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Holding Power: Middle School vs. Junior High School

Burton Erickson
Western Kentucky University

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Erickson,
Burton C., Jr.

1979

HOLDING POWER: MIDDLE SCHOOL VS.
JUNIOR HIGH SCHOOL

An Analysis of Selected Variables in Middle School Programs and
Junior High School Programs and Their Effect on Two Groups of
High School Dropouts

A Thesis

Presented to

the Faculty of the Department of
Educational Leadership
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Education Specialist

by

Burton C. Erickson, Jr.

July 1979

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Junior High School Programs and Their Effect on Two Groups of
High School Dropouts

Recommended

July 10, 1979
(Date)

V. J. Armstrong
Director of Thesis

Norman D. Sherman
David Hanson

Approved

8-8-79

Elmer Gray
Dean of the Graduate College

HOLDING POWER: MIDDLE SCHOOL VS. JUNIOR HIGH SCHOOL

An Analysis of Selected Variables in Middle School Programs and Junior High School Programs and Their Effect on Two Groups of High School Dropouts

Burton C. Erickson, Jr.

July 1979

Directed by: V. J. Christenson, Norman D. Ehresman, and David Shannon
Department of Educational Leadership, Western Kentucky University

This was a study of three variables and their effect on two groups of students who dropped out of school during the tenth grade. One group had attended three full years of junior high school in Owensboro while the other group had attended three full years of middle school in Owensboro. The study also reviewed the programs and emphases of the junior high school and the middle school.

The students were compared on mean cumulative grade point average, mean percentage of absenteeism, and incidence of dropout during the tenth grade.

Statistical analysis of the respective sets of data showed that there was no significant differences between the two school types relative to the three areas studied.

TABLE OF CONTENTS

INTRODUCTION 1

 Statement of Problem. 1

 Significance of Problem 2

 Definition of Terms 3

 Statement of Hypothesis 3

 Limitations of Study. 4

REVIEW OF SELECTED RELATED LITERATURE 5

RESEARCH DESIGN. 13

 Description of Schools. 13

 Procedure 16

 Null Hypothesis 17

 Sources of Data 17

PRESENTATION AND ANALYSIS OF DATA. 19

 Summary 23

 Conclusions 23

 Implications for Further Research 24

APPENDICES

 Appendix 1 26

 Appendix 2 28

 Appendix 3 30

 Appendix 4 32

 Appendix 5 34

REFERENCES 36

I INTRODUCTION

Statement of Problem

In 1976, the Kentucky Education Association issued a statement that the average educational level attained by Kentuckians aged twenty-five years and older was ninth grade, indicating that many, many Kentuckians never graduated from high school.

The technological nature of our society results in an increasing demand for highly trained people. Considering this demand, a high school education would be a good basic foundation for young people to continue preparing themselves for further training in trade schools, apprenticeship programs, or colleges. A person with only a ninth grade education would indeed be poorly prepared for someday taking his place in the mainstream of American society as a fully functioning adult.

Educators have undoubtedly worried about this problem for many years, having tried many ways to reduce the dropout rate. One recent change involving the regrouping of grades and corresponding changes in school organizations, philosophies, and emphases resulted in the middle school concept.

The purpose of this study was to ascertain the relative effect of middle schools and junior high schools on three aspects of student performance. Two groups of students were compared.

The first comparison was of mean cumulative grade point averages from beginning of middle school or junior high school until dropping out.

The third comparison was the incidence of dropping out for each group during the tenth grade.

The pooled variance t-test was used to analyze the grade point average and the rate of absences data. The incidence of dropping out was analyzed with the chi square test.

Significance of Problem

The problem of school dropouts has many facets and ramifications. One of the more obvious is the impact upon the American social structure where uneducated or undereducated adults end up with the lowest paying jobs, or perhaps without any jobs at all. Such adults then depend upon various forms of social legislation to provide the basic necessities of life. Others are an economic cost in lowered productivity per adult employed and a social cost of frustrated people turning to socially unacceptable ways of life.

One aspect of this problem, from an economics standpoint, is the possibility of a way of life perpetuating itself, with families living from welfare, A.D.C., food stamps, or other government programs from generation to generation. Classroom teachers have heard youngsters talk about getting on welfare and food stamps when they grow up as their expected way of life. Frequently, the parents of such children have little education and minimal earning power and are existing with the aid of these various programs.

Obviously there are more than economic aspects to this problem. An individual's self-esteem may be enhanced by the way he/she learns to use leisure time; many of the activities provided by the high school program are those that will directly carry over to an individual's adult life.

Activities such as sports, music, and clubs can provide a student with skills and interests which he will enjoy for many years after leaving the educational system.

A sense of self-worth may greatly enrich an adult's life and this may be acquired through maturing as well as learning. It stands to reason that a student who drops out of school at age sixteen will miss out on much that would help him become a mature, self-directed, happy adult.

Definition of Terms

Middle School	A school with grades 6-8
Junior High School	A school with grades 7-9
Incidence of dropping out	The frequency of students from a given class not finishing high school

Statement of Hypothesis

Students attending middle school immediately prior to entering high school will have a higher grade point average, lower absentee rate, and a lower frequency of dropping out than those students attending a junior high school immediately prior to entering high school.

Limitations of Study

This study explored the areas of grades, attendance, and school drop-outs from the standpoint of whether the student attended a junior high school or a middle school immediately prior to entering high school.

The researcher recognized that the time periods were not the same for each group. The junior high school group attended junior high school from 1969 to 1972. The middle school group attended middle school from

1972 to 1975. The assumption was made that there was no attributable influence in either group on grades, attendance, or frequency of dropping out due to the difference in time spans.

II REVIEW OF SELECTED RELATED LITERATURE

Dropping out of school prior to graduation has been a concern of educators for years. The federal government addressed this problem by means of the Economic Opportunity Act of 1964 (1), which stated in part:

"The United States can achieve its full economic potential as a nation only if every individual has the opportunity to contribute and participate in the workings of society."

This statement implies that citizens who lack the basic skills acquired through our educational system may be denied participation in many phases of our society.

Warner (29) related our freedom and security directly to the extent that we educate our youth. He felt that if our nation's youth was not educated to their maximum potential, future generations would value freedom less highly and our security would be correspondingly weakened.

Stressing the importance of education was not just something that twentieth-century politicians and authors shared: it went back to the very beginning of our country. In recognition of the importance of education, compulsory school attendance laws were passed early in our educational history.

In 1852, the Massachusetts legislature was the first to pass a compulsory school attendance law with the expressed purpose to "insure that children of the lower classes became moral and literate and thus a benefit to society, rather than a danger to it." Everhart (7) thus felt that the underlying purpose of compulsory attendance was the "Americanization" of the children of the waves of immigrants to the United States during the

last half of the nineteenth century.

As a result of this approach, compulsory attendance became defined in terms of standardization and efficiency. Rather than the production of culture, compulsory attendance in public schools encouraged the consumption of culture.

Hicks (16) found that dropouts usually followed a well-defined pattern before dropping out. Having researched the problem in an attempt to identify potential dropouts, many others found that different dropout groups shared basic traits. It was found that many potential dropouts began by losing interest in school, which quickly led to a falling off of grades, skipping classes, and encountering trouble with the administration. Often, after administrative rebukes, they became rebellious and disruptive, causing teachers to banish them from classes--whereupon as soon as they were old enough they dropped out of school.

Bachman (2) found that dropouts tended to have two characteristics in common: they generally had some sort of family problem and they were all in academic difficulty. Further, they often came from families in which parents had been dropouts, with a sort of tradition existing within the family for not finishing school. Also, many of these families were from the lower socio-economic levels.

Berston (4) found that in addition to socio-economic status and family problems, many dropouts seemed to have a marked tendency toward poorer physical health and psychological problems. In comparing the incidence of dental problems in the high school group as a whole, he found the dropouts having significantly higher rates of dental problems. Using a similar comparison of auditory problems, rates showed the dropout group as having a much higher incidence of problems than their age group as a

whole.

Millard (20) noted in a study of student maturity that dropouts tended to be less mature than non-dropouts. He also felt that the reasons they dropped out were related to deeper, more serious psychological problems than just immaturity. Conflicts caused by such problems were so severe that the students could not resolve them by simply walking away from them. When they attempted to resolve school problems by ignoring them, the problems did not go away so the students often dropped out of school.

Research has shown that the causes of the students' conflicts were related to their environment and family. In a comparison of child-rearing techniques of middle and lower class families, Elliott (6) found that middle class families stressed order, discipline, and responsibility. Lower class families stressed avoidance of trouble, avoidance of involvement with authorities, evidence of physical prowess, and freedom from external controls. He felt that the values of the two groups tended to be supportive, respectively, of middle class youngsters staying in school and lower class youngsters dropping out of school.

According to Mataka (18), the decision to drop out of school was also based on reasons having to do with the student's peer group. Unhappy romances, jobs, and cars often would precipitate decisions to drop out of school. Cars often placed the student under financial pressure, but they were felt to be so important to his social position that dropping out of school in order to work to support the car was the only course of action the student felt was open to him.

In another study of social conflicts comparing dropouts and non-dropouts, Bell (3) found dropouts tended to be much less involved in school activities than did non-dropouts. He attributed this reduced participation to

such elements as lack of sense of belonging because of lower socio-economic family status, lack of confidence brought on by their own perceptions of themselves as being behind in school, or outside interests such as jobs.

Another facet of the dropout problem was the relationship between teachers and potential dropouts. Eargle (5) reported that a positive correlation existed between academic progress and teacher preference. Those students better liked by the teacher nearly always did better academically than the less well-liked students. In addition, teachers were found to have a marked tendency to regard students from the lower socio-economic level families as "less preferred" than their higher socio-economic level peers. In his study of forty students rated by several teachers, not one of the students rated as "most preferred" belonged to the lower socio-economic class.

As early as elementary school, certain characteristics were exhibited indicating a strong potential toward dropping out in the future. Frericks (11) asked teachers to describe what they remembered about students of years past. The responses were then tabulated as being favorable, unfavorable, or having no opinion. He found a high positive correlation between teachers' ratings of those unfavorable and those students who did eventually become dropouts.

The problem of whether or not to retain a child in a grade was always hard to resolve. Schreiber (24) found, in a study of children held back in the first or second grades, that children held back during either of these two grades suffered an eighty percent chance of not graduating from high school. Those children often continued to earn poor grades in school, so retention and poor grades were often highly indicative of the students' eventually becoming a dropout.

Using similar studies and indicators, Thompson (25) predicted in 1963 that one of every three youths in the ninth grade would drop out of school during the 1960-1970 decade. Reflecting on this prediction, Grant (12) found in 1975 that the dropout rate was actually somewhat smaller than the earlier prediction, now at about one in four.

In looking into causes of dropouts and various dropout factors, some studies made recommendations designed to lower the dropout rate. Raymond (22) reported on a program implemented in Fargo, North Dakota, which succeeded in lowering the dropout rate 26%. The program utilized a "tender loving care" approach through creation of individualized learning centers. A student having the characteristics of a potential dropout was assigned a teacher as an ombudsman. That teacher had no formal training in counseling, and the relationship between the potential dropout and the ombudsman teacher was one of informal counseling with the teacher also acting as a mediator between the student and any problematic encounters involving the professional staff. Simultaneously, the student was receiving help with his lessons through the individualized learning center.

Fallstrom (8) found a similar lowering of the dropout rate in several high schools where alternative programs had been developed. Those programs dealt only with improving basic skills, largely reading and math.

In 1976, a panel appointed by the U.S. Office of Education (27) studied the education of adolescents in this country. They recommended that compulsory daily attendance should be reduced from all day to two to four hours daily. The balance of the day would be spent in the community in complementary educational activities designed to heighten the adolescents' interests while broadening their horizons and keeping them in school until graduation.

Wilde (30) came to a similar conclusion in an independent study of the education of adolescents. Because of the highly individualized way in which children learn, he felt that many children need alternative means of acquiring skills and knowledge. Thus, he concluded that compulsory attendance seemed to be counter-productive and that it could actually encourage some adolescents to drop out of school.

Organizing a school system has been the responsibility of superintendents and school boards for many years. A common method of organization used an elementary level school or schools which fed into one or more junior high schools. The junior high school then fed into the high school.

The mid-sixties brought the middle school concept, a new approach to school organization. McQueen (19) reported that as recently as 1965 fewer than 500 middle schools were being operated in only twenty-nine states. The middle school concept spread until middle schools were operated in all states during the late seventies. Naturally a corresponding decrease in the number of junior high schools occurred at this time.

Many educators wondered why the well-accepted, traditional junior high school format which had existed for many years should so suddenly be replaced by middle schools. Groden (15) suggested that junior highs had failed in their original mission so they should be replaced by middle schools. He further felt that the junior high concept was so strongly associated with the old establishment philosophy that it fell victim to the social unrest of the sixties, resulting in a marked swing from junior high schools to middle schools.

In some communities the swing to middle school occurred for more practical reasons. Murphy (21) found many school districts in which middle schools came into being because of available space due to population

changes. Others originated as a result of middle schools being less expensive to build than junior high schools, especially when a completely new building was required.

However, Gravelink (13, 14) reported there were still junior high school supporters who resisted the change to middle schools. He proposed that the proponents of the two plans spend less time squabbling over which one was better and pool their energies and ideas to come up with a plan that was truly a better method for educating ten to fourteen year-old children. He found that, more often than not, middle schools came into being by decrees or edicts from boards of education and in effect became middle schools in name only. Gravelink suggested that the only justifiable reason to go to the middle school plan was the desire to improve the delivery system for education in light of what was known about students in the ten to fourteen year-old age group.

Fielder (9) also felt that middle schools should be established in recognition of the special needs of that age group. In order to do this he advocated special training for teachers who would be assigned to middle schools, plus an entirely different organizational approach. He felt that this approach was needed to make middle school assignments more attractive than they were at the present time.

One approach to the transition from junior high school to middle school was to schedule some in-service meetings for teachers to acquaint them with the new concept. Fielder (9) felt that this was not adequate and that specialized training of the faculty was necessary in order for the middle school plan to succeed. One way to provide this specialized training was to give teachers released time or supplemental pay to take special training. As a continuing process he advocated giving teachers

time as well as a comfortable place to read to stay abreast with professional journals which the school should provide.

In the selected literature reviewed, many facets of middle school and junior high school were investigated. Such things as the dropouts' physical and psychological health, their participation in school activities, the socio-economic status of their families, their parents' attitudes toward school and authority, alternatives to traditional schools, dropout prevention programs, in-service training and preparation of teachers, and preparation of facilities were all covered. Conspicuous by its absence, however, was any attempt to assess the relative effectiveness, or lack thereof, of the middle school program in its effect on grades, absenteeism and prevention of future dropouts as compared to the junior high school program.

III RESEARCH DESIGN

Description of Schools

In 1972, the Owensboro Independent School System changed from junior high schools to middle schools. The philosophy and program of the junior high schools had been those of a miniature high school where the teachers were all secondary certified and where courses were taught in a departmentalized manner in all three grades—seventh, eighth, and ninth. Specialized or advanced courses such as foreign language, algebra, typing, and vocational home economics were offered in addition to the standard math, English, science, and social studies. Physical education, art, music, shop, and health were also taught.

A wide variety of extra curricular activities was available. Student councils, yearbooks, newspapers, dances, clubs, musicales, and instrumental music programs were all accessible, contributing an important part of each school's total program.

Interscholastic athletic competition in football and basketball was begun in the ninth grade. The teams played a schedule against conference and regional teams that was just slightly shorter than the senior high school schedule. Post-season or extra-season tournament play also occurred.

In the junior high, students were twelve or thirteen years of age before entering the seventh grade. As a result a large number turned sixteen before completing junior high and dropped out before entering high school.

The junior high schools were administered by a principal, an assistant

principal, and a counselor.

The philosophy and programs of the middle schools de-emphasized the high school aspect and attempted to establish an approach between the highly nurturistic elementary school approach and the more adult and independent approach characteristic of the high school. Although the academic area was still organized on a departmentalized basis, all specialized or advanced courses were eliminated and courses became extensions of the elementary school curriculum. Those included math, science, language, social studies, spelling and, to some extent, reading. Physical education, art, music, shop, health, and non-vocational home economics were offered as exploratory courses.

Sixth grade was taught by elementary certified teachers, but seventh and eighth continued to be taught by secondary teachers.

Extracurricular activities were either greatly de-emphasized or eliminated entirely. There were no longer such things as student council, yearbooks, dances, musicales, or clubs. In their places each middle school was free to experiment with a variety of ideas to replace them. Quasi student councils, dittoed "newspapers," and activities classes were offered.

The activity classes were exploratory and hobby-oriented, taught by volunteer teachers who had either an interest or a talent in the particular area. They were changed three or four times a year so that students could enroll in several different areas within one school year.

Athletics became a two-part program. One part was a football and basketball home-and-home competition between the three middle schools in the Owensboro schools, with an occasional extra game scheduled with a Daviess County middle school or a parochial school. The season was only five to seven games long and no tournament play was permitted. Only

seventh and eighth graders competed on the teams.

The second part of the athletic program was an intramural sports program for all three grades, offering up to a dozen or more different sports with competition on an individual as well as team basis. The program was supervised by a group of four teachers, taking place several times a week during the last period of the day, sometimes lasting up to an hour past school dismissal.

When the change from junior high school to middle school took place, there was no change in the administrative level. Each middle school was administered by the same principal, assistant principal, and counselor as had been in charge of the junior high. The official philosophy for both school types was stated in terms of preparing the student to continue his education, utilizing his abilities and interests to the fullest.

One major difference was an effort in the middle school to slow the rate of maturation between the sixth grade and high school, making high school more special and a goal to be attained. The middle school system allowed the student to become established in high school well before his sixteenth birthday.

Another important difference in middle school philosophy was its direction toward practical application as reflected in a self-evaluation by the Foust Middle School (10) faculty. In the report it was stated that a specific objective of the program was to help the student acquire skills, abilities, and knowledge essential for becoming a self-directed learner. It also incorporated an on-going evaluation to determine the program's relevancy to daily living.

Procedure

This study involved two groups of students. Both groups were composed of students who dropped out of Owensboro High School in the tenth grade. Both groups attended three full years of middle school or junior high school in the Owensboro School System and then were promoted to the high school.

The groups were compared in three ways:

1. Mean cumulative grade point average from beginning middle/junior high school to the time of dropping out.
2. Mean percentage of absenteeism from beginning of middle/junior high school to the time of dropping out.
3. Incidence of dropping out of students enrolled at the beginning of tenth grade.

A set of data suitable for statistical analysis was obtained for each of the three areas. The grade point data and the absenteeism data were analyzed by the pooled variance "t" test for statistical significance. The data on the incidence of dropping out were analyzed by the chi square test for statistical significance.

The programs of the two types of schools were reviewed. This review concentrated on the areas of academic emphasis and curriculum, athletics, extra-curricular programs, social activities, and basic school philosophies.

The class chosen to represent the junior high school experience was the class of 1975, for they were the last group to go completely through the junior high program with no exposure to the middle school program. The class chosen to represent the middle school experience was the class of 1979, for they were the first group to go entirely through the middle school with no exposure to the junior high program.

The incidence of dropping out was considered only for the tenth grade as this was the year during which most students reached their sixteenth birthday. The students dropping out during the eleventh and twelfth grades were not considered because it was felt that the impact of their middle/junior high experience would have been diluted by time. The classes of 1976, 1977 and 1978 were transition classes having attended only two years in junior high school or one year in middle school and one year in junior high school or only two years in middle school prior to entering high school.

Null Hypothesis

There is no significant difference in the mean cumulative grade point average, the mean percentage of absences, or the incidence of dropping out between the students who attended the middle school and the students who attended the junior high school immediately prior to entering high school. The .05 level of significance was selected for the rejection of the null hypothesis.

Sources of Data

The cumulative grade point average and percentage of absenteeism were both computed from data taken from permanent records of the Owensboro Board of Education and the Owensboro High School. The records of the junior high school group were taken from the inactive files listing all records for students not currently enrolled. The records consisted of grade reports for each year beginning with junior high or middle school, attendance figures for each academic year, and the final disposition of the student. The files are kept according to the year of final disposi-

tion so that the records of all students who graduated, dropped out, or left the school system for any other reason during a particular academic year are easily available.

The students dropping out of the tenth grade for the class of 1975 dropped out during the academic year 1972-1973. The entire file was searched and the data pertaining to grades and attendance for those listed as having dropped out were compiled.

The data for the middle school group were obtained from the active files of the counseling office of Owensboro High School. The files for each class were arranged alphabetically and if a student left, dropped out, or otherwise stopped attending school, the file was so marked. The file for the class of 1979 was searched, and for each dropout the data on grades and attendance were recorded.

The incidence of dropping out for each of the two groups was computed from the data obtained from these files. The computation was done by comparing the number of students at the beginning of the tenth grade and the number of students that dropped out during the tenth grade.

IV PRESENTATION AND ANALYSIS OF DATA

The null hypothesis stated that there would be no significant difference in the mean cumulative grade point averages, the mean percentage of absences, and the tenth grade incidence of dropping out between the students who attended junior high school and the students who attended middle school immediately prior to entering high school.

Mean Cumulative Grade Point Average

The mean cumulative grade point average was computed on the basis of a four point system. Each course taken during the entire middle school or junior high school years graded on a basis of A, B, C, D, or E was considered. Points were assigned to letter grades on the basis of four for an A, three for a B, two for a C, one for a D, and 0 for an E. These points were then totaled and the sum was divided by the total number of courses taken. A figure was obtained for each dropout, and the grade point averages were totaled in order to compute the group's mean, by dividing the total number of dropouts into the total of the grade point averages.

In the middle school group there was a total of 34.6 points. Dividing this by the eighteen dropouts, a mean cumulative grade point average of 1.92 was obtained.

The same procedure was followed for the junior high group. Their total points of 62.3 were divided by the thirty-five students, giving a 1.78 mean cumulative grade point average. The middle school group

average was 7.8% higher than the junior high school group average, but this difference was not significant at the .05 level according to the pooled variance t-test (28).

TABLE 1

Mean Cumulative Grade Point Average of Each Group at Drop Out

	Number of Students	Mean Cumulative Grade Point Average	Value of "t"
Middle School Group	18	1.92	
Junior High School Group	35	1.78	

.897 N.S.

Since the table showing the critical values of "t" did not have an entry for fifty-one degrees of freedom (df), the judgment of significance was made on the basis of forty df, which was more conservative. At forty df, a "t" of 2.021 was necessary for significance at the .05 level. The "t" of .897 was smaller and therefore that part of the null hypothesis pertaining to the cumulative grade point average was not rejected.

Mean Percentage of Absences

The mean percentage of absences was computed from the attendance data taken from the Owensboro High School counseling department's active student files and the Owensboro Board of Education's inactive student files. The middle school attendance data came from the active files because it was based on the class of 1979; the junior high school attendance data came from the inactive files because it was based on the class of 1975.

The total days absent for the duration of the student's enrollment

from the beginning of middle school or junior high school up to the point of dropping out during the tenth grade was used for each student. This was compared to the total number of days the student was enrolled during the time span. A total number of days absent and a total number of days enrolled for each group was then computed and a mean percentage of absenteeism obtained.

The middle school group had a total of 10,496 days of enrollment for the dropouts. They also incurred 825.5 days of absence during that time. This gives a mean percentage of absence of 7.9% for the middle school group.

The junior high school group had a total of 20,408 days of enrollment for the dropouts. They incurred 1,720.5 days of absence during this time. This gives a mean percentage of absenteeism of 8.4% for the junior high group. The middle school group's average was 5.9% lower than the junior high school group's average, but this difference was not significant at the .05 level according to the pooled variance t-test (28).

TABLE 2

Mean Percentage of Absences of Each Group at Drop Out

	Number of Students	Percentage of Absences	Value of "t"
Middle School Group	18	7.9%	
Junior High School Group	35	8.4%	.421 N.S.

Since the table showing critical values of "t" did not include an entry for fifty-one df, the judgement of significance was made on the basis of forty df which was more conservative. At forty df, a "t" of 2.021 was

necessary for significance at the .05 level. The "t" value of .421 was smaller, so therefore that part of the null hypothesis pertaining to the mean percentage of absences was not rejected.

Incidence of Dropping Out

The incidence of dropping out was calculated in the following manner. The enrollment at the beginning of the tenth grade for the class of 1975 (junior high group) and the class of 1979 (middle school group) was obtained from the Director of Pupil Personnel of the Owensboro School System. A list of students who dropped out during their tenth grade year was made by reviewing the files of the respective class and year of dropping out. The incidence of dropping out is shown in Table 3.

Since only nominal scale data were available, the chi square test of significance was selected to test that part of the null hypothesis dealing with dropout frequency.

TABLE 3

Incidence of Dropping Out for Each Group

	Enrollment on First Day of Class	Number of Dropouts
Middle School Group	563	18
Junior High School Group	655	35

Using a probability of .05, a chi square for two df would need to be 5.99 to be statistically significant. With a chi square of 3.36, that part of the null hypothesis pertaining to the incidence of dropping out was not rejected. The difference in the incidence of dropping out was not statistically significant at the .05 level.

Summary

This study was pursued as a result of the recent change in the Owensboro schools from a junior high to a middle school program. The purpose of the study was to determine if the middle school plan had any effect on the three areas of importance to students and schools alike, namely the areas of grades, attendance and dropout incidence.

For the study, two groups were used: The last class to complete three years of junior high school with no middle school exposure (the class of 1975) and the first class to go through three full years of middle school with no exposure to junior high school (the class of 1979). The students who dropped out during the tenth grade were studied as a group in respect to grade point average and rate of absenteeism from the beginning of junior school or middle school until dropping out. A mean for the entire class was computed for the comparative purposes. The pooled variance t-test was used to analyze the data for statistical significance was applied.

Conclusions

The results of the study showed that there was no statistically significant difference in the mean cumulative grade point average, mean percentage of absenteeism, or dropout frequency between the junior high school and the middle school group. There were, however, some interesting differences.

The middle school group had slightly higher grades than the junior high group. One possible explanation for this difference might be that the middle school's academic program became more an extension of the elementary school program with some of the more sophisticated courses such as

foreign language and algebra being transferred to the high school. Additionally, the gradual easing of grading standards as indicated by decreasing achievement test scores for college freshmen in recent years may account for this difference.

The middle school also had a slightly lower percentage of absences for the group as a whole than did the junior high group, possibly indicating that the middle school students enjoyed coming to school more and put forth more effort to attend than the junior high students. However, it was more likely due to the middle school group's being younger (on an average) than the junior high group--as grade comparison revealed each succeeding year's records showed progressively higher rates of absenteeism. It was noticed that this pattern held true through the senior year of high school.

Based on findings of this study, it does not seem that the middle school could be said to exert any more influence on grades, attendance, or the dropout tendency of a student in high school than did the junior high school.

Implications for Further Research

During the course of this study there arose several areas of interest which would be profitable sources for further investigations of the dropout problem.

One area was the effect on the dropout frequency, if any, of the changing of the high school from one building housing grades ten through twelve, to two buildings, in separate parts of town split into a nine-ten center and an eleven-twelve center.

Another area of interest would be the design and implementation of a program specifically designed to treat the dropout problem. In the literature reviewed there were so many reports of successful programs which did lower the dropout rates that it seems almost imperative that this area be pursued.

In conclusion, consideration of the problem of dropouts as a whole, and that two very different pre-high school approaches did not in this case make any significant difference in the dropout frequency, would lead to the question of alternatives to the conventional schools for the dropout-prone students. Research into alternative educational plans such as work-study programs or vocational training programs and their effect on school dropout frequency might prove fruitful.

Appendix 1

Mean Cumulative Grade Point Average

Calculations of "t" using the pooled variance t-test.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sum x_1^2 + x_2^2}{N_1 + N_2 - 2} \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

$$t = \frac{1.92 - 1.78}{\sqrt{\frac{2.96 + 11.80}{18 + 35 - 2} \left(\frac{1}{18} + \frac{1}{35} \right)}}$$

$$t = .897$$

Appendix 2

Mean Percentage of Absences of Each Group

Calculations of "t" using the pooled variance t-test.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sum X_1^2 + \sum X_2^2}{N_1 + N_2 - 2} \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

$$t = \frac{8.4 - 7.9}{\sqrt{\frac{361.32 + 485.14}{35 + 18 - 2} \left(\frac{1}{35} + \frac{1}{18} \right)}}$$

$$t = .421$$

Appendix 3

Frequency of Dropping Out for Each GroupCalculation of χ^2

$$\chi^2 = \frac{(O-E)^2}{E}$$

	<u>Dropouts</u>	<u>Still Enrolled</u>	<u>Total</u>
Middle School Group	18 \ 24.5	545 \ 538.5	563
Junior High School Group	35 \ 28.5	620 \ 626.5	655
Total	53 \ 53	1165 \ 1165	1218

O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
18	24.5	-6.5	42.3	1.73
35	28.5	6.5	42.3	1.48
545	538.5	6.5	42.3	.08
620	626.5	-6.5	42.3	.07

$$\chi^2 = 3.36 \text{ N.S.}$$

Appendix 4

Mean Cumulative Grade Point Average at Dropping Out

Calculations of Mean Grade Point Average

	Number of Students	Total Individual G.P.A. Points	<u>Total G.P.A. Pts</u> <u>Total Students</u>	Mean G.P.A.
Middle School Group	18	34.6	$\frac{34.6}{18}$	1.92
Junior High School Group	35	62.3	$\frac{62.3}{35}$	1.78

Appendix 5

Mean Percentage of Absences of Each Group at Drop Out

Calculations of mean percentage of absence

	<u>Number Students</u>	<u>Total Number Days Enrolled</u>	<u>Total Number Days Absent</u>	<u>Days Absent Days Enrolled</u>	<u>Mean % Absence</u>
Middle School Group	18	10,496	825.5	$\frac{825.5}{10,496}$	7.9%
Jr. High School Group	35	20,408	1,720.5	$\frac{1,720.5}{20,408}$	8.4%

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