the local community are used as resources. Differences are shown for the category "no" (IGE 0, non-IGE 3.0, and non-IGE district 0).

9. Teachers' Opinion about Use of Student Responsibility Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 61--Students can state the learning objective for the activity in which they are engaged. Teachers in IGE schools (83.6) and non-IGE schools (79.3) reported higher percentages for the category "yes" than teachers in non-IGE district schools (69.1). Differences are notable for the category "no" (IGE 7.9, non-IGE 7.9, and non-IGE district 16.8).

Outcome 62--Students elect their learning/behavioral objectives. Teachers in IGE schools (63.3) and in non-IGE schools (60.7) reported higher percentages for the

category "yes" than teachers in non-IGE district schools (50.0). Differences are notable for category "no opinion" (IGE 10.6, non-IGE 17.2, and non-IGE district 22.1).

Outcome 64--Students select their learning activities. Teachers in non-IGE district schools (60.1) reported higher percentage for category "yes" than IGE schools (56.6) and non-IGE district schools (44.5). Differences are notable for category "no opinion" (IGE 17.1, non-IGE 15.3, and non-IGE district 25.2).

Outcome 65--Students increasingly accept more responsibility for selecting or developing learning activities. Teachers in IGE schools (70.0) and in non-IGE schools (71.7) reported higher percentages for the "yes" category than teachers in non-IGE district schools (61.0). Differences are notable for the category "no opinion" (IGE 11.3, non-IGE 15.7, and non-IGE district 22.4).

10. Teachers' Opinion about Use of Planning, Analyzing, and Improving Outcomes

Significant differences exist in the three types of schools (IGE, non-IGE, non-IGE district) for implementation of the following outcomes:

Outcome 70--Each staff member plans and implements a plan for in-service based on professional needs. Teachers in IGE schools (82.4) reported higher percentage for the category "yes" than teachers in non-IGE schools (72.1) and non-IGE district schools (65.9).

Outcome 74--The steering committee coordinates school-wide in-service programs for total staff. Teachers in IGE schools (84.7) reported higher percentage for the category "yes" than teachers in non-IGE schools (70.4) and non-IGE district schools (70.0). Differences are notable for the category "no opinion" (IGE 9.3, non-IGE 18.2, and non-IGE district 20.0).

Outcome 78--Teachers in the district have opportunities for exchange of ideas and/or participation in workshops. Teachers in IGE schools (96.7) reported higher percentages for the category "yes" than teachers in non-IGE schools (95.8) and in non-IGE district schools (90.4).

Outcome 79--Teachers constructively critique/evaluate the ways they function and make decisions as a group. Differences are notable for the category "no opinion" (IGE 7.8, non-IGE 6.6, and non-IGE district 12.8). Teachers in IGE schools (90.6) reported higher percentage for the category "yes" than teachers in non-IGE schools (87.4) and non-IGE district schools (82.2).

Outcome 80--Teachers who work together constructively critique the group's learning program plans. Teachers in IGE schools (92.2) reported higher percentage for the category "yes" than teachers in non-IGE schools (84.2) and non-IGE district schools (77.9). Differences are notable for the category "no opinion" (IGE 6.5, non-IGE 11.5, and non-IGE district 16.2).

Outcome 82--The steering committee periodically analyzes and improves the way its members work together. Teachers in IGE schools (82.8) reported higher percentage for the category "yes" than teachers in non-IGE schools (68.8) and non-IGE district schools (62.0). Differences are notable in the category "no opinion" (IGE 12.6, non-IGE 25.5, and non-IGE district 31.6).

Outcome 83--Teachers observe each other informally during instruction time and provide feedback to each other. Teachers in IGE schools (77.1) and non-IGE schools (69.1) reported higher percentage for the category "yes" than teachers in non-IGE district schools (53.5). Differences are notable for the category "no" (IGE 7.2, non-IGE 12.1, and non-IGE district 20.4).

Outcome 84--Teachers observe one another using formal procedures and constructively critique performance. Teachers in IGE schools (67.8) and in non-IGE schools (59.6) reported higher percentage for the category "yes" than teachers in non-IGE district schools (39.5). Differences are notable for categories "no" (IGE 13.8, non-IGE 22.3, and non-IGE district 37.2) and "no opinion" (IGE 18.4, non-IGE 18.1, and non-IGE district 23.3).

Outcome 85--Teachers from other schools observe at the school during instruction time. Teachers in IGE schools (80.0) and non-IGE schools (74.5) reported higher percentage for the category "yes" than teachers in non-IGE district schools (59.7). Differences are notable for the category

"no" (IGE 13.8, non-IGE 22.3, and non-IGE district 37.2).

Conclusions

School Decisions

1. More teachers in IGE and non-IGE schools develop written statements concerning their educational beliefs than teachers in non-IGE district schools. Teachers' opinions are consistent with this statement.

2. Though most teachers in the three types of schools are not involved in affecting decisions concerning recommendated replacements and additions to professional staff, teachers in IGE schools reported more involvement than teachers in the other two types of schools.

Over fifty-five percent of the teachers in the three types of schools believe that teachers should use this outcome while forty percent of the teachers in non-IGE and non-IGE district schools reported that they should not use the outcome or have no opinion.

3. Many teachers in the three types of schools make decisions concerning scheduled blocks of time but more teachers in IGE schools do this on a regular basis. About ninety-five percent of the teachers in the three types of schools believe that this outcome should be used.

4. Teachers in the three types of schools make many decisions concerning the students assigned to them. Teachers' opinions are consistent with this statement. Only eight percent of the non-IGE district teachers do not agree with the outcome.

5. Teaching staffs in non-IGE district schools receive approval and support for new programs from Central Office administration than do staffs of IGE schools.

Teachers' opinion is consistent with the statement. About thirty percent of teachers in IGE and non-IGE schools have no opinion or do not agree with the outcome.

6. A plurality of teachers from the three types of schools examine goals of new program before using the program.

Teachers' opinions are consistent with this statement (ninety-four percent).

7. In the three types of schools teachers (seventy percent) "seldom" or "sometimes" involve students in school-wide decision-making.

About sixty-three percent of the teachers reported that this outcome should be used.

8. In the three types of schools the majority of teachers make decisions about space and materials, and teachers almost unanimously believe that they should make these decisions.

School Organization

1. Although the majority of IGE schools are organized in teams, most teachers believe that schools should be organized in teams. About twenty-six percent of the teachers in non-IGE and non-IGE district schools were either uncertain or did not agree with this statement.

2. Since sixty-six percent of the teachers in non-IGE district schools, fifty percent of the teachers in non-IGE schools, and seven percent of the teachers in IGE schools did not answer questions 14 through 26 (because their schools are not organized in teams), it can be concluded that most IGE schools are organized in teams.

3. The following conclusions are made from the responses of teachers whose schools are organized in teams:

a) Although teachers in many IGE and non-IGE schools (eighty-two and sixty-two percent respectively) have one teacher who represents each team, teachers' opinions and practice support the notion that one teacher should represent the team.

b) Although the majority of teachers in IGE schools work with students of two or more grade levels, teachers in non-IGE schools eighty percent) believe this is an effective practice, while thirty-five percent of the teachers in non-IGE district schools have no opinion or do not believe in the use of this outcome.

c) Although the majority of teachers in IGE schools instruct only students in their team except when the unique learning needs of students can only be met by others in the building or by out-of-school learning

opportunities, teachers in the three types of schools believe this is an effective practice.

d) Teachers in IGE schools are more professionally and personally compatible than teachers in the other two types, although the differences are not great. Teacher's opinions in the three types of schools are that this compatibility should exist in schools.

4. In IGE schools the steering committee makes school building policies, yet over eighty percent of the teachers in all three types of schools agree that this outcome should be practiced.

5. In the three types of schools, although the steering committee does not solve problems referred to it on a regular basis, teachers' opinions indicate that this outcome should be practiced.

6. Teachers in the three types of schools cultivate open communication with parents, but they do not extend the same effort to cultivate open communication with the community.

Teachers in the three types of schools believe that communication with parents (ninety-eight percent) and with the community (ninety-four percent) are effective practices.

7. A majority of teachers in the three types of schools claim that student evaluation conferences included

teachers, parents, and the student; eighty-four percent of the teachers in the three types of schools believe this is an effective practice.

Curriculum and Teaching

1. Although the majority of teachers in IGE and non-IGE schools reported that steering committee ensures that goals of the schools are consistent with those of the school system, teachers in the three types of schools agree (ninety percent IGE, eighty percent other) that the steering committee should perform this function.

2. While the majority of teachers in IGE and non-IGE schools reported that steering committee ensures the consistency of school objectives with school system goals, teachers in the three types of schools agree (IGE ninety percent; non-IGE and non-IGE district eighty percent) that this is an effective practice.

3. When selecting a student's learning activity, a majority of teachers and/or students in the three types of schools consider the following: (ranked according to frequency of use) achievement, peer relationship, learning styles, interest in subject matter, and self-concept.

4. In the three types of schools frequently students identify with a specific teacher who is viewed as a warm and supportive person who shares accountability for the student's learning program. Teachers in these schools agree that this is an effective practice (ninety-two percent).

5. Teachers in the three types of schools frequently establish broad goals to emphasize with students and upon which to base learning programs on specific behavioral objectives.

Teachers agree this is an effective practice (ninety-two percent).

6. In the three types of schools, students have opportunities to learn in various sizes of groups and with diverse media.

Ninety-seven percent of the teachers supported this school practice.

Student Responsibilities

1. More students in IGE and non-IGE schools can state the learning objective for the activity for which they are engaged than students in non-IGE district schools. Teachers in IGE and non-IGE schools (eighty percent) believe this outcome should be practiced.

2. In the three types of schools, students do not ordinarily select their learning activities nor accept responsibility for selecting their learning objectives.

Teachers' opinion in the three types of schools are diverse: about sixty percent of the teachers in IGE and non-IGE schools agree that these are effective practices. About twenty-five percent do not agree that students should select learning activities and fourteen percent disagree with students selecting objectives.

About forty-five percent of the teachers in non-IGE districts agree with these practices.

3. Although most students do not select their learning activities in the three types of schools, sixty percent of the teachers in IGE and non-IGE schools believe this is an effective practice; half the teachers in non-IGE districts agree with this statement.

4. Ordinarily, students in the three types of schools are not given increased responsibility for selecting or developing learning activities, however, the majority of teachers in the three types of schools believe this is an effective practice (sixty-five percent).

5. Although in the three types of schools, the majority of students do not know the parts of a learning program, teachers in these schools believe this is an effective practice (eighty percent).

6. In the three types of schools students ordinarily do not make many decisions concerning their participation in learning activities or objectives, yet about eighty-three percent of the teachers in the three types of schools believe this is an effective practice.

7. In the three types of schools students do not ordinarily plan or evaluate their progress toward educational goals (either by self, with a teacher, or together with teachers, parents and self); yet about seventy percent of the teachers in these schools believe this is an effective practice.

8. A majority of teachers in the three types of schools use a variety of sources when evaluating what a student has learned, and teachers in all types of schools agree that this is an effective practice.

9. Teachers reported a pattern of relationship between use and opinion support for student responsibility outcomes: The higher percentages for use of "opinion" came from teachers in IGE and non-IGE schools. The higher percentages of "never" and "seldom" for use; "no" and "no opinion" together for teachers' opinions came from non-IGE district schools.

Planning, Analyzing, and Improving

1. Although most teachers are not observed formally or informally with feedback in the three types of schools, over half of the teachers believe informal observation is a desired outcome. Formal observation is seen as an effective practice by teachers in IGE and non-IGE schools while sixty percent of the teachers in the non-IGE schools do not agree with the practice.

2. In the three types of schools, teachers from other schools do not observe at respondents' schools during instruction time, yet the majority of all teachers believe this is an effective practice.

3. Although in practice students do not provide feedback/evaluation of the learning program, seventy-eight percent of the teachers believe this is an effective practice.

4. Many teachers in IGE and non-IGE schools have common and sufficient time to plan and work together while the majority of teachers in non-IGE district schools are not involved in this activity. Teachers in the three types of schools believe in the use of this practice.

5. Teachers in IGE schools constructively critique the way they function as a group than do teachers in non-IGE and non-IGE district schools, yet a majority of teachers in all three types of schools agree that this is an effective school practice.

6. More teachers in IGE schools constructively critique the learning program plans for the team and each student than do teachers in the other two types of schools, yet a majority of teachers in all schools agree that this is an effective practice.

7. The majority of teachers in non-IGE district schools do not have steering committees that analyze and improve the way its members work together, yet sixty-two percent of the teachers in these schools believe that this is an effective practice.

8. The steering committee coordinates school-wide in-service programs for the total staff in IGE schools more than in the other two types of schools.

A majority of teachers believe this is an effective practice.

9. Although most teachers do not plan or implement a program for in-service based on professional needs, a

majority of teachers believe this is an effective practice.

10. Most schools do not have a formal procedure to exchange ideas or resolve problems with other schools, yet eighty-three percent of teachers believe this is an effective outcome.

11. Teachers have modest opportunities for exchange of ideas and participation in workshops, yet ninety-three percent of the teachers believe workshop opportunities should be available in the district.

12. In all outcomes concerned with processes of planning, analyzing, and improving, the IGE and non-IGE schools evidenced more use of effective outcomes than non-IGE district schools and higher teacher opinion support of the outcomes.

Discussion of Conclusions

Is there a difference between the use of IGE outcomes in schools in an IGE school district and schools in a non-IGE school district?

In this study the following outcomes were implemented to a higher degree in the IGE school districts (IGE and the non-IGE schools) than in the non-IGE school districts (non-IGE district schools):

School Decision Outcomes -

1, 6, 8, 9, 10

School Organization Outcomes -

13, 14, 15, 16, 17, 18, 19, 20, 21, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34

Curriculum and Teaching -

35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 47, 48, 49, 53, 54

Student Responsibility -

55, 56, 58, 59, 60, 61, 62, 65, 66, 67, 68

Planning, Analyzing, and Improving -

69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86

Outcomes concerned with school decisions, curriculum and teaching, and school organization have a higher percentage of use in all three types of schools than outcomes related to student responsibility and processes of planning, analyzing, and improving.

In this study sixty-six percent of the non-IGE district teachers and fifty percent of the non-IGE teachers (in an IGE district) reported that their schools were not organized in team.

Teaming is a dynamic process; it requires a commitment to the idea that the learning needs of students can be effectively met through the continuous processes of problem-solving and improvement.

Since the /I/D/E/A/ Change Program is a dynamic or interactive process of schooling, school district educators should recognize that a school implements IGE and does not adopt a program. The significance is critical, since it is the difference between fitting the school to the child (IGE) rather than fitting the child to the school (conventional models).

From the data of this study it is evident that teachers in the IGE districts (both IGE schools and non-IGE schools) use IGE outcomes more than non-IGE teachers in non-IGE district schools.

Implications

As a result of analyzing the data gathered in this study, the following implications are proposed for administrators in Central school offices:

1. School districts should consider the study and the appropriate implementation of the /I/D/E/A/ Change Program for Individually Guided Education in at least one of their schools.

2. Educational leaders, professionals, and parents in school districts should be oriented to the outcomes of IGE and the educational consequences of a conventional model of schooling.

3. Since teachers' opinions in all three types of schools supported the use of IGE outcomes as effective school practices, developmental in-service programs encompassing IGE concepts could be conducted in school districts by "trained" personnel.

4. School districts should have a trained IGE facilitator who not only works with IGE schools but also coordinates in-service opportunities and provides other services to Central Office consultants, professional personnel, and to other educators in non-IGE schools.

5. The greatest support a Central Office can provide for its schools is to conduct its operations using the IGE process of continuous improvement.

6. Studying the current use of effective school practices as proposed by IGE and the opinions of teachers about each practice could assist district planners in determining the receptivity of staff to the implementation of the /I/D/E/A/ Change Program. While many of the outcomes related to cooperative and continuous improvement techniques will appear as new, many other outcomes related to professional teaching decisions will be familiar.

7. Recognizing the importance and necessity of commitment to the /I/D/E/A/ Change Program, Central Office educators should set timelines for involving staff in commitment type activities, such as, communication skills, problem solving techniques, and shared decision-making skills.

8. Since most educators are familiar with innovations as isolated methods or programs, and since /I/D/E/A/ is <u>not</u> a project but a <u>process of schooling</u>, school district planners should organize staff informational activities to reflect this critical difference.

9. Greater opportunities are needed for educators to share ideas, observe new programs and processes, discuss and debate issues of accountability. Participation in such in-service programs in the local building, in the district, or at other sites should be rewarded.

10. Opportunities for learning formal and informal critique and feedback strategies for teacher performance should be encouraged. Appropriate in-service should be provided for teachers and principals to ensure positive consequences.

11. Opportunities for learning team teaching and shared decision-making techniques should be provided since teachers believe strongly that these are effective school practices.

Recommendations for Further Study

1. If this study is replicated, the teachers' perceptions of their use of IGE outcomes should be verified by the observations of a team of trained /I/D/E/A/ "personnel".

2. If the involvement of an IGE facilitator is an important element in a future study, the researcher should carefully define the criteria for selecting the facilitator.

3. This study could be replicated with middle schools incorporating the team observation/questionnaire comparison technique.

4. In research concerning IGE schools, minimum criteria should be identified by the research as to what constitutes "IGE-ness". Team observation could verify this condition. Labels on schools are not always congruent with realities.

5. Because the IGE outcomes are comprehensive in scope, a researcher could concentrate on one category, i.e. Student Responsibility outcomes, and compare use in IGE and non-IGE school districts.

APPENDIX

OUTCOMES OF THE /I/D/E/A/ CHANGE PROGRAM

1. All staff members have had an opportunity to examine their own goals and the IGE outcomes before a decision is made to participate in the program.

2. The school district has approved the school staff's decision to implement the /I/D/E/A/ Change Program for Individually Guided Education.

3. The entire school is organized into Learning Communities with each Learning Community composed of students, teachers, aides, and a Learning Community leader.

4. Each Learning Community contains a cross section of staff.

5. Learning Community members have an effective working relationship as evidenced by responding to one another's needs, trusting one another's motives and abilities, and using techniques of open communication.

6. Each Learning Community is composed of approximately equal numbers of two or more student age groups.

7. Each student has an advisor whom he or she views as a warm supportive person concerned with enhancing the student's self concept; the advisor shares accountability with the student for the student's learning program.

8. Personalized in-service programs are developed and implemented by each Learning Community staff as a whole as well as by individual teachers.

9. The Learning Community maintains open communication with parents and the community at large.

10. Sufficient time is provided for Learning Community staff members to meet.

11. Learning Community members select broad educational goals to be emphasized by the Learning Community.

12. Role specialization and a division of labor among teachers are characteristics of the Learning Community activities of planning, implementing and assessing.

13. Each student learning program is based on specified learning objectives.

14. A variety of learning activities using different media and modes are used when building learning programs.

15. Both student and teacher consider the following when a student's learning activities are selected:
    Peer relationships
    Achievement
    Learning styles
    Interest in subject areas
    Self-concept

16. Students pursue their learning programs within their own Learning Communities except on those occasions when their unique learning needs can only be met in another setting using special human or physical resources.

17. Learning Community members make decisions regarding the arrangements of time, facilities, materials, staff, and students within the Learning Community.

18. The staff and students use special resources from the local community in learning programs.

19. A variety of data sources is used when learning is assessed by teachers and students, with students becoming increasingly more responsible for self-assessment.

20. Each student (individually, with other students, with staff members, and with his or her parents) plans and evaluates his or her own progress toward educational goals.

21. Teachers and students have a systematic method of gathering and using information about each student which affects his or her learning.

22. The Program Improvement Council formulates school-wide policies and operational procedures, and resolves problems referred to it involving two or more Learning Communities.

23. The Program Improvement Council coordinates school-wide in-service programs for the total staff.

24. The school is a member of a League of schools implementing IGE processes and participating in an interchange of personnel to identify and alleviate problems within the League schools.

25. The school as a member of a League of IGE schools stimulates an interchange of solutions to existing educational problems plus serving as a source of ideas for new development.

26. The Learning Community analyzes and improves its operations as a functioning group.

27. Learning Program plans for the Learning Community and for individual students are constructively critiqued by members of the Learning Community.

28. The Program Improvement Council analyzes and improves its operations as a functioning group.

29. Each student can state learning objectives for the learning activities in which she or he is engaged.

30. Each student accepts increasing responsibility for selecting his or her learning objectives.

31. Each student accepts increasing responsibility for selecting or developing learning activities for specific learning objectives.

32. Each student demonstrates increasing responsibility for pursuing her or his learning program.

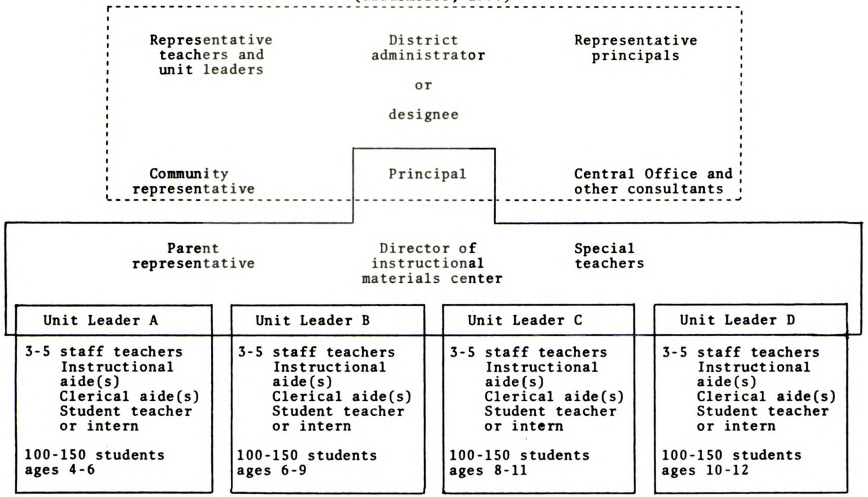
33. The Program Improvement Council assures continuity of educational goals and learning objectives throughout the school and assures that they are consistent with the broad goals of the school system.

34. Students are involved in decision-making regarding school-wide activities and policies.

35. Teacher performance in the learning environment is observed and constructively critiqued by members of the Learning Community using both formal and informal methods.

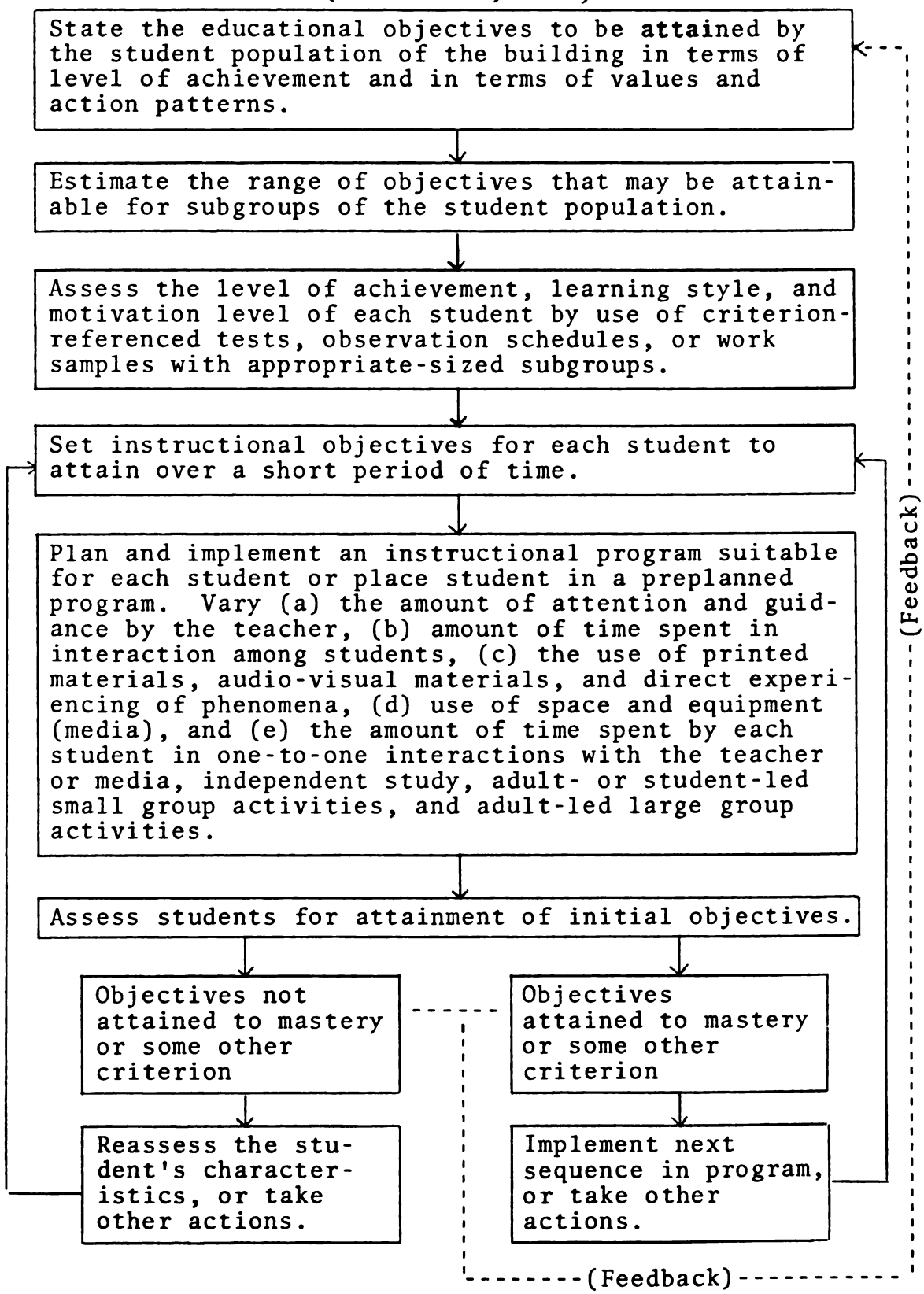
ORGANIZATIONAL CHART OF A MULTIUNIT SCHOOL OF 600 STUDENTS

(Klausmeier, 1977)



INSTRUCTIONAL PROGRAMMING MODEL IN IGE

(Klausmeier, 1977)



MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

April 4, 1979

Dear IGE Colleague:

I am preparing to conduct a research study which will be used as part of a doctoral dissertation. The study is being supported by the Kettering Foundation. The general thrust of the study concerns the implementation of IGE Outcomes in IGE and non-IGE school districts.

The first phase of the study is to identify those IGE Facilitators who are associated with both IGE and non-IGE schools in the same school district. Secondly, to identify non-IGE school districts contiguous to IGE school districts. This preliminary phase is only identification, that is, there is NO commitment for further participation in the research investigation at this time.

Enclosed is a short form for your response and a stamped addressed envelope for your convenience. Recognizing the value of IGE research and the importance of this investigation, I am very grateful for your cooperation, expertise, and time.

Sincerely,

S Evelyn Piche

Sister Evelyn Piche
IGE Facilitator

Please return at your earliest convenience but no later than April 23, 1979.

INFORMATION FOR STUDY OF THE IMPLEMENTATION OF IGE OUTCOMES

_____
Facilitator's Name

_____ _____ _____
Name of School District City State

1. Check the appropriate line.

   Are you (facilitator) associated with both IGE and non-IGE schools?

   _____ YES _____ NO

2. Approximately how many schools in the district are organized in these categories?

	IGE SCHOOLS	NON-IGE SCHOOLS
A. Elementary	_____	_____
B. Middle	_____	_____
C. High	_____	_____

3. List the name and address of two non-IGE school districts contiguous to your school district and the name of the superintendent, if possible.

DISTRICT I		DISTRICT II
_____	name	_____
_____	address	_____
_____	city, state	_____
_____	name of superintendent	_____

THANK YOU FOR YOUR COOPERATION AND GENEROUS EFFORTS! Please return at your earliest convenience but no later than April 23, 1979. Thank you!

April 23, 1979

Dear IGE Colleague,

This communication is just to verify that I would appreciate your assistance in the study I am conducting with the support of the Kettering Foundation. The thrust of the study concerns the implementation of IGE Outcomes (school practices) in IGE districts and non-IGE districts.

The information requested on the enclosed form is what is needed. After the selection process occurs, you will be notified and invited to participate in the research. However, this is the identification phase.

The reason for requesting the names of two districts contiguous to yours is to expedite my reference to directories. Your name will not be used in any way whatsoever.

Projecting the many demands on your time I am grateful for your time and cooperation. Happy Spring!

Sincerely,

Sister Evelyn Piche
IGE Facilitator
Doctoral Student

P.S. Participation in this study will include only two schools in your district, one IGE and one non-IGE.

Teachers in each IGE Learning Community regularly schedule periods during the school day to meet with individual children. There are many times when this one-to-one, teacher-to-student contact is necessary. Teachers and students must sit down together to review student progress and design learning programs. Some children have learning problems. They need help and encouragement. Other children need guidance and direction. Students with problems not directly related to school need to be counseled and referred to other individuals or agencies. From time to time, all children—even Igee—need individual attention.

Revised July 1974

Please return at your earliest convenience but no later than April 30, 1979.

INFORMATION FOR STUDY OF THE IMPLEMENTATION OF IGE OUTCOMES

_____
Facilitator's Name

_____ _____ _____
Name of School District City State

1. Check the appropriate line.

   Are you (facilitator) associated with both IGE and non-IGE schools?

   _____ YES _____ NO

2. Approximately how many schools in the district are organized in these categories?

	IGE SCHOOLS	NON-IGE SCHOOLS
A. Elementary	_____	_____
B. Middle	_____	_____
C. High	_____	_____

3. List the name and address of two non-IGE school districts contiguous to your school district and the name of the superintendent, if possible.

DISTRICT I		DISTRICT II
_____	name	_____
_____	address	_____
_____	city, state	_____
_____	name of superintendent	_____

THANK YOU FOR YOUR COOPERATION AND GENEROUS EFFORTS! Please return at your earliest convenience but no later than April 30, 1979. Thank you!

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

May 10, 1979

Dear IGE Colleague:

THANK YOU for returning the Information Form concerning the study of school practices!

I am happy to announce that your school district has been selected to participate in the study. I hope you will continue to participate in this worthwhile study. Both my major professor, Louis Romano, Ph.D., and /I/D/E/A/ have supported and encouraged this investigation in the hopes of providing educators, especially teachers, with practical insights toward the improvement of schooling.

In order to complete this study it is necessary to obtain perceptions and opinions of teachers in IGE and non-IGE schools on the use of select school practices. By random selection the following schools will be invited to participate in the study:

1. IGE School -

2. Non-IGE School -

For your information a copy of the letter and questionnaire which will be sent to the principals of the above mentioned schools is enclosed. I would appreciate your encouragement for participation in the study with the principals.

Information received from schools will remain anonymous and confidential concerning the individual schools. If clarifications are needed, please call me collect, 517-332-0293 day or night before the mailing date to schools which is May 16, 1979.

I am sincerely APPRECIATIVE of your generous efforts and cooperation in this important matter. Progress is made through those who are willing to share their professional expertise and resources. If you are interested in the results of this study, I would be happy upon request to share the summary and conclusions.

Sincerely,

Sister Evelyn Piche
IGE Facilitator
Doctoral Candidate

Enclosures

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824

May 10, 1979

Dear

I am preparing to conduct a research study which will be used as part of a doctoral dissertation. The general thrust of the study concerns the use of select school practices.

I am happy to announce that your school district has been selected to participate in the study. I hope you will participate in this worthwhile study. Both my major professor, Louis Romano, Ph.D., and the Kettering Foundation have supported and encouraged this investigation in the hopes of providing educators with practical insights toward the improvement of schooling.

In order to complete this study it is necessary to obtain perceptions and opinions of teachers on the use of select school practices. By random selection the school named below will be invited to participate in the study:

For your information a copy of the letter and questionnaire which will be sent to the principal of the above mentioned school is enclosed. I would appreciate your encouragement for participation in the study with the principal of the school. (I realize I am hopeful with your list of priorities!)

Information received from the school will remain anonymous and confidential concerning the individual school. If clarifications are needed, please call me collect, 517-332-0293 day or night, before the mailing date to the school which is May 16, 1979.

I am sincerely APPRECIATIVE of your generous efforts and cooperation in this important matter. Progress is made through those who are willing to share their professional expertise and resources. If you are interested in the results of this study, I would be happy upon request to share the summary and conclusions.

Sincerely,

Evelyn Piche
Superintendent of Schools
Madison Parochial Schools

Enclosures

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

May 16, 1979

Dear Colleague:

I am in the process of conducting a research study which will be used as part of my doctoral dissertation. I am happy to announce that your school has been randomly selected to participate in this study concerning selected school practices.

In order to complete this study it is necessary to obtain perceptions and opinions of teachers about specific practices. I hope your school staff will participate in this worthwhile investigation. It is projected that the study will provide educators, especially teachers, with practical insights toward the improvement of schooling.

Information received from your school will remain anonymous and confidential concerning your individual school. The questionnaires are coded according to schools for the researcher's information only.

Principals, your participation consists of the following:

1. Complete the School Data Form enclosed.
2. Distribute "Inventory of Selected School Practices Questionnaire" to your staff.
3. Request teachers to return the questionnaire in sealed envelope to your office for mailing.
4. Please return questionnaire within one week of receipt, or as soon as possible in the enclosed self-addressed stamped envelope.

I would appreciate the participation of all your staff or as many members as possible.

That is a tall request from a stranger. However, progress is made through those who are willing to share their professional expertise and resources. Having had the experience of being a principal, I recognize how one strives to improve the quality of education with a staff and how we are called upon to "walk the extra mile." With all the many demands placed on you at this time of year, I am especially grateful for your generous efforts and cooperation.

If you are interested in the results of this study, I would be happy, upon request, to share the summary and conclusions.

Sincerely,

Evelyn Piche
Superintendent of Schools
Madison Parochial Schools

STUDY OF SELECTED SCHOOL PRACTICES

SCHOOL DATA FORM

Principals, please respond.

1. What grades does your school include?

( ) a. K-3
( ) b. K-6
( ) c. K-8
( ) d. 1-8
( ) e. other (specify)

_____

2. What is the enrollment of students?

( ) a. 0 - 149
( ) b. 150 - 299
( ) c. 300 - 449
( ) d. 450 - 599
( ) e. 600 - 749
( ) f. 750 - +

3. How many teachers are on staff?

a. _____ full time

b. _____ part time

c. _____ specialists (e.g. Phy. Ed.)

4. Where is the location of your school?

( ) a. rural
( ) b. suburban
( ) c. urban

5. What is the average socio-economic status of the families of your students?

( ) a. lower class
( ) b. working class
( ) c. middle class
( ) d. upper middle class
( ) e. upper class

Principals, THANKS-A-MILLION for your participation in the study and know that your response and the response of your teachers are APPRECIATED.

FOLLOW-UP POST CARD

905 Alton
E. Lansing, MI 48823
May 26, 1979

Dear Colleague,

Recently I sent you a package of questionnaires and a School Data Form for the study of Selected School Practices. Naturally, I am anxious to receive them.

Recognizing the demanding time of the year, your leadership efforts in coordinating this project are APPRECIATED. Please return the questionnaires within the next two days or at your earliest convenience. THANK YOU for your cooperation in this worthwhile study.

Sincerely,

S. Evelyn Piche'

P.S. IF YOU HAVE CONCERNS ABOUT THE STUDY, please call me collect 517-332-0293. 517-332-7697. THANKS!

OUTCOMES OF THE /I/D/E/A/ CHANGE PROGRAM

AND

OUTCOMES IDENTIFIED FOR THIS STUDY

Category	/I/D/E/A/ Outcome	Study Outcome
SCHOOL DECISIONS:	1	1, 2, 3
	2	4, 5
	17	6, 7, 8, 9, 10
	34	11, 12
SCHOOL ORGANIZATION:	3	13, 14, 15, 16
	4	17
	5	18, 19, 27, 28
	6	20
	9	29, 30, 31
	12	21, 22, 23, 24
	16	25, 26
	22	32, 33, 34
CURRICULUM AND TEACHING:	7	35, 36, 37
	11	38
	13	39
	14	40, 41, 42
	15	43, 44, 45, 46, 47
	18	48, 49
	21	50, 51, 52
	33	53, 54
STUDENT RESPONSIBILITY:	19	55, 56, 57
	20	58, 59, 60
	29	61
	30	62, 63
	31	64, 65, 66
	32	67, 68
PLANNING, ANALYZING, AND IMPROVING:	8	69, 70, 71
	10	72, 73
	23	74
	24	75, 76
	25	77, 78
	26	79
	27	80, 81
	28	82
	35	83, 84, 85, 86

SCHOOL DISTRICT PARTICIPANTS

	STATE	IGE SCHOOL DISTRICT	NON-IGE SCHOOL DISTRICT
1.	Illinois	South Holland - #151	South Holland - #150
2.	"	Archdiocese of Chicago	Diocese of Joliet
3.	Indiana	Metropolitan School District of Washington Township	
4.	"		Mishawaka City Schools
5.	Iowa		Urbandale Community Schools
6.	"	Northern Trails Area Education Agency	Rockwell Swaledale Community Schools
7.	"	Archdiocese of Dubuque	Diocese of Davenport
8.	"	Waterloo Public Schools	Cedar Falls Community Schools
9.	Kansas	Wichita Public Schools	Haysville Unified School District
10.	Kentucky	Ashland Public Schools	Boyd Community Schools
11.	"	Fort Campbell Dependent Schools	Christian County Schools
12.	Michigan	Benton Harbor Area Schools	Coloma Community Schools
13.	"	Archdiocese of Detroit	Diocese of Lansing
14.	"		Westwood Heights Public Schools
15.	"		Brandywine Public Schools
16.	"	Wayne County Intermediate School District	

STATE	IGE SCHOOL DISTRICT	NON-IGE SCHOOL DISTRICT
17. Missouri	Ferguson-Florissant School District	Hazelwood School District
18. "	Poplar Bluff Public Schools	Twin Rivers School District R10
19. Ohio		Barberton City Schools
20. "	Ashtabula County Schools	Conneaut Area Schools
21. Tennessee	Green County School System	Unicoi County School Systems
22. Virginia	County of Albemarle Schools	Augusta County Schools
23. "	Warren County Schools	Shenandoah County Schools
24. "	Norfolk City Schools	Chesapeake City Schools
25. "	Diocese of Richmond	Diocese of Arlington
26. "		Amherst County Schools
27. Wisconsin		South Milwaukee School District

Michigan State University, 1979

INVENTORY OF SELECTED SCHOOL PRACTICES QUESTIONNAIRE

This questionnaire is designed to obtain the judgement of teachers about specific school practices. This questionnaire is NOT an evaluation but rather a DESCRIPTION of the use of selected school practices.

You are asked for two types of responses: one concerns your school and the other concerns your opinion.

General Directions:

First Response: What is wanted is your point of view about the use of each practice in your school. Please circle the number that best describes your school for each practice.

RATING SCALE: 5 — Always
4 — Frequently
3 — Sometimes
2 — Seldom
1 — Never
0 — I don't know

Second Response: What is **YOUR OPINION** about using each practice in any Elementary school? Indicate **YOUR OPINION** by circling the appropriate letter.

RATING SCALE: Y — Yes
N — No
0 — No Opinion

Teachers, your participation in this project is valued and appreciated.
THANK YOU!

	Your School THESE PRACTICES ARE USED IN MY SCHOOL.						Any Elementary School I BELIEVE THIS IS AN EFFECTIVE PRACTICE FOR SCHOOLS.		
	Always	Frequently	Sometimes	Seldom	Never	I don't know	Yes	No	No Opinion
SCHOOL DECISIONS:									
1. Staff members develop written statements of agreement concerning their educational beliefs.	5	4	3	2	1	0	Y	N	0
2. Staff members examine the goals of a new program before using the new program.	5	4	3	2	1	0	Y	N	0
3. When a new program is being considered, staff examine their own goals and the new program's goals for consistency.	5	4	3	2	1	0	Y	N	0
4. Central Office administration (i.e. superintendents, assistant superintendent in charge of instruction, school board or curriculum consultants) review new programs and give approval of programs through financial and Central Office support for its use.	5	4	3	2	1	0	Y	N	0
5. Central Office administration approves a staff's decision to adopt a new program before it is implemented.	5	4	3	2	1	0	Y	N	0
6. Teachers make decisions that affect the scheduled blocks of time for teaching and learning.	5	4	3	2	1	0	Y	N	0
7. Teachers make decisions that affect flexible use of space assigned to them (i.e. — classrooms).	5	4	3	2	1	0	Y	N	0
8. Teachers make decisions that affect the selection of materials they use.	5	4	3	2	1	0	Y	N	0
9. As a result of interview, teachers affect recommended replacements and additions to professional staff.	5	4	3	2	1	0	Y	N	0
10. Teachers make most decisions that affect the students assigned to them.	5	4	3	2	1	0	Y	N	0
11. Students are involved in decision-making regarding many school-wide activities.	5	4	3	2	1	0	Y	N	0
12. Students are involved in decision-making regarding school-wide policies that affect them.	5	4	3	2	1	0	Y	N	0

	Your School THESE PRACTICES ARE USED IN MY SCHOOL.						Any Elementary School I BELIEVE THIS IS AN EFFECTIVE PRACTICE FOR SCHOOLS.		
	Always	Frequently	Sometimes	Seldom	Never	I don't know	Yes	No	No Opinion
SCHOOL ORGANIZATION:									
13. Your school is organized in teams. (Groups of two or more teachers working together in planning and sharing teaching responsibilities for part or all of the day.)	5	4	3	2	1	0	Y	N	0
If your school is not organized in teams for part or all of the day, skip to #27.									
14. A team includes teachers and students.	5	4	3	2	1	0	Y	N	0
15. A team includes teachers, students and aides.	5	4	3	2	1	0	Y	N	0
16. One teacher of a team acts as the coordinator and representative of the group.	5	4	3	2	1	0	Y	N	0
17. Teachers who team together (i.e., in teams, grade levels, department, etc.) possess collectively a diversity of strengths, backgrounds and ideas.	5	4	3	2	1	0	Y	N	0
18. Team members are professionally compatible (Respond to one another's needs, feel free to call upon others for advice)	5	4	3	2	1	0	Y	N	0
19. Team members are personally compatible (i.e., listen to others, show trust in others' motives and abilities).	5	4	3	2	1	0	Y	N	0
20. Teachers who team together serve students whose ages span at least two years (grade levels).	5	4	3	2	1	0	Y	N	0
21. Teachers who team together each share in planning of student's learning program according to teacher's talents (i.e., one establishes behavioral objectives, others suggest learning activities; one provides unit outline plan for specific content area, etc.).	5	4	3	2	1	0	Y	N	0
22. Teachers who team together agree on what content areas (behavioral objectives) each will teach and an evaluation of this teaching arrangement is conducted.	5	4	3	2	1	0	Y	N	0
23. Teachers who team together share in the planning of content (i.e., what it will be and/or varied ways it can be learned).	5	4	3	2	1	0	Y	N	0
24. Teachers who team together share in the teaching and assessing of the learning program.	5	4	3	2	1	0	Y	N	0
25. Ordinarily, students are taught by a small group of teachers except when unique learning needs of student can only be met by others within the school building.	5	4	3	2	1	0	Y	N	0
26. Ordinarily, students are taught by a small group of teachers except when unique learning needs of student can only be met by out-of-school learning opportunities.	5	4	3	2	1	0	Y	N	0
27. Teacher-to-student relationships evidence trust, respect for one another, and open communication.	5	4	3	2	1	0	Y	N	0
28. Student-to-student relationships evidence trust, respect for one another, and open communication.	5	4	3	2	1	0	Y	N	0
29. Teachers cultivate open communication with parents (i.e., send written communication describing school program, invite parents to school, etc.)	5	4	3	2	1	0	Y	N	0
30. Teachers cultivate open communication with community (i.e., report student/school activities in local newspaper, encourage use of school facility, etc.).	5	4	3	2	1	0	Y	N	0
31. Student evaluation conferences are held with parent, student, and teacher participating.	5	4	3	2	1	0	Y	N	0
32. A steering committee (an advisory or decision-making group composed of the principal and representative teachers) make school building policies.	5	4	3	2	1	0	Y	N	0
33. A steering committee formulates school-wide operational procedures (i.e., guidelines for use of media center, etc.).	5	4	3	2	1	0	Y	N	0
34. The steering committee resolves school building problems referred to it.	5	4	3	2	1	0	Y	N	0

CURRICULUM AND TEACHING:

35. Each student identifies with a specific teacher who is viewed as a warm, supportive person concerned with the student's self-concept.	5	4	3	2	1	0	Y	N	0
36. Each student identifies with a specific person who shares accountability for the student's learning program.	5	4	3	2	1	0	Y	N	0
37. The staff participates in in-service programs concerned with supportive role (i.e., goal setting, value clarification, etc.).	5	4	3	2	1	0	Y	N	0
38. Teachers select or establish broad educational goals to emphasize with students.	5	4	3	2	1	0	Y	N	0
39. Student's learning program is based on specified behavioral objectives.	5	4	3	2	1	0	Y	N	0
40. For each behavioral objective there is a variety of alternative learning activities.	5	4	3	2	1	0	Y	N	0
41. Learning programs include alternative learning activities (assignments) that use diverse media (i.e., audio-visual materials, paper/pencil, manipulatives, etc.).	5	4	3	2	1	0	Y	N	0
42. Students have opportunites to learn in various sizes of groups (i.e., small, paired, large, and by themselves).	5	4	3	2	1	0	Y	N	0
43. Teachers and/or students consider peer relationships when selecting a student's learning activities.	5	4	3	2	1	0	Y	N	0
44. Teachers and/or students consider achievement when selecting a student's learning activities.	5	4	3	2	1	0	Y	N	0
45. Teachers and/or students consider learning styles when selecting a student's learning activities.	5	4	3	2	1	0	Y	N	0
46. Teachers and/or students consider interest in subject areas when selecting learning activities.	5	4	3	2	1	0	Y	N	0
47. Teachers and/or students consider self-concept when selecting a student's learning activities.	5	4	3	2	1	0	Y	N	0
48. People in the local community are used as resources (i.e., recruit volunteers, bring resource person to school, etc.).	5	4	3	2	1	0	Y	N	0
49. Places in the local community are used as learning resources.	5	4	3	2	1	0	Y	N	0
50. Useful information about each student's interests, abilities, and achievement is recorded.	5	4	3	2	1	0	Y	N	0
51. There exists a systematic method of gathering useful information about students.	5	4	3	2	1	0	Y	N	0
52. Useful student information is used when personalized learning programs are planned.	5	4	3	2	1	0	Y	N	0
53. The steering committee (an advisory/decision-making group composed of principal and representative teachers) ensures that educational goals of the school are consistent with those of the school system.	5	4	3	2	1	0	Y	N	0
54. The steering committee ensures that the learning objectives of school are consistent with goals of school system.	5	4	3	2	1	0	Y	N	0
55. When evaluating what a student has learned, a variety of sources are used (i.e., performance, paper/pencil, past records, etc.).	5	4	3	2	1	0	Y	N	0

STUDENT RESPONSIBILITY:

56. Students increasingly demonstrate greater ability for self-assessment of their learning.	5	4	3	2	1	0	Y	N	0
57. Learning is assessed by teachers and students.	5	4	3	2	1	0	Y	N	0
58. Students evaluate and plan their programs toward educational goals.	5	4	3	2	1	0	Y	N	0
59. Students and teachers are included in the process of evaluating and planning toward each student's learning goals.	5	4	3	2	1	0	Y	N	0
60. Students, teachers, and parents evaluate and plan progress toward each student's learning goals.	5	4	3	2	1	0	Y	N	0
61. Students can state the learning objective for the activity in which they are engaged.	5	4	3	2	1	0	Y	N	0
62. Students elect their learning/behavioral objectives.	5	4	3	2	1	0	Y	N	0
63. Students increasingly accept more responsibility for selecting their learning objectives.	5	4	3	2	1	0	Y	N	0
64. Students select their learing activities (assignments).	5	4	3	2	1	0	Y	N	0
65. Students increasingly accept more responsibility for selecting or developing learning activities.	5	4	3	2	1	0	Y	N	0

	Your School THESE PRACTICES ARE USED IN MY SCHOOL.						Any Elementary School I BELIEVE THIS IS AN EFFECTIVE PRACTICE FOR SCHOOLS.		
	Always	Frequently	Sometimes	Seldom	Never	I don't know	Yes	No	No Opinion
66. There are a number of learning activities available for each objective.	5	4	3	2	1	0	Y	N	0
67. Students know the parts of a learning program (i.e., objectives, activities, assessment, record keeping).	5	4	3	2	1	0	Y	N	0
68. The degree of student decision-making increases according to demonstrated ability.	5	4	3	2	1	0	Y	N	0
PLANNING, ANALYZING, AND IMPROVING:									
69. Teachers develop and implement a plan for in-service experiences.	5	4	3	2	1	0	Y	N	0
70. Each staff member plans and implements a plan for in-service based on professional needs.	5	4	3	2	1	0	Y	N	0
71. Staff members plan and implement in-service programs based upon school goals or goals of a new program.	5	4	3	2	1	0	Y	N	0
72. Teachers who work together have common time to plan and work together.	5	4	3	2	1	0	Y	N	0
73. Teachers who work together have sufficient time to plan and work together.	5	4	3	2	1	0	Y	N	0
74. The steering committee coordinates school-wide in-service programs for total staff.	5	4	3	2	1	0	Y	N	0
75. The school has a formal procedure to exchange ideas and resolve problems with other schools in the district (i.e., newsletter, specific meetings, visit other schools, etc.).	5	4	3	2	1	0	Y	N	0
76. Consultants from Central Office assist the school.	5	4	3	2	1	0	Y	N	0
77. Schools in the district that are working on the same project meet to exchange ideas or resolve problems (i.e., reading program, how to individualize instruction, etc.).	5	4	3	2	1	0	Y	N	0
78. Teachers in the district have opportunities for exchange of ideas and/or participation in workshops.	5	4	3	2	1	0	Y	N	0
79. Teachers constructively critique/evaluate the way they function and make decisions as a group.	5	4	3	2	1	0	Y	N	0
80. Teachers who work together constructively critique the group's learning program plans.	5	4	3	2	1	0	Y	N	0
81. Teachers constructively critique learning program plans for individual students.	5	4	3	2	1	0	Y	N	0
82. The steering committee periodically analyzes and improves the way its members work together.	5	4	3	2	1	0	Y	N	0
83. Teachers observe each other informally during instruction time and provide feedback to each other.	5	4	3	2	1	0	Y	N	0
84. Teachers observe one another using formal procedures and constructively critique performance.	5	4	3	2	1	0	Y	N	0
85. Teachers from other schools observe at the school during instruction time.	5	4	3	2	1	0	Y	N	0
86. Students provide feedback/evaluation of the learning program.	5	4	3	2	1	0	Y	N	0

Teachers, your assistance in this important project is greatly valued and appreciated. Thank you!

Please place questionnaire in envelope sealed and give it to your principal.
Questionnaires from school will be returned to:

S. Evelyn Piche
905 Alton Road
E. Lansing, MI 48823

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