DISSERTATION ABSTRACT

AN ANALYSIS OF THE ADVANTAGES OF THE QUARTER SYSTEM AS COMPARED TO THE SEMESTER SYSTEM IN SELECTED SECONDARY SCHOOLS

By

Walter R. Bush

Purpose of Study

The purpose of the study was to determine whether the quarter system provides more advantages than the semester system.

Population and Scope

The sample for this study was taken from thirty-seven secondary schools located in the Metro-Atlanta Area and North Georgia. Twenty-two schools returned the research instrument.

The Hypothesis

The quarter system offers the following advantages as compared with the semester system:

1. A greater number of courses
2. Higher teacher-pupil ratio
3. More efficient utilization of personnel
4. Greater enrollment in remedial and enrichment courses
5. Fewer failures
6. More early graduates

7. Reduction in drop-out rate.

Findings

Some findings which have emerged from this study are listed below:

1. The schools that participated in this study experienced greater increases in the total number of courses offered, the number of new courses offered, the number of remedial courses offered and the number of enrichment courses offered during the quarter mode of operation than the semester.

2. The number of required courses and the number of prerequisite courses offered in these schools did not change during the quarter or semester operation.

3. The findings from this study indicated that the teacher-pupil ratio did not change during either mode of operation.

4. Very few of the schools included in this study utilized the services of teacher aides during either mode of operation.

5. The majority of the administrators who participated in this study were in agreement that personnel can be utilized more efficiently in the quarter system than the semester system.

6. The enrollment in remedial and enrichment courses showed a noticeably larger increase for the quarter system over the semester system.

7. The number of students who graduate early showed a phenomenal increase for the quarter system over the semester system.

8. The quarter system did not drastically affect the number of failures. The failure rate was relatively constant for both modes of operation.

9. The drop-out rate for the quarter or semester system did not differ significantly.

Conclusions

An analysis of the findings of this study warrants the following conclusions:

1. The number of courses offered in the schools that participated in this study showed an increase during the quarter

system that was significantly larger than the number of courses offered in the schools during the semester operation. The increase was reflected in the total number of courses offered, the number of new courses offered, the number of remedial courses offered, and the number of enrichment courses offered.

2. The teacher-pupil ratio did not show any improvement during the quarter operation that was significantly different from the teacher-pupil ratio realized in the schools during the semester operation.

3. Personnel can be more efficiently utilized during the quarter system than the semester system according to the responses of administrators that participated in the study.

4. The student population did realize more educational advantages during the quarter operation which were significantly different from those realized during the semester. These advantages were reflected in increased enrollment per 1000 students in remedial courses, in enrichment courses and an increase in the number of students who graduated early.

5. The drop-out rate for the schools during the quarter operation did not show a decrease that was significantly different from the drop-out rate for the schools during the semester operation.

Implications

The findings and conclusions from this research justify the following implications:

1. Much emphasis has been placed on the number of courses offered in the schools during the quarter system. Indications are that greater emphasis is needed on the number of courses actually taught rather than the number of courses offered.

2. The increase in the number of courses offered during the quarter system warrants an increase in the number of counselors employed to guide students in planning their programs.

3. With the inception of the quarter system, the students' chances of failing were increased to three as compared to two chances of failing under the semester system.

4. The three quarter plan with a tuition summer school may favor those students who are able to pay and may work a hardship on those students who are not able to pay.

5. There is a need for more flexibility in the State's formula for funding schools and in allocating personnel. Funds should be allocated on the basis of total number of days attended during the calendar year rather than 180 days per school year.

6. The practice of utilizing instructional aides has not gained wide acceptance by the schools that participated in this study.

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A DISSERTATION

SUBMITTED TO THE FACULTY OF THE SCHOOL OF EDUCATION,

ATLANTA UNIVERSITY IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF EDUCATION

BY

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CHAPTER I

INTRODUCTION

Rationale

Many schools throughout the nation have implemented the quarter system and others are conducting studies to determine the feasibility of implementing it.

In an attempt to meet the demands that have evolved on the schools, there have been additions to the curriculum and additions to the time spent in school. During the last century, the length of the school year has been gradually extended from an average of 132 days to an average of 180 days.[1]

Some advocates of the extended school year feel that the spiraling cost of school building construction makes it necessary to examine the school year and to seek ways of promoting greater utilization of facilities.

Questions most often asked by those who advocate greater utilization of school facilities are: (1) Can we permit our education plants to lie idle 25 percent of the time (i.e., Summer)? (2) Are we making the most effective use of trained teachers.[2]

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[1] James V. Moon, "The Extended School Year," Education LXXXIV (May, 1964): 557-564.

[2] Ibid.

As one examines these questions, it is evident that the discussion on the extended school year has increased in its intensity in recent years; but, to a great degree, the dialogue has been based on judgments held by interested citizens rather than on information drawn from carefully designed research.

In reviewing the literature related to the extended school year, one finds that there are many plans, but Moon states that there are four plans which stand out. They are:

1. The staggered four quarter plan for all students;
2. A full 48-week school year for all;
3. A voluntary summer school program; and
4. A summer program for professional personnel. . . .

Actually the staggered four quarter system has been experimented with and abandoned by a number of districts. An experiment that began in 1904 in Bluffton, Indiana ended in 1915. From a peak of 13 in 1925 the number dwindled until in 1950 Chattanooga, Tennessee was the only system. In 1956, no system was reported to be using the staggered quarter plan.[1]

Today, some districts have returned to a form of the quarter system, others are studying the advantages that the quarter system offers. In light of this trend, an analysis of the quarter system operation has been made to determine if selected advantages mentioned in the literature are being realized.

Definition of Terms

The following terms that are used in the rationale and terms that

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[1] Ibid.

will be used elsewhere in this study are:

1. Quarter system—an organizational scheme that divides the school year into four blocks of time.

2. Semester system—an organizational scheme that divides the school year into two major blocks of time.

3. Consecutive Quarter Plan—All students attend school for 48 weeks, four quarters with each having 12 weeks.

4. Staggered Quarter Plan—A 48-week operation with an enrollment plan that has three-fourths of the students enrolled each quarter while one-fourth of the students are on vacation.

5. Modified Summer Plan—A regular 180-day school year, plus an expanded summer school.

6. Year-Round School—the schools are opened for 12 months with the same instructional program being offered on a continuous basis instead of a 9-month school year with limited summer offering.

7. Summer Program for Professional Personnel—A plan which provides professional personnel with an opportunity to be employed on a 12-month basis with the children attending school the traditional 36-40 weeks while teachers, administrators and supervisors are engaged in instructional and curriculum planning during the remainder of the year.[1]

8. New course—new concepts and new learning activities that are being offered for the first time as defined by the researcher and administrator.

9. Revised course—an existing course for which the content and learning activities are modified or changed.

10. Remedial course—A review of basic learning activities and basic content for students who have deficiencies in the basic skills areas.

11. Enrichment course—learning activities and course content in addition to those required for graduation.

12. Required course—A course that all students must take before they are permitted to graduate.

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[1] Stephen J. Knezevich, Administration of Public Education (New York: Harper & Row, 1962), p. 406.

13. Prerequisite course--A course that must be taken before the next course in the sequence.

14. Elective course--A course in the curriculum organizational scheme from which students can select according to needs and interests.

The terms year-round school, year-round education, extended school year, and expanded school year are used synonymously throughout this study.[1] The terms quarter system and quarter plan are used synonymously throughout this study.

Evolution of the Problem

Many schools that are presently operating under the quarter system have been involved in the program from 1-6 years. Some of these schools have utilized inventory forms, questionnaires and interviews to determine the advantages and disadvantages of the quarter system. Educators, students and parents have participated in these early studies. From these studies, valuable information regarding the way these groups feel about the quarter system has been gained. However, little has been done to determine the effectiveness of the plan.

The current study became a concern of the writer when, upon reviewing literature related to the quarter system, very little data were found which indicate whether schools are realizing specific anticipated advantages. For this reason, a decision to conduct the study was made.

Contribution to Educational Knowledge

It is the hope of the writer that the findings of this study will

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[1] National School Public Relations Association, Year-Round School: Districts Develop Success Programs. Education U.S.A. Special Report, Washington, D. C., 1971, pp. 3-9.

bring forth some information that may be used to assist school administrators, teachers, other school personnel and parents in assessing the advantages of the quarter system as it relates to the improvement of the total school program. It is also the hope of the writer that the study will bring forth a body of knowledge which may be used to assist school personnel in developing curricular materials, organizing and implementing the quarter system.

Finally, it is the hope of the writer that the findings of this study will make available a body of information that may be used to assist others in determining the advantage of implementing the quarter system.

Statement of Problem

The problem deals with the question: Are selected advantages of the quarter system as expressed in current literature being realized in selected secondary schools?

Purpose of Study

The purpose of the study is to determine whether the quarter system provides more advantages than the semester system.

The Hypothesis

The quarter system offers the following advantages as compared with the semester system:

1. A greater number of courses
2. Higher teacher-pupil ratio
3. More efficient utilization of personnel
4. Greater enrollment in remedial and enrichment courses

5. Fewer failures
6. More early graduates
7. Reduction in drop-out rate

Population and Scope of Study

The sample for this study was taken from thirty-seven secondary schools located in the Metro-Atlanta Area and North Georgia. Twenty-two schools returned the research instrument.

Limitation of the Study

Limitations of this study are that the questionnaire was executed through face-to-face contact which could have biased the data and the study sample was a selected sample.

Research Method

The research method used was the comparative method which will be explained elsewhere in this study.

The Instrument

The instrument used in this study was a specifically designed questionnaire that was approved by a panel of instructors in the Atlanta University System.

Procedural Steps

This research was conducted through the following steps:

1. Permission to conduct this study was secured from the proper authorities.
2. A survey of related literature was made and is presented as a part of this study.

3. A questionnaire was constructed and approved by a panel of instructors in the Atlanta University System.

4. The writer mailed the instrument to selected schools and made follow-up visits to execute it cooperatively with the administrators.

5. The data collected through the instrument have been tabulated, assembled in appropriate tables and carefully analyzed. The research procedure is explained in detail in Chapter II under, "Procedures used in the analysis of data."

6. The findings, conclusions, implications and recommendations which emerged from the analysis and interpretation of the data are presented elsewhere in the study.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH DESIGN

The volume of literature related to the quarter system has increased tremendously within the past few years. Educators do not hesitate to become involved in dialogue regarding the advantages of the quarter system, but little has been done to determine whether the advantages claimed for the quarter system are being realized.

Historical Background of the Quarter System

The longer school year is not a new phenomenon in the United States. Most city schools operated on an 11 or 12 month plan prior to 1840, but in areas where children were needed to work on farms, the school year was shorter. Cities gradually decreased the length of the school year and rural areas increased the length of the school year. By the 1900's most of the nation's schools operated on a 9 or 10 month calendar.[1]

The present nine months school year dates from the early 1900's. During this period, children constituted an important part of the labor force that tended the nation's farms. The school operations were geared to an agrarian economy and schooling occupied a secondary place

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[1] Seymour Holzman, "180 Days vs the Year-Round School," Scholastic Teacher (April, 1970): 18-19.

to the demands of the farm.[1]

Automation changed the methods of making a living and with automation, the need for more education for children was recognized.

Vacation schools which provided recreational activities for children during the summer months took the first step toward eliminating the long summer break. Later, these schools developed academically oriented programs. At first, the academic programs were geared to the needs of students who had failed courses during the regular school year.[2]

Some districts that were among the first to operate year-round school are as follows:

> Bluffton, Ind. operated a short lived program in 1904. Other school districts that operated for various periods of time on the year-round system were Omaha, Neb.; Nashville, Tenn.; Newark, N. J.; and Ambridge and Aliquippa, Pa.
>
> The Newark, N. J. plan was probably the most notable of all. It began in 1912 and continued until 1931. The program was considered popular with parents, teachers, and businessmen, but it died during the lean years of the depression. One of the major pluses of the Newark experiment was its effect on juvenile delinquency. . . .
>
> The Newark, Omaha and Nashville plans operated on the basis of improving education. The Ambridge and Aliquippa plan were aimed at utilizing existing buildings.
>
> The first three plans expired because of a shortage of funds during the 30's. The latter plans operated until funds were available for new schools.[3]

The length of the school year has been and still is a concern of

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[1]Gerald M. Knox, "Should We Have Year-Round Schools?" Better Homes and Gardens, June 1970, p. 60.

[2]National School Public Relations Association, Year-Round School: Districts Develop Success Programs, Education U.S.A. Special Report, Washington, D. C. 1971, p. 1.

[3]Ibid., p. 1.

educators. Indications are that the dialogue regarding year-round schools will continue and that many school systems will initiate year-round school programs in the near future. Information released from the Georgia State Department of Education on the status of schools in Georgia operating under a quarter curriculum organization indicates the following:

1. Systems presently operating on quarter plan — 28
2. Systems to begin operating on quarter plan during 1973-74 — 20
3. Systems in initial planning stage — 38
4. Special types of operations other than carnegie unit or semester plan[1] — 4

Objectives of Year-Round School

Initially, the purposes for operating year-round schools were:

To promote economy in school operations through fuller utilization of the school facilities; and

To improve the educational opportunities for students who were being served.[2]

The objective which relates to economy of operations has been the most frequent reason cited for utilizing school facilities year-round. Proponents of the plan argue that most communities could realize considerable savings on the school's debt service, the cost of fuel, light, power, maintenance and state tax on bonds.[3]

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[1]State Department of Education. Atlanta: Report on Status of Georgia School Systems, the Quarter Curriculum Organization, Nov. 20, 1973. (Mimeographed)

[2]Sherrell E. Varner, The Rescheduled School Year (Washington, D.C.: National Education Association, 1968), p. 6.

[3]Ibid.

Current literature indicates that emphasis on year-round programs has shifted from economy in operation to quality education and more educational benefits for children. A report that was given on the Atlanta Four Quarter Plan supports this position. The report states the following:

> The advantages sought from the four quarter plan are not financial. Initially, such an operation is more expensive to operate and maintain than the two semester plus tuition-supported summer school. Benefits to the students should be the prime reason for converting to the four quarter plan.[1]

Schoenfield and Schmitz agree that the reasons for moving toward the four-quarter school year should be for increased educational benefits rather than economy of operation. They state the following:

> . . . The quarter system has given fairly extensive experimentation roughly from the beginning of this century to the middle years of the depression. . . . The prime motive for implementing the pattern was economy, and when the programs seemed too expensive they were discontinued. Following the Second World War, the all-year school was realized through the form of the extended summer school system and the argument for it has concerned itself chiefly with educational objectives.[2]

It is apparent from the literature that the initial objective of the four quarter system which relates to reduced operational cost has not been realized, but the objective which relates to increased educational benefits for children is more realistic.

The Advantages of the Quarter System

Proponents of the four-quarter school year and other forms of the

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[1] National School Public Relations Association, op. cit., p. 47.

[2] Clarence A. Schoenfield and Neil Schmitz, Year-Round Education--Its Problems and Prospects from Kindergarten to College. (Madison, Wisconsin: Dembar Educational Research Services, Inc., 1964), p. 17.

quarter systems have begun to talk about the advantages afforded through a year-round school operation. It should be noted that the dialogue and reports include elements of commonality in the advantages listed by systems that are considering implementing a quarter plan operation.

The Atlanta Plan which is probably the most observed, the most talked about and the most copied plan, cites the following advantages inherent in the quarter plan:

1. There is continuous student progress.
2. Technically, there are no failures.
3. Teachers have the opportunity to work year-round with additional pay.
4. Buildings remain open and are not as subject to vandalism.
5. Closing and opening preparations are minimized.
6. All students are not dumped on the streets at one time.
7. Students may attend school part time and can earn money throughout the year; . . .
8. The program can be adjusted to the student's learning patterns.[1]

Writers who have published articles or books about various forms of the quarter system are in agreement that each form offers increased educational benefits to children. The advantages inherent in the rotating quarter system include the following:

1. The school plant and other equipment are not idle for one-fourth of the year.
2. Fewer buildings are required, thus, effecting economies in school construction, debt services, and insurance premiums.

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[1]B. Robert Anderson, "Four Quarters Make A Whole Year in Atlanta," School Management (June 1972): 8.

3. Theoretically, the same school plant, staffed by the same number of personnel, provides for 25 percent more pupils.

4. It eliminates the need for double sessions in overcrowded school systems.

5. Fewer books, less equipment, and the like are needed at any one time.

6. The pupil's work is evaluated more often.

7. A pupil who has failed may repeat only the quarter failed rather than the entire semester or year.

8. The pupil who has been absent for an extended time may re-enroll in the quarter or quarters missed instead of making up the entire semester or year.

9. Teacher status is raised. Teachers receive more pay if they work all four quarters, and need not seek summer employment outside the school system.

10. Fewer teachers are required, thus relieving pressure of the teacher shortage.

11. More pupils may be able to find vacation employment, because only one-fourth as many youths are seeking jobs at any one time.

12. More pupils may be able to participate in extra curricular activities.[1]

Some systems have cited educational advantages of the quarter plan operation in a series of case studies. Agreement on the educational advantages offered by the quarter system is evident in each case study. Some systems, which were included in the studies that deserve special attention are the Jefferson County (Louisville) Kentucky, the Hayward California School System and some schools in the Chicago School System.[2]

The most contemporary list of educational advantages claimed for the

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[1]Sherrell E. Varner, op. cit., p. 14.

[2]The National School Publication Association, op. cit., pp. 36-60.

four quarter school year was reported in a recent study of schools in Metropolitan Atlanta.

The researcher grouped the educational advantages of the four quarter system under four major headings. They are:

1. Educational advantages for students;
2. Educational advantages in the area of curriculum;
3. Advantages in school finance; and
4. Advantages for professional personnel.[1]

It is interesting to note that regardless of the scheme used to group the advantages that are inherent in the four quarter school year and other forms of the quarter operation, a great deal of homogeneity exists in the advantages that may be realized through various types of quarter plan operations.

Reactions to the Four Quarter System by People in Various Occupations

How do teachers and persons in other professions and occupations feel about the year-round school concept and what do they have to say about it? There is no consensus. Not all teachers favor or oppose the year-round school concept. The same can be said for other groups involved. The reason for favoring or opposing the idea also varies.

A look at the attitudes of the N.E.A. and the A.F.T. indicates that the N.E.A. is much closer to accepting and promoting the idea of the year-round school than the A.F.T. The N.E.A. has passed a resolution favoring the year-round school while the A.F.T. has been reluctant to come out

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[1] Supplementary Educational Center, Metropolitan Atlanta Region. Atlanta: Atlanta Board of Education, 1970, p. 31.

even tentatively for the year-round school concept. Albert Shanker, head of New York City's United Federation of Teachers, called the concept just another game to have teachers put in more work for the same amount of money.[1]

During the second phase of the study of the four quarter system which took place during the late 40's and 50's, communities were anything but enthusiastic about the plan.

Clyde L. Ogden notes the tone of early literature relative to the four quarter plan. He states that research on the four quarter plan established two salient facts. They are:

1. Communities that have tried the plan have abandoned it.
2. Communities that have thoroughly investigated the plan, reject it.[2]

In some of the more recent studies, it is evident that this attitude has changed. Prince William operates a 45-15 year-round plan. A survey of parent attitudes toward the plan showed that 82 percent of the families involved in the program approve of it.

A Gallup Poll taken in April 1972 showed that 53 percent of the public favor the year-round school, 41 percent was against the program and 6 percent was undecided.[3]

How does the future for the year-round school look? It is difficult for one to draw valid conclusions based upon available data.

During the past six years, many of the states have conducted, are

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[1]The National School Publication Association, op. cit., p. 13.

[2]Clyde L. Ogden, "The Four Quarter Plan. . . .How Practical Idea?" American School Board Journal (August, 1956): 19.

[3]"Big Savings in Year-Round Schools." Business Week, April, 1973, p. 10.

conducting or plan to conduct feasibility studies regarding the quarter system. Systems that are implementing the quarter system appear to be totally committed to the idea even though few state legislatures have enacted school funding laws that support the quarter mode of operation.

According to information reported in The National School Public Relations Association's publication, two problems facing proponents of the year-round school which must be solved are:

1. Getting state legislatures to revise state laws so that they permit schools to operate on a year-round basis.

2. Revision of state aid distribution formulas so that school districts can get money to operate schools during the summer.[1]

Some progress has been made toward bringing about a solution to this problem. Three states have passed laws that enable school districts to operate on year-round basis and they have provided funds.[2]

Paul Friggens feels that the year-round school idea is gaining momentum across the country. He states that:

> Our schools are coming out of cold storage. . . . The Prestigious American Association of School Administrators now urges educators to re-examine the almost universal practice of leaving school plants and personnel idle at a time in our history when every available resource is needed. . . .The year-round school does appear to be an idea whose time has come. It deserves the most serious study and trial.[3]

Indications from the literature are that as parents and teachers become more knowledgeable about the quarter system, they will become more

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[1]The National School Public Relations Association, op. cit., p. 24.

[2]Ibid.

[3]Paul Friggens, "Should We Switch To Year-Round Schools?" PTA, March 1972, p. 5.

supportive of the plan. It is apparent from the literature also that it is difficult to formulate concrete answers to questions raised concerning the advantages associated with the quarter plan, but opinions expressed in the literature are in agreement that the reorganization of the school year does provide a frame of reference for making marked revisions in the instructional program of the school.

The research procedures have been organized under four headings: (1) the selection of sample, (2) a description of the data gathering instrument, (3) methods used to collect data, and (4) the statistical procedures used in analyzing the data.

Selection of Sample

The majority of the schools in the state of Georgia operating on the quarter system are located in the Metropolitan Atlanta and North Georgia. Therefore, the population for this study includes schools located in these areas.

In systems where there were five schools or less, all schools were included in the sample. In systems where there were ten or more schools, the schools were arranged in alphabetical order and every other school was included in the sample. Thirty-seven copies of the instrument were mailed and a tentative date for an on site visit by the writer was suggested on an enclosed self-addressed post card. One metropolitan system did not participate in the study.

The Data Gathering Instrument

The questionnaire was designed to secure information on the last two years of the semester system and the first two years of the quarter system. The questions on the instrument requested hard data that were

extracted from the superintendents' and principals' annual reports, school schedules, and curriculum guides.

The instrument was constructed by the writer under the supervision of his committee and was approved by a panel of instructors in the Atlanta University System. It was sent to schools that had been operating on the quarter system two or more years. Data relevant to the last two years of the semester operation and the first two years of the quarter operation were requested. There were two major divisions of the instrument, demographic and educational characteristics. Educational characteristics include five sections. They were (1) curriculum, (2) personnel, (3) resources, (4) student activities, and (5) drop-outs. Items were included in the questionnaire that would affirm or negate the sub-hypotheses stated in Chapter I.

Methods Used in Collection of Data

Copies of the questionnaire with a cover letter that explained the purpose of the study were sent to 37 schools. Enclosed with the questionnaire was a self-addressed post card which suggested a date and time for the writer to visit the principal of the participating schools to execute the instrument. Ten days after the instrument had been mailed, a follow-up letter was mailed to those individuals who did not respond. In cases where the second letter brought no response, a person-to-person telephone call was made to confirm the date of visit. Eighteen of the 22 respondents' instruments were executed in face-to-face sessions with the writer and principal. (See Appendix B, Visitation Schedule). Four of the respondents completed their instruments utilizing telephone interaction between the writer and principal. The joint execution of the

instrument helped to clarify necessary questions.

Procedures Used in the Analysis of the Data

The research approach was the comparative method. The major purpose of the study was to affirm or negate the question: Are selected advantages of the quarter system as expressed in current literature being realized in selected secondary schools? A panel of instructors in the Atlanta University School of Education recommended that the hypotheses be stated in a form that would not bias the respondent.

The data were organized and analyzed to test for significant differences in advantages the quarter operation offered over the semester operation.

It should be pointed out that although the term significant difference implies the "control-experiment" concept, the writer's major concern was to adjust variables that tended to exert more influence on findings than others and to utilize appropriate statistics to test each hypothesis. Adjustment was made by dealing with all variables on a yearly basis.

An attempt was made to test the mean value of a collective group of related variables and to test the difference of individual means to determine what specific variables contributed to the collective group. The specific hypotheses tested are presented in Chapter IV. They were tested by using multivariate analysis of variance and by using "t" Tests with matched pairs. The programs used were BMDX 69, Multivariate Analysis of Variance, Health Science Computing Facilities, UCLA and the SPSS Sub-Package for the "t" Tests.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

The purpose of this chapter is to present an analysis of the demographic and descriptive data. Test results are presented in Chapter IV. Conclusions, implications and recommendations are presented in Chapter V.

Demographic information. The data regarding locale, enrollment, personnel and the average number of years the selected schools in the Metro-Atlanta Area and North Georgia had been operating on the quarter system are presented in Table 1.

TABLE 1

DEMOGRAPHIC INFORMATION: ENROLLMENT AND PERSONNEL IN A SELECTED GROUP OF SCHOOLS IN THE METRO ATLANTA AREA AND NORTH GEORGIA

	Enrollment			Teachers			Operative
Schools	Boys	Girls	Total	Male	Female	Total	Years
1	225	215	440	14	12	26	3
2	293	294	587	9	17	26	2
3	306	284	590	17	24	41	6
4	321	356	577	16	18	34	2
5	317	378	695	17	25	42	6
6	412	418	830	18	28	46	2
7	501	406	907	13	31	44	6
8	464	461	925	21	22	43	2
9	477	461	938	19	22	41	2
10	525	458	983	21	31	52	6
11	503	504	1007	20	34	54	6
12	523	501	1024	16	33	49	6
13	517	547	1064	23	36	59	6
14	537	528	1065	21	31	53	2

TABLE 1--Continued

Schools	Enrollment			Teachers			Operative Years
	Boys	Girls	Total	Male	Female	Total	
15	582	541	1123	21	31	52	6
16	672	602	1274	19	38	57	6
17	670	680	1350	22	37	39	2
18	760	740	1500	30	39	69	2
19	780	773	1553	21	51	72	6
20	1061	1143	2204	36	49	85	2
21	665	721	1386	28	36	64	2
22	505	500	1005	22	25	47	2
Totals	11616	11511	23127	444	670	1114	85
Average	528	523	1051	20	30	51	4
Range	225-1061	215-1143	440-2204	9-36	12-51	26-85	2-6

An analysis of the data showed that the average enrollment for the schools included in this study was 1051 and that the enrollment in the schools ranged from 440 to 2204.

The average number of professional persons employed in the schools was 51 and the number of persons employed in the individual schools ranged from 26 to 85.

The average number of years that schools included in this study had been operating on the quarter system was 3.86 and the number of years that the schools had operated on the quarter system ranged from two to six.

All twenty-two schools were operating on a plan which included a fall, winter and spring quarter with a volunteer tuition summer quarter.

The enrollment in the schools included in the study showed a normal

enrollment pattern with reference to student body size. There were schools in the Metro-Area which showed large enrollments and some which showed small enrollments. As for the Rural Area, there were schools which showed large enrollments and some showed small enrollments.

Enrollment for Prior and Final Year of Semester Operations and First and Second Year of Quarter Operations. The data on enrollment for the four years studied are presented in Table 2.

TABLE 2

ENROLLMENT FOR PRIOR AND FINAL YEAR OF SEMESTER OPERATION AND FOR FIRST AND SECOND YEAR OF QUARTER OPERATION

	Semester Plan Operation		Quarter Plan Operation	
School	Enrollment Year Prior to Final Year	Enrollment Final Year	Enrollment First Year	Enrollment Second Year
1	425	453	468	552
2	471	525	578	587
3	711	699	683	628
4	648	655	678	677
5	1028	985	991	985
6	1017	1006	869	830
7	540	548	603	653
8	836	847	887	925
9	768	876	932	938
10	1186	1219	1270	1246
11	1087	1299	1410	1360
12	1536	1478	1499	1549
13	421	491	541	597
14	925	875	950	1000
15	1382	1398	1419	1464
16	1356	1614	1564	1613
17	1240	1321	1300	1350
18	750	1425	1450	1500
19	1393	1467	1420	1489
20	1300	1200	1300	2200
21	832	1228	1284	1386
22	843	903	971	1005
Totals	20695	22512	23067	24534
Average	941	1023	1049	1115
Range	421-1536	453-1614	468-1564	522-2200

These data showed that despite the downward trend in public school enrollment, the average enrollment for schools in Metro-Atlanta and North Georgia increased over a four year period from 941 to 1115.

The range in enrollment for the prior and final year of the semester operation was from 421 to 1614.

The enrollment for the first and second year of the quarter system ranged from 468 to 2200.

As can be seen from the data presented in Table 2, page 22, there were five schools that showed a decrease in enrollment during the second year the schools operated on the quarter system, but the total enrollment for all schools increased each year.

Frequency of Curriculum Revision. The data related to the frequency with which the curriculum was revised while operating under the semester and the quarter system are presented in Table 3.

TABLE 3

FREQUENCY WITH WHICH CURRICULAR REVISIONS WERE MADE WHILE OPERATING ON THE SEMESTER PLAN AND WHILE OPERATING ON THE QUARTER PLAN

	Semester Plan			Quarter Plan		
School	Revisions Every Year	Revisions Every 2 Years	Other	Revisions Every Year	Revisions Every 2 Years	Other
1	X			X		
2	X					X
3	X			X		
4	X			X		
5	X			X		
6	X			X		
7	X			X		
8	X			X		
9	X			X		
10	X			X		

TABLE 3—Continued

School	Semester Plan Revisions Every Year	Semester Plan Revisions Every 2 Years	Semester Plan Other	Quarter Plan Revisions Every Year	Quarter Plan Revisions Every 2 Years	Quarter Plan Other
11	X			X		
12	X			X		
13	X			X		
14	X			X		
15	X			X		
16	X			X		
17	X			X		
18	X					X
19	X			X		
20	X			X		
21	X			X		
22			X	X		
Totals	21		1	20		2

Indications are that 21 of the 22 schools made curriculum revisions every year while operating on the semester plan and 20 of the 22 schools made curriculum revisions every year while operating on the quarter plan.

This data indicate that the number of schools that made curriculum revisions every year was slightly larger during the semester plan of operation than it was during the quarter plan. But the difference is so slight, one cannot assume from this data that a change in the mode of operation had any significant effect upon the number of schools that made curriculum revisions each year or the frequency with which curriculum revisions were made.

As for the third category, one school checked "other" under the semester operation. This response could mean that this school made curricular revisions more often than once per year or less frequently than every two years.

Two schools checked the category "other". These schools could have made curriculum revisions more often than once per year or less frequently than once every two years.

Total Number of Courses Offered the Prior and Final Year of Semester Operation and the First and Second Year of the Quarter System. The data related to total number of courses offered by schools included in this study for the prior and final year of the semester operation and the first and second year of the quarter operation are presented in Table 4.

TABLE 4

NUMBER OF COURSES OFFERED THE LAST TWO YEARS OF SEMESTER OPERATION AND FIRST TWO YEARS OF QUARTER OPERATION

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	45	45	80	60
2	36	38	115	120
3	100	100	250	255
4	78	73	187	218
5	112	112	193	195
6	51	57	197	234
7	204	229	491	522
8	62	70	150	150
9	54	49	159	162
10	204	229	491	522
11	125	105	250	256
12	204	229	491	522
13	175	180	250	260
14	55	58	119	115
15	204	229	491	522
16	204	229	491	522
17	95	100	110	121
18	63	65	250	265
19	204	229	491	522
20	54	58	62	134

TABLE 4--Continued

School	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
21	56	60	196	205
22	97	87	141	151
Totals	2482	2631	5655	6033
Average	113	120	257	274
Range	36-204	38-229	62-491	60-522

An examination of the data indicated that the average number of courses offered the year prior to the final year of the semester operation was 113 and the average number of courses offered the final year of the semester plan was 120.

The average number of courses offered by the same schools while operating on the quarter system was 257 and the average number of courses offered the second year of the quarter system was 274.

The number of courses offered by the individual schools the year prior to the final year of the semester operation ranged from 36 to 204.

The number of courses offered by the same schools the final year of the semester operation ranged from 38 to 229.

The number of courses offered by individual schools the first year of the quarter operation ranged from 62 to 491 and the number of courses offered the second year of the quarter plan ranged from 60 to 522.

The total number of courses offered the prior and final year of the semester operation as compared to the total number of courses offered the

first and second year of the quarter operation showed that these schools offered considerably more courses during the quarter operation than they did the semester operation.

The increased number of courses offered during the quarter was reflected in the expanded range in the number of courses that were offered.

Number of New Courses Offered the Last Two Years of the Semester Operation and the First Two Years of the Quarter Operation. Data regarding the number of new courses that were offered the last two years of the semester operation and the number of new courses that were offered the first two years of the quarter system are presented in Table 5.

TABLE 5

NUMBER OF NEW COURSES OFFERED THE LAST TWO YEARS OF SEMESTER OPERATION AND FIRST TWO YEARS OF QUARTER OPERATION

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	0	0	0	6
2	0	2	8	0
3	12	3	75	25
4	7	7	10	15
5	10	5	15	18
6	0	6	37	14
7	17	25	295	31
8	5	3	10	8
9	0	3	8	3
10	17	25	259	31
11	10	10	15	18
12	17	25	259	31
13	2	3	15	8
14	3	0	15	18
15	17	25	259	31
16	17	25	295	31
17	3	5	2	3
18	3	3	166	15
19	17	25	259	31

TABLE 5--Continued

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
20	4	6	18	21
21	4	0	9	2
22	1	5	8	2
Totals	166	211	2037	362
Average	8	10	93	16
Range	0-17	0-25	0-295	0-31

As can be seen from the data presented in the table, the schools participating in this study offered an average of eight new courses the year prior to the final year of the semester operation and an average of 10 new courses the final year of the semester operation.

Data pertaining to the number of new courses offered the first and second year of the quarter system showed that an average of 93 new courses were offered the first year, and for the second year an average of 16 new courses were offered.

The number of new courses offered by the individual schools the first year of the quarter system ranged from 0 to 295 and the second year of the quarter system the number of new courses offered ranged from 0 to 31. These data indicated that one school did not implement any new courses either of the two years studied.

These data show that the number of new courses offered in the specific schools increased tremendously with the implementation of the quarter system, but there were no data to indicate the number of courses that

were actually taught from the increased course offerings.

Number of Enrichment Courses Offered the Last Two Years of the Semester System and the First Two Years of the Quarter Operation. The data relative to the number of enrichment courses offered the last two years of the semester plan and the first two years of the quarter operation are presented in Table 6.

TABLE 6

NUMBER OF ENRICHMENT COURSES OFFERED THE LAST TWO YEARS OF THE SEMESTER PLAN AND THE FIRST TWO YEARS OF THE QUARTER PLAN

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	10	10	15	13
2	5	5	10	16
3	20	21	20	25
4	22	23	36	41
5	18	18	25	20
6	9	10	42	54
7	67	72	107	129
8	12	12	36	51
9	8	9	14	12
10	67	72	107	129
11	8	10	20	20
12	67	72	107	129
13	20	20	20	20
14	10	8	14	14
15	67	72	107	129
16	67	72	107	129
17	3	1	10	10
18	10	10	30	35
19	67	72	107	129
20	6	10	18	27
21	22	23	45	50
22	0	0	0	0
Totals	585	622	997	1182
Average	27	28	45	54
Range	0–67	0–72	0–107	0–129

An analysis of the data reported on the number of enrichment courses offered in schools included in this study indicated that the average number of enrichment courses offered the year prior to the final year of the semester was 27 and that the average number of enrichment courses offered the final year of the semester operation increased from 27 to 28.

Further analysis of the data indicated that the schools offered an average of 45 enrichment courses the first year and an average of 54 enrichment courses the second year of the quarter operation.

The number of enrichment courses offered by individual schools ranged from 0 to 67 prior to the final year of the semester operation and from 0-72 the final year of the semester operation.

The number of enrichment courses offered by the individual schools the first year of the quarter system ranged from 0-107 and from 0-129 the second year of the quarter operation. These statistics indicate that students had a larger number of enrichment courses during the quarter system than they did the semester system from which to choose their programs. These data as reported and analyzed support the assumption that the quarter system provides for a greater number of enrichment courses than does the semester system and that increased enrichment offerings mean increased variety in the curriculum.

Number of Remedial Courses Offered the Last Two Years of the Semester Operation and the First Two Years of the Quarter System. Data regarding the number of remedial courses offered the last two years of the semester operation and the first two years of the quarter operation are presented in Table 7.

The data indicated that the 22 schools participating in the study

offered an average of 21 remedial courses the year prior to the final year of the semester and an average of 23 remedial courses the final year of the semester operation.

TABLE 7

NUMBER OF REMEDIAL COURSES OFFERED THE LAST TWO YEARS OF THE SEMESTER OPERATION AND THE FIRST TWO YEARS OF THE QUARTER OPERATION

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	2	2	6	6
2	3	3	3	3
3	4	5	12	12
4	2	2	4	6
5	7	7	14	14
6	5	6	21	29
7	62	67	95	92
8	8	8	14	16
9	2	4	14	14
10	62	67	95	92
11	6	6	12	12
12	62	67	95	92
13	12	12	12	12
14	3	3	6	6
15	62	67	95	92
16	62	62	95	92
17	4	3	4	4
18	20	20	23	26
19	62	67	95	92
20	4	4	14	18
21	5	18	40	48
22	0	2	3	6
Totals	459	582	772	784
Average	21	23	35	36
Range	0-62	2-67	3-95	3-92

The same group of schools offered an average of 35 remedial courses the first year of the quarter operation and an average of 36 remedial courses the second year of the quarter operation.

The number of remedial courses offered by the individual schools ranged from 0-62 courses the year prior to the final year of the semester operation and from 2-67 the final year.

Further study of the data related to the number of remedial courses offered by the individual schools the first two years of the quarter operation indicated that the number of remedial courses offered the first year ranged from 3-95 and the second year the number of remedial courses offered ranged from 3-92.

The data pertaining to the number of remedial courses offered by the selected schools indicated that the schools did offer more remedial courses during the quarter operation than they did during the semester.

The Number of Required Courses Offered the Last Two Years of the Semester Operation and the First Two Years of the Quarter Operation. The number of required courses offered was expected to decrease during the quarter operation. A position which has been expressed or implied by some supporters of the quarter system is that required courses prevent students from pursuing courses according to their interest but that the flexibility afforded by the quarter system should help to reduce the number of required courses. However, an examination of the data in Table 8 shows that the average number of required courses offered by the schools included in this study was 14 courses the year prior to the final year of the semester plan and 13 required courses were offered the final year of the semester.

TABLE 8

NUMBER OF REQUIRED COURSES OFFERED THE LAST TWO YEARS OF THE SEMESTER OPERATION AND THE FIRST TWO YEARS OF THE QUARTER OPERATION

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	12	9	9	9
2	14	14	13	13
3	12	12	9	9
4	16	13	27	29
5	12	12	9	9
6	11	11	36	36
7	16	16	16	16
8	11	11	11	11
9	11	9	9	9
10	16	16	16	16
11	9	9	9	9
12	16	16	16	16
13	14	14	14	14
14	8	7	9	9
15	16	16	16	16
16	16	16	16	16
17	11	11	9	9
18	20	20	20	20
19	16	16	16	16
20	13	13	9	9
21	12	12	10	10
22	22	22	27	27
Totals	304	295	326	328
Average	14	13	15	15
Range	8-22	7-22	9-36	9-36

During the first and second year of the quarter operation the schools offered an average of 15 required courses both years.

The number of required courses offered by the individual schools while operating under the semester mode of operation ranged from 8-22 for the year prior to the final year of the semester operation and the

number of required courses offered the final year of the semester operation ranged from 7-22.

The number of required courses offered the first and second year of the quarter operation ranged from 9-36 for both years.

As stated earlier, the number of required courses was expected to decrease during the quarter system as compared to the semester system. But this was not the case. The number of required courses showed a slight increase for the quarter operation as compared to the semester.

The Number of Prerequisite Courses Offered the Last Two Years of the Semester and the First Two Years of the Quarter Operations. The average number of prerequisite courses offered by the schools that participated in this study was expected to decrease during the quarter operation when compared to the average number of prerequisite courses offered by the same group of schools during the final two years they operated on the semester plan. Courses in a quarter operation were to be offered as independent units and the number of prerequisite courses offered by these schools was expected to decrease with the advent of the quarter system. An examination of the data in Table 9 indicated that the average number of prerequisite courses offered the year prior to the final year of the semester operation was 34 and the average number of prerequisite courses offered the final year of the semester operation was 36.

An inspection of the data for the quarter indicated that the average number of prerequisite courses offered the first year was 34 and the average number of prerequisite courses offered the second year was 33.

TABLE 9

NUMBER OF PREREQUISITE COURSES OFFERED THE LAST TWO YEARS OF THE SEMESTER OPERATION AND THE FIRST TWO YEARS OF THE QUARTER OPERATION

School	Semester Plan Operation Year Prior to Final Year	Semester Plan Operation Final Year	Quarter Plan Operation First Year	Quarter Plan Operation Second Year
1	15	15	3	3
2	4	4	0	0
3	20	25	20	20
4	13	13	10	10
5	22	22	8	8
6	14	14	12	12
7	83	89	85	79
8	12	12	17	17
9	7	7	4	4
10	83	89	85	79
11	8	8	8	8
12	83	89	85	79
13	20	20	9	9
14	10	6	10	10
15	83	89	85	79
16	83	89	85	79
17	8	8	32	32
18	30	30	50	50
19	83	89	85	79
20	6	4	7	12
21	24	24	12	12
22	40	40	36	39
Totals	751	786	748	720
Average	34	36	34	33
Range	4– 83	4– 89	0– 85	0– 79

The number of prerequisite courses offered by the individual schools ranged from 4–83 the year prior to the final year of the semester and from 4–89 the final year of the semester operation.

As for the quarter, the number of prerequisite courses offered ranged from 0–85 the first year and from 0–79 the second year.

The number of prerequisite courses offered the second year of the quarter operation did show a slight decrease as compared to the number of prerequisite courses offered the prior and final year of the semester system, but it was interesting to note that the average number of prerequisite courses offered by the schools included in this study remained almost constant during the semester and quarter mode of operation.

Personnel--Number of Administrators Employed the Last Two Years of Semester System and the First Two Years of the Quarter System. An examination of the data which relate to the number of administrators employed the last two years of the semester operation and the first two years of the quarter operation are presented in Table 10. The data indicated that the average number of administrators employed the year prior to the final year of the semester operation was 2.09 and the number of administrators employed the final year of the semester plan was 2.23.

TABLE 10

NUMBER OF ADMINISTRATORS EMPLOYED THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

School	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	1	2	2	2
2	1	2	2	2
3	2	2	2	2
4	2	2	2	2
5	3	4	2	3
6	2	2	2	2
7	2	2	2	2
8	2	2	2	2
9	2	2	2	2

TABLE 10—Continued

School	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
10	2	2	2	2
11	2	3	2	3
12	3	3	2	2
13	2	2	2	2
14	2	2	3	3
15	2	2	2	2
16	3	2	3	3
17	2	2	2	2
18	2	2	2	3
19	2	2	2	2
20	3	3	3	4
21	2	2	2	2
22	2	2	2	2
Totals	46	49	47	51
Average	2.09	2.23	2.14	2.32
Range	1-3	2-4	2-3	2-4
Adm. Per 1000 Students	2.35	2.20	2.20	2.30

The number of administrators employed in the same schools the first year of the quarter plan was 2.14 and 2.32 per school were employed the second year.

The number of administrators employed in the individual schools ranged from 1-3 the year prior to the final year of the semester operation and from 2-4 per school the final year of the semester operation.

The number of administrators employed by the schools the first two years of the quarter plan ranged from 2-3 per school the first year and from 2-4 per school the second year. Further analysis of the data indicated that the schools employed an average of 2.35 administrators per

thousand students the prior to final year of the semester and an average of 2.20 the final year of the semester. As for the quarter, the schools employed an average of 2.20 administrators per 1000 students the first year and 2.30 the second year of the quarter. The consistency in the number of administrators employed in the schools per one thousand students during both modes of operation reflects the state formula for allocating administrators.

The Number of Instructors Employed the Last Two Years of the Semester System and the First Two Years of the Quarter System. The data relative to the number of instructors employed by the 22 schools during both modes of operation are presented in Table 11.

TABLE 11

NUMBER OF INSTRUCTORS EMPLOYED THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan of Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	20	20	20	23
2	23	23	23	23
3	43	42	42	43
4	26	27	28	29
5	54	61	57	57
6	50	48	43	41
7	20	21	24	25
8	38	38	38	38
9	35	36	38	40
10	31	42	43	41
11	53	63	66	71
12	58	61	56	54
13	28	32	35	38
14	37	39	44	46
15	52	53	56	54
16	53	60	60	59
17	48	50	52	53

TABLE 11-Continued

Schools	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
18	30	50	55	59
19	60	54	55	54
20	45	47	47	81
21	32	48	53	57
22	37	39	40	41
Totals	873	954	975	1027
Average	40	43	44	47
Range	20-60	20-63	20-66	23-81
Average No. of Instructors Per 1000 Students	43.7	43.8	43.5	43.5

These data indicated that 873 instructors were employed the year prior to the final year of the semester operation and 954 instructors were employed the final year the schools were operated on the semester plan.

The number of instructors employed the first and second year of the quarter operation was 975 the first year and 1027 the second year.

As can be seen from the data, the average number of teachers employed did show an increase, but the average number of teachers employed per 1000 students which is also presented in the table is a more valid figure to observe for patterns that may have emerged from the study.

The average number of instructors employed the year prior to the final year of the semester operations was 40 and was 43 the final year the schools were operated on the semester plan.

The average number of instructors employed in the schools for the first and second year of the quarter operation was 44 the first year and 47 for the second year.

The number of instructors employed in the individual schools ranged from 20 to 60 the prior and from 20-63 the final year of the semester operation.

As for the quarter, the number of instructors employed the first year ranged from 20-66 and from 23 to 81 the second year.

Further analysis of the data indicated that the average number of instructors employed per thousand students was 43.7 the year prior to the final year of the semester and 43.8 the final year. As for the quarter, the number of instructors employed per 1000 students was 43.5 the first year and 43.5 the second year. As can be seen from these data, the state formula for allocating teachers is reflected in the average number of instructors employed per thousand students during both modes of operation.

The Number of Supportive Personnel Employed the Last Two Years of the Semester System and the First Two Years of the Quarter System (Librarian and Counselor). The data related to the number of supportive personnel employed in the schools for the period studied are presented in Table 12.

As can be seen from an analysis of the data, an average of four supportive persons were employed during the semester and quarter mode of operation.

The number of supportive personnel employed by the individual schools the prior and final year of the semester operation ranged from two to six.

TABLE 12

NUMBER OF SUPPORTIVE PERSONNEL EMPLOYED THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	2	2	2	2
2	2	2	2	2
3	3	4	4	4
4	3	2	2	3
5	4	5	4	4
6	3	3	3	3
7	3	3	3	3
8	3	3	3	3
9	2	2	3	3
10	5	5	5	5
11	4	4	5	5
12	6	6	6	6
13	2	2	2	3
14	3	3	3	3
15	6	6	6	6
16	6	5	6	8
17	4	5	5	5
18	3	3	3	4
19	6	6	6	6
20	4	5	4	9
21	2	2	5	5
22	3	3	4	4
Totals	79	81	86	96
Average	4	4	4	4
Range	2-6	2-6	2-6	2-9
Support Personnel Per 1000 Students	3.9	3.7	3.9	4.0

The number of supportive personnel employed the first two years of the quarter plan of operation ranged from 2-6 the first year and

from 2-9 the second year.

Although the total number of supportive personnel increased during the second year of the quarter operation, there was no significant difference in the supportive personnel-pupil ratio.

Further analysis of the data indicated that the schools participating in this study employed an average of 3.9 supportive persons per thousand students during the semester mode of operation and 4.0 per 1000 students during the quarter mode of operation. Again, indications are that the State Department's formula for allocating teachers held the supportive personnel-student ratio constant during both schemes of operation.

The Number of Aides Employed the Last Two Years of the Semester System and the First Two Years of the Quarter System. The data pertaining to the number of aides employed in selected schools are presented in Table 13.

TABLE 13

NUMBER OF TEACHER AIDES EMPLOYED THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	1	1	1	0
2	1	1	1	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	1	1
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0

TABLE 13—Continued

Schools	Semester Plan Operation Year Prior to Final Year	Semester Plan Operation Final Year	Quarter Plan Operation First Year	Quarter Plan Operation Second Year
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	4	4	2	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	2	2	2	0
19	0	0	0	0
20	0	0	0	6
21	0	0	0	0
22	0	1	1	1
Totals	8	9	8	8
Average	.363	.409	.363	.363
Range	0–4	0–4	0–2	0–6

An analysis of the data regarding teacher aides indicated that schools participating in this study did not employ many teacher aides. Only 7 of the 22 schools were utilizing the service of teacher aides.

It was interesting to note that one school did not use aides the prior and final year of the semester and it did not use any aides during its first year of the quarter operation. However, this school did employ six aides the second year of the quarter operation.

This school also showed an increase in the number of supportive personnel and an increase in the enrollment.

From the data presented in the table, it is apparent that the schools participating in this study are not utilizing the service of

many aides.

Number of Remedial Teachers Employed the Last Two Years of the Semester System and the First Two Years of the Quarter System. Data relative to the number of remedial teachers employed in the selected schools are presented in Table 14. The data indicated that the schools employed an average of five remedial teachers per school the prior and final year of the semester operation.

TABLE 14

NUMBER OF REMEDIAL TEACHERS EMPLOYED THE LAST TWO YEARS OF THE SEMESTER PLAN AND THE FIRST TWO YEARS OF THE QUARTER PLAN

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	1	1	1	1
2	1	1	1	1
3	4	4	4	4
4	0	0	0	0
5	5	5	5	5
6	2	2	3	4
7	6	6	7	6
8	2	2	3	3
9	2	3	3	3
10	9	12	13	12
11	2	2	4	4
12	13	14	16	15
13	3	3	4	3
14	1	1	1	1
15	10	8	9	8
16	15	16	17	16
17	1	1	2	2
18	5	5	15	16
19	14	12	12	11
20	4	2	2	3
21	0	1	2	2
22	0	1	1	2
Totals	100	102	125	122
Average	5	5	6	6
Range	0-15	0-16	0-17	0-16
Average Per 1000 Students	4.37	4.42	5.01	4.70

Data relevant to the quarter system from the same schools indicated that they employed an average of six remedial teachers the first and second year they operated.

The number of remedial teachers employed by the individual schools ranged from 0-15 the year prior to the final year of the semester system and from 0-16 the final year of the semester system.

The data showed also that the number of remedial teachers employed the first year the schools were operated on the quarter system ranged from 0-17 and the second year, the number of remedial teachers employed ranged from 0-16.

Further analysis of the data related to the number of remedial teachers employed by the schools that participated in this study indicated that the average number of remedial teachers employed per 1000 students was 4.37 for the year prior to the final year of the semester operation and that the number employed the final year of the semester operation was 4.42 per 1000 students.

The average number of remedial teachers employed per 1000 students when the schools were operated on the quarter system was 5.01 the first year and 4.70 per 1000 students the second year.

The data showed that there was a slight increase in the number of remedial teachers employed per 1000 students when the schools were operated on the quarter plan.

Number of Enrichment Teachers Employed the Last Two Years of the Semester System and the First Two Years of the Quarter System. Data which show the number of enrichment teachers employed the last two years the schools were operated on the semester system and the first two years they were operated on the quarter system are presented in Table 15. An

TABLE 15

NUMBER OF ENRICHMENT TEACHERS EMPLOYED THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
1	1	1	1	0
2	0	0	1	0
3	5	5	5	5
4	2	2	2	2
5	5	5	6	6
6	2	3	4	5
7	4	4	5	5
8	3	3	3	3
9	4	4	6	6
10	6	9	9	7
11	3	3	5	5
12	14	14	12	12
13	3	3	3	4
14	1	1	1	0
15	16	18	19	19
16	11	14	13	13
17	0	0	2	2
18	2	2	4	5
19	16	14	16	15
20	2	2	2	4
21	0	1	0	0
22	0	0	0	0
Totals	100	108	119	118
Average	5	5	5	5
Range	0-16	0-18	0-19	0-15
Enrichment Teachers Per 1000 Students	4.46	4.25	4.86	4.64

examination of the data showed that the individual schools employed an average of five enrichment teachers during the semester and the quarter mode of operation.

One school did not utilize enrichment teachers while it operated on the semester or quarter plan.

The number of enrichment teachers employed by the individual schools the year prior to the final year of the semester mode of operation ranged from 0-16 and from 0-18 the final year of the semester plan.

Further study of the data related to the number of enrichment teachers employed during the two years the schools operated on the quarter system showed that the number of enrichment teachers employed ranged from 0-19 the first year and from 0-15 the second year.

The data also showed that the schools employed an average of 4.46 enrichment teachers per 1000 students the year prior to the final year they operated on the semester system and an average of 4.25 enrichment teachers per 1000 students were employed the final year they operated on the semester system.

For the quarter system operation, these schools employed an average of 4.86 enrichment teachers per 1000 students the first year they operated on the quarter system and they employed 4.64 enrichment teachers per 1000 students the second year.

Despite the change in the mode of operation, these schools showed little increase in the average number of enrichment teachers employed during the four year period that was studied. The number of enrichment teachers employed per 1000 students did show a slight increase for the quarter system when compared to the semester.

Utilization of Personnel During Semester and Quarter Plans. The data regarding the utilization of personnel during the quarter system as compared to the semester mode of operation are presented in Table 16.

TABLE 16

ADMINISTRATORS' RESPONSES: UTILIZATION OF PERSONNEL FOR SEMESTER AND QUARTER OPERATION

Schools	More Effective A	As Effective B	Less Effective C
1	X		
2		X	
3			X
4	X		
5	X		
6	X		
7	X		
8	X		
9		X	
10	X		
11	X		
12	X		
13	X		
14		X	
15	X		
16	X		
17	X		
18		X	
19	X		
20	X		
21	X		
22	X		
Totals	17	4	1

With reference to the effectiveness with which personnel was being utilized, 17 of the 22 principals who responded agreed that personnel was utilized more effectively when the schools were operated on the quarter plan than when the schools were operated on the semester plan.

Four principals indicated that they agreed that personnel was utilized as effectively when schools were operated on a semester plan as when they were operated on a quarter plan.

One principal indicated that he agreed that personnel was utilized

less effectively during quarter plan than when the school operated on a semester plan.

The data reported by administrators indicated that a large majority agreed that personnel could be utilized more effectively in a quarter plan of operation than they could in a semester plan.

Enrollment in Enrichment Courses for the Last Two Years of the Semester System and the First Two Years of the Quarter System. The data related to enrichment enrollment during the semester and quarter operation are presented in Table 17.

TABLE 17

ENROLLMENT IN ENRICHMENT COURSES THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	15	10	30	25
2	0	0	12	0
3	308	350	400	420
4	150	125	233	216
5	175	178	270	279
6	135	150	280	360
7	124	126	210	209
8	120	110	125	130
9	160	180	180	140
10	498	281	289	296
11	180	176	260	315
12	436	438	503	499
13	280	280	280	280
14	10	10	15	20
15	476	564	759	791
16	344	438	542	541
17	110	120	175	200
18	150	150	75	200
19	500	436	668	625

TABLE 17--Continued

Schools	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
20	14	28	72	94
21	264	298	342	433
22	0	0	0	0
Totals	4449	4448	5720	6073
Average	202	202	260	276
Range	0-500	0-564	0-759	0-791
Enrollment Per 1000 Students	214	195	247	253

An examination of the enrichment enrollment data for the last two years the schools were operated on the semester system indicated that they enrolled an average of 202 students the prior and final year they were operated on the semester plan.

A look at the enrichment enrollment data for the first two years the schools were operated on the quarter system indicated that the average enrollment in enrichment courses was 260 the first year and was 276 the second year.

The number of students enrolled in enrichment courses in the individual schools the two years they were operated on the semester system ranged from 0-500 and from 0-564, respectively.

The student enrollment in enrichment courses the two years the schools were operated on the quarter system ranged from 0-759 the first year and from 0-791 the second year.

Further examination of the data on student enrollment in enrichment courses per 1000 students showed that the schools involved in this study enrolled an average of 214 per 1000 students the year prior to the final year of the semester operation and an average of 195 per 1000 students the final year they operated on the semester plan.

Data on enrichment enrollment for the same schools indicated that the enrollment increased to 247 per 1000 students the first year the schools were operated on the quarter system and to 253 per 1000 students the second year.

It was noted that the number of students enrolled in enrichment courses per 1000 was greater when the schools were operated on the quarter plan than it was when they were operated on the semester plan.

Enrollment in Remedial Courses the Last Two Years of the Semester System and the First Two Years of the Quarter System. Data on enrollment in remedial courses during the prior and final year of the semester and the first and second year of the quarter operation are presented in Table 18.

TABLE 18

ENROLLMENT IN REMEDIAL COURSES THE LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	30	25	60	40
2	30	30	30	30
3	80	100	180	185
4	60	60	80	120

TABLE 18—Continued

Schools	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
5	172	180	157	196
6	101	102	130	193
7	143	142	222	223
8	100	95	110	115
9	135	135	180	140
10	216	285	412	381
11	105	120	225	296
12	309	343	507	472
13	148	155	160	160
14	10	10	60	75
15	243	191	288	286
16	457	480	539	508
17	75	80	100	175
18	200	500	475	500
19	333	285	380	349
20	71	62	127	183
21	68	279	392	460
22	0	75	75	135
Totals	3086	3734	4889	5222
Average	140	170	222	237
Range	0-457	0-500	30-539	30-508
Enrollment Per 1000 Students	147	160	203	208

The data related to the number of students enrolled in remedial courses in these schools indicated that they enrolled an average of 140 students in remedial courses when they were operated the year prior to the final year of the semester system. The final year of the semester system, the schools enrolled an average of 170 students in remedial courses.

Data reported for the two years the schools were operated on the

quarter system indicated that they enrolled an average of 222 students in remedial courses the first year and an average of 237 the second year.

The average enrollment in remedial courses increased each year. It appears that a trend started during the semester operation and continued during the quarter operation. The data presented in the table support the assumption that the increase in the remedial enrollment accelerated during the quarter operation.

The enrollment in remedial courses in the individual schools ranged from 0-457 the year prior to the final year they were operated on the semester system and the range for the final year was from 0-500.

A study of the data reported on student enrollment in remedial courses for the first two years the schools were operated on the quarter system indicated that the enrollment in the individual schools ranged from 30-539 the first year and from 30-508 the second year.

Further analysis of the data indicated that these schools enrolled 147 per 1000 students in remedial courses the year prior to the final year of the semester plan and 160 per 1000 the final year they were operated on the semester plan.

These data also indicated that the number of students enrolled in remedial courses the first two years these schools were operated on the quarter plan was 203 per 1000 students the first year and 208 per 1000 students the second year. Indications are that the enrollment in remedial courses per 1000 students did increase in these schools when they changed to the quarter plan.

Failures for the Last Two Years of the Semester System and the First Two Years of the Quarter System. The data reported on the number of

failures that were recorded for the prior and final year the schools were operated on the semester system and data for the first and second year the schools were operated on the quarter system are presented in Table 19.

TABLE 19

FAILURES—LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation Year Prior to Final Year	Final Year	Quarter Plan Operation First Year	Second Year
1	43	35	30	33
2	54	33	52	92
3	70	59	87	52
4	24	30	15	18
5	57	54	70	49
6	57	62	41	36
7	25	30	24	27
8	43	35	54	68
9	47	29	35	25
10	70	60	71	59
11	107	103	143	105
12	7	6	19	14
13	42	53	56	43
14	40	60	80	98
15	46	54	29	89
16	97	114	82	84
17	88	80	0	0
18	75	115	90	110
19	54	65	65	34
20	66	89	86	176
21	63	82	98	90
22	48	50	0	38
Totals	1223	1298	1227	1340
Average	56	59	58	61
Range	7-107	6-115	0-143	0-176
Failures Per 1000 Students	65	60	56	57

These data indicated that an average of 56 students failed the year prior to the final year of the semester operation and an average of 59 students failed the final year the schools were operated on the semester plan.

The data reported on failures for the first two years the schools operated on the quarter plan indicated that an average of 58 students failed the first year and an average of 61 students failed the second year.

The number of students who failed in the individual schools ranged from 7-107 the year prior to the final year the schools were operated on the semester plan and the number of students who failed the final year ranged from 6-115.

An examination of the data that were reported on student failures from the same schools the first two years they were operated on the quarter system indicated that the number of students who failed in the individual schools ranged from 0-143 the first year and from 0-176 for the second year.

A more critical analysis of the data indicated that 65 students per 1000 failed the year prior to the final year the schools were operated on the semester plan an average of 60 students per 1000 failed the final year of the semester operation.

Data for the first two years the schools were operated on the quarter plan indicated that 56 students per 1000 failed the first year and 57 students per 1000 failed the second year. Slightly fewer failed per 1000 students during the quarter operation, but one cannot assume from these data that this decrease was significant as compared to the number of failures during the semester operation.

Early Graduates—Last Two Years of the Semester System and the First Two Years of the Quarter System. The data which show the number of students who graduated early during both periods studied are presented in Table 20.

TABLE 20

EARLY GRADUATES—LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	0	0	10	16
2	5	5	10	54
3	2	3	13	17
4	0	0	49	61
5	4	5	20	25
6	0	0	43	78
7	0	0	2	6
8	3	5	15	61
9	0	0	40	100
10	0	0	1	5
11	10	15	28	39
12	1	0	5	8
13	5	8	17	23
14	9	10	49	80
15	4	5	15	21
16	2	3	6	13
17	0	0	50	75
18	0	0	50	120
19	2	3	12	17
20	0	0	37	68
21	7	9	16	59
22	0	0	59	64
Totals	54	71	547	1010
Average	2	3	25	46
Range	0–10	0–10	1–59	5–120
Early Graduates Per 1000 Students	3	4	26	46

The data as reported by specific schools that executed the instrument indicated that very few students graduated early when the schools were operated on the semester plan. An average of two students graduated early the year prior to the final year the schools were operated on the semester plan and an average of three students graduated early the final year of the semester plan.

Indications are that the number of students who graduated early increased tremendously when the schools were operated on the quarter plan. An average of 25 students graduated early the first year and an average of 46 students graduated early the second year.

An analysis of the data with reference to range showed that the number of students who graduated early in the individual schools ranged from 0-10 the prior and final year the schools were operated on the semester plan.

Further study of the data indicated that three students per 1000 graduated early when the schools were operated on the semester plan. As can be seen from the data, an average of 26 students per 1000 graduated early the first year the schools were operated on the quarter system and an average of 46 students per 1000 graduated early the second year.

Indications are that the number of students who graduated early in the individual schools when they were operated on the quarter plan ranged from 1-59 the first year and from 5-120 the second year. Whether this was a student advantage may need further study but as for this study, the schools did meet the objective of the quarter system which relates to the opportunity for the students to graduate early.

Drop-outs--Last Two Years of the Semester System and the First Two

Years of the Quarter System. The data related to drop-outs for the period studied are presented in Table 21.

TABLE 21

DROP-OUTS—LAST TWO YEARS OF THE SEMESTER SYSTEM AND THE FIRST TWO YEARS OF THE QUARTER SYSTEM

Schools	Semester Plan Operation		Quarter Plan Operation	
	Year Prior to Final Year	Final Year	First Year	Second Year
1	52	50	59	73
2	42	47	67	114
3	22	29	20	25
4	23	23	53	57
5	7	9	11	8
6	93	109	78	87
7	13	11	20	6
8	37	49	53	62
9	45	35	97	66
10	35	20	28	16
11	9	18	20	21
12	33	20	19	35
13	27	18	26	27
14	80	90	106	117
15	20	17	22	11
16	40	39	18	57
17	61	60	60	58
18	78	42	82	75
19	23	19	25	33
20	87	91	97	127
21	64	72	78	132
22	100	88	98	93
Totals	991	956	1137	1300
Average	45	43	52	59
Range	7-100	9-109	11-106	6-132
Drop-outs per 1000 Students	54	48	56	60

A study of the drop-out index as reported from the schools that

responded to the questionnaire indicated that there was not much difference in the number of students who dropped out during the semester system when compared to the number who dropped out during the quarter system.

An average of 45 students dropped out the year prior to the final year of the semester operation and an average of 43 students dropped out the final year the schools operated on the semester plan.

An examination of the drop-out data for the quarter operation indicated that an average of 52 students dropped out the first year and an average of 59 students dropped out the second year.

A study of the drop-out range indicated that the number of drop-outs for the individual schools ranged from 7-100 the year prior to the final year the schools were operated on the semester plan and from 9-109 the final year the schools were operated on the semester plan.

The data reported on drop-outs for the two years the schools were operated on the quarter plan indicated that the drop-out rate ranged from 11-106 the first year and from 6-132 the second year.

Further analysis of the data indicated that an average of 54 students per 1000 dropped out when the schools were operated the year prior to the final year of the semester operation. And an average of 48 students per 1000 dropped out during the final year.

A more indepth analysis of the data indicated that an average of 56 students per 1000 dropped out the first year the schools were operated on the quarter plan and 60 students per 1000 dropped out the second year.

The data did not support the assumption that the quarter system provides an organizational scheme which permits students to select more

relevant experiences, fewer students leave school before graduation.

More indepth comparisons and analysis of these data have been made in Chapter IV.

CHAPTER IV

TESTING HYPOTHESES

In this chapter, five sub-hypotheses will be tested to determine whether a selected group of schools that changed from the semester to the quarter mode of operation realized any advantages that were significantly greater when compared to the same schools while they operated on the semester plan. The major hypothesis to be affirmed is as follows:

The quarter system offers the following advantages as compared with the semester system:

1. A greater number of courses
2. Higher teacher-pupil ratio
3. More efficient utilization of personnel
4. Greater enrollment in remedial and enrichment courses
5. Fewer failures
6. More early graduates
7. Reduction in drop-out rate.

The comparative data used to test the hypotheses were taken from the year prior to the final year of the semester operation and the second year of the quarter operation. These years were selected to make adjustment for any winding down that might have been evident during the final year of the semester and to make adjustment for any gradual take-off that may have been evident during the first year of the quarter operation.

Ultimately, the purpose of this study was to affirm or negate the question: Are selected advantages of the quarter system as expressed in current literature being realized in selected secondary schools? To answer this question, five sub-hypotheses have been tested.

Sub-hypotheses one, two, and four were tested utilizing both the multivariate analysis of variance and "t" tests. Sub-hypothesis five was tested utilizing "t" test. Sub-hypothesis three was tested utilizing the difference between two per-cents and the frequency distribution. A basic assumption regarding the sub-hypotheses to be tested was that if the quarter system indicated more advantages than the semester system in three of the five areas studied, the major hypothesis that selected advantages of the quarter system as expressed in current literature are being realized in selected secondary schools will be affirmed.

All comparisons were made on yearly totals. Consequently, advantages that may have been inherent in a particular mode of operation were eliminated.

Sub-hypothesis 1: The quarter system offers more courses than the semester system.

Six variables related to the number of courses offered were used to test this hypothesis. Included in the group were relevant data regarding total number of courses offered, number of new courses offered, number of remedial courses offered, number of enrichment courses offered, number of required courses offered, and the number of prerequisite courses offered. This group of variables was then tested utilizing multivariate analysis of variance and the means of the individual variables included in the group were compared utilizing "t" tests. An inspection of the F-ratio score indicated that there was a significant difference in the

number of courses offered during the quarter system as compared to the number of courses offered during the semester system.

The multivariate analysis of variance, used to test this hypothesis yielded (F=9.58, d.f.=6,16). The yielded F-ratio score is significant because it is greater than the required F-ratio when compared with the critical point (F=2.74, d.f.=6,16, α=0.05).[1]

The rationale used to test this hypothesis was that if the F-ratio score was significant and 50 per cent of the individual variables included in the collective test of means indicated an increase in the number of courses offered for the quarter system, this would be sufficient cause to affirm the hypothesis. The multivariate test having indicated a significant difference, the univariate test (t-Test) was applied to discover the variables responsible for this difference. The univariate test data are presented in Table 22.

Four of the six variables: Total number of courses offered, number of new courses offered, number of remedial courses offered, and enrichment courses offered yielded significant "t" scores that ranged from 5.11 to 7.04 which did exceed the required "t" score of 2.08 at the .05 level of confidence with 21 d.f. and did each represent an increase in the number of courses offered in these categories for the quarter system.

The two remaining variables: Required courses, and prerequisite courses did not yield "t" scores that were significant. The "t" scores for these two variables ranged from 0.73 to 0.80.

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[1]Clinton I. Chase, Elementary Statistical Procedures (New York: McGraw-Hill Book Co., 1967), p. 232.

TABLE 22

COMPARED MEAN SCORES OF THE SEMESTER AND QUARTER ADVANTAGES FOR CURRICULAR DATA COLLECTED THROUGH QUESTIONNAIRE

Variables Compared	Mean Yearly Totals for Quarter System	Mean Yearly Totals for Semester System	Diff.	S.D.	"t"	P.05	d.f.
Total Number of Courses	274.22	112.81	161.40	108.07	7.01	S	21
Total Number of New Courses	16.45	7.55	8.91	5.94	7.04	S	21
Number of Enrichment Courses	53.73	26.59	27.14	24.89	5.11	S	21
Number of Remedial Courses	35.64	20.86	14.77	13.26	5.23	S	21
Number of Required Courses	14.91	13.82	1.09	6.36	0.80	NS	21
Number of Pre-requisite Courses	32.73	34.14	1.41	9.09	0.73	NS	21

Thus, the multivariate F-ratio indicating a significant difference was supported by the "t" test which showed that the differences between the quarter system and the semester system were in the hypothesized direction.

These statistics indicate that the quarter plan does provide for more courses than the semester plan. The sub-hypothesis was affirmed.

Sub-hypothesis 2: There is improvement in the teacher-pupil ratio under the quarter system over the semester system.

The rationale used to test hypothesis 2 was similar to that used to test hypothesis 1. The basic assumption here was that if the quarter system provided for an improvement in the teacher-pupil ratio over the semester system, the teacher-pupil ratio would improve and the number of persons employed for the quarter operation would be significantly larger. The per pupil personnel ratios were used for the periods tested. The hypothesis was tested by comparing the number of persons employed per thousand students in all categories for the quarter and semester mode of operation.

The group of variables related to per pupil personnel for the prior to final year and the second year of the quarter year were tested. Variables included in the group were number of administrators, number of instructors, number of supportive personnel, number of instructional aides, number of enrichment teachers, and the number of remedial teachers (see Table 23).

It was found that there was no significant difference in the teacher-pupil ratio offered by the quarter system over those offered by the semester operation. The multivariate analysis of variance for data comparing

TABLE 23

COMPARED MEAN SCORES OF THE SEMESTER AND QUARTER ADVANTAGES FOR PERSONNEL DATA COLLECTED THROUGH QUESTIONNAIRE

Variables Compared	Mean for Quarter*	Mean for Semester*	Mean Diff.*	SD	T-Score	Prob.	d.f.
Number of Administrators	0.0024	0.0023	0.0001	0.001	.67	NS	21
Number of Instructors	0.0436	0.0437	0.0001	0.005	.13	NS	21
Number of Supportive Personnel	0.0040	0.0039	0.0001	0.001	.46	NS	21
Number of Instructional Aides	0.0002	0.0005	0.0003	0.001	.97	NS	21
Number of Remedial Teachers	0.0047	0.0045	0.0002	0.002	.67	NS	21
Number of Enrichment Teachers	0.0046	0.0044	0.0003	0.001	.95	NS	21

*Personnel Employed per 1000 students.

teacher-pupil ratio realized during the prior to final year of the semester operation with the second year of the quarter operation when tested, yielded (F=1.02, d.f.=6,16) which was not significant when compared with the critical point (F=2.74, d.f.=6,16, α =0.05).

Further study of the variables compared in conjunction with hypothesis 2 indicated that four of the comparisons were in the hypothesized direction, but not one of the variables yielded a significant "t" score. The "t" scores ranged from .13 to .97. Since not any of the "t" scores for variables included in the group exceeded 2.08, they are considered not significant at the .05 level of confidence with 21 degrees of freedom. The hypothesis was not affirmed.

Sub-hypothesis 3: Principals perceive a more efficient utilization of personnel under the quarter system than the semester.

To test this hypothesis, administrators who participated in the study were asked to compare the quarter and semester systems relative to utilization of personnel. The frequency distribution of responses from administrators and percentages are presented in Table 24. Possible responses were in three categories: (1) A statement that personnel could be utilized more effectively in the quarter system than the semester, (2) a statement that personnel could be utilized as effectively in the quarter system as the semester, and (3) a statement that personnel could be utilized less effectively in the quarter system than the semester system.

An inspection of the frequency distribution of the data used to test this hypothesis indicated that 17 (77.3 per cent) of the respondents indicated that personnel could be more effectively used in the quarter

TABLE 24

ADMINISTRATORS' RESPONSES: UTILIZATION OF PERSONNEL FOR SEMESTER AND QUARTER OPERATION

Personnel Can Be Utilized	Number of Responses	Percent of Schools
1. More effectively in a quarter plan than in a semester plan	17	77.3
2. As effectively in a semester plan as in a quarter plan	4	18.2
3. Less effectively in a quarter plan than in a semester plan	1	4.5
Totals	22	100.0

system than the semester system, four (18.2 per cent) of the respondents indicated that personnel can be used as effectively in the quarter mode of operation as the semester and one respondent (4.5 per cent) indicated that personnel could be used less effectively in the quarter system than the semester scheme of operation.

It is evident from the data that the utilization of personnel was perceived by participating administrators to be more effective in the quarter operation than in the semester operation. This hypothesis was affirmed.

Sub-hypothesis 4: The quarter system provides for the student population more advantages than the semester system relative to enrichment, and remedial enrollment, failures and early graduates.

Variables related to student advantages were grouped. Variables compared in the group included student enrollment in enrichment courses,

enrollment in remedial courses, student failures and the number of students who graduated early. The rationale used to test hypothesis 4 is similar to that used to test hypotheses one and two. It was assumed that if more student advantages were evident in the quarter mode of operation than the semester, there would be an increase in enrichment enrollment, remedial enrollment, the number of students who graduated early and that failure rate would move in a reverse direction. When these variables were tested collectively utilizing multivariate analysis of variance, they yielded ($F=12.29$, $d.f.=4,18$) which was significant when compared with the critical point ($F=2.93$, $d.f.=4,18$, $\alpha=.05$).

The F-statistic was significant which indicated that the advantages realized by the student population for schools operating on the quarter system were significantly different from those realized by the student population for schools operating on the semester system.

Further statistical treatment of the data is presented in Table 25. These statistics indicated that two of the four variables: Enrollment in remedial courses and the number of students who graduate early had "t" scores of 3.49 and 6.03, respectively, for they exceeded 2.08 at the 0.05 level of confidence with 21 degrees of freedom. The differences were in the direction to support the hypothesis.

The "t" scores for both other variables, number of failures per year and number of drop-outs, revealed mean differences that were in the right direction, though not significant.

The rationale used to test this hypothesis was that if the F-ratio indicated a significant difference and 50 per cent of the variables included in the group revealed differences in the hypothesized direction,

TABLE 25

COMPARED MEAN SCORES OF THE SEMESTER AND QUARTER STUDENT ADVANTAGES FOR DATA COLLECTED THROUGH QUESTIONNAIRE

Variables Compared	Mean for Quarter System*	Mean for Semester System*	Mean Diff.	SD	"t"	P.05	d.f.
Enrollment in Enrichment Courses	0.25333	0.2138	0.0395	0.115	1.61	NS	21
Enrollment in Remedial Courses	0.2077	0.1510	0.0567	0.076	3.49	S	21
Number of Failures	0.0571	0.0648	0.0077	0.029	1.25	NS	21
Number of Early Graduates	0.0456	0.0030	0.0425	0.033	6.03	S	21

*Per 1000 students.

the hypothesis that increased advantages were being realized by the student population in selected schools under the quarter system would be accepted. The F-ratio was significant and all four variables were in the right direction. The hypothesis was affirmed.

Sub-hypothesis 5: The drop-out rate indicates that more students drop-out under the quarter plan than the semester plan.

An analysis of the data collected from the superintendents' annual reports and presented in Table 26 show that when the drop-out rate for schools during the year prior to the final year of the semester operation were compared with the drop-out rate for the same schools operating during the second year of the quarter operation, there was no significant difference.

TABLE 26

COMPARED MEAN SCORES OF DROP-OUTS FOR THE SECOND YEAR OF THE QUARTER OPERATION AND THE YEAR PRIOR TO FINAL YEAR OF SEMESTER OPERATION

Type of Operation	N	Mean	Mean Diff.	S.D.	"t"	P	d.f.
Quarter	22	*0.0603	0.0062	0.031	0.96	NS	21
Semester	22	*0.0541					

*Drop-outs per 1000 students.

Further study of the data indicated that there was a mean difference of 0.0062 with a "t" score of 0.96. The computed "t" score did not exceed the required "t" score of 2.08 which is necessary at the 0.05 level of confidence with 21 degrees of freedom.

This would be interpreted to mean that there was no significant difference reflected in the drop-out rate during the semester or the quarter mode of operation. The hypothesis was not affirmed.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction. This research was conducted to confirm or negate the hypothesis relative to the semester and quarter systems. The comparative study was designed to determine whether the quarter system offered more selected advantages than the semester system in a selected group of schools in the Metro-Atlanta area and North Georgia. A specifically designed instrument was executed that secured pertinent data for the research which were analyzed.

Statement of problem. The problem deals with the question: Are selected advantages of the quarter system as expressed in current literature being realized in selected secondary schools?

Purpose of study. The purpose of the study was to determine whether the quarter system provides more advantages than the semester system.

The hypothesis. The quarter system offers the following advantages as compared with the semester system:

1. A greater number of courses
2. Higher teacher-pupil ratio
3. More efficient utilization of personnel
4. Greater enrollment in remedial and enrichment courses
5. Fewer failures

6. More early graduates

7. Reduction in drop-out rate

Summary of findings. Since the central problem of this study dealt with the question: Are selected advantages of the quarter system as expressed in current literature being realized in selected secondary schools? Some answers which have emerged are listed below as "findings" of the study.

1. The schools that participated in this study experienced greater increases in the total number of courses offered, the number of new courses offered, the number of remedial courses offered, and the number of enrichment courses offered during the quarter mode of operation than the semester.

2. The number of required courses and the number of prerequisite courses offered in these schools did not change during the quarter or semester operation.

3. The findings from this study indicated that the teacher-pupil ratio did not change during either mode of operation.

4. Very few of the schools included in this study utilized the services of teacher aides during either mode of operation.

5. The majority of the administrators who participated in this study were in agreement that personnel can be utilized more efficiently in the quarter system than the semester system.

6. The enrollment in remedial and enrichment courses showed a noticeably larger increase for the quarter system over the semester system.

7. The number of students who graduate early showed a phenomenal increase for the quarter system over the semester system.

8. The quarter system did not drastically affect the number of failures. The failure rate was relatively constant for both modes of operation.

9. The drop-out rate for the quarter or semester system did not differ significantly.

Discussion. Three of the five sub-hypotheses of this study were affirmed. Thus, the results of the study indicated that the quarter system did provide the schools that participated some selected advantages over the semester system in the areas of curriculum offerings, utilization of personnel and advantages for the student population.

An analysis of the comparative data for the number of courses offered in the schools during the last two years of the semester and the first two years of the quarter showed that the total number of courses offered, the number of new courses offered, the number of remedial courses offered and the number of enrichment courses offered were significantly larger during the second year of the quarter operation than the number of courses offered in these categories the year prior to the final year of the semester.

The number of courses required for graduation and the number of prerequisite courses remained constant during the semester and quarter mode of operation. In the writer's opinion, the increase in the number of courses offered did afford students a larger group of courses from which to select their required courses.

The analysis of the data relevant to an improvement in personnel indicated that the teacher-pupil ratio did not change during the semester nor quarter operation in either of the six categories that were analyzed. This study indicated that there is limited flexibility in the State Department's formula for allocating teachers.

The student population did realize some educational advantages during the quarter system that were significantly different from the educational advantages they realized during the semester system. These

advantages were reflected by increases in the number of students enrolled in remedial courses and significant increases in the number of students who graduated early during the quarter operation.

The large number of early graduates is an advantage for students, but it could work in reverse order for the schools. Students graduating early reduce the average daily attendance. Under the state's formula for funding schools, teacher's allotments and financial allocations are dependent on the average daily attendance. Therefore, funds should be allocated on the basis of total days attended during calendar months rather than the 180 day school year.

There were no data on whether any of the schools in this group had reverted back to the semester operation. This is an area for additional study.

Conclusions. An analysis of the findings of this study warrants the following conclusions:

1. The number of courses offered in the schools that participated in this study showed an increase during the quarter system that was significantly larger than the number of courses offered in the schools during the semester operation. The increase was reflected in the total number of courses offered, the number of new courses offered, the number of remedial courses offered, and the number of enrichment courses offered.

2. The teacher-pupil ratio did not show any improvement during the quarter operation that was significantly different from the teacher-pupil ratio realized in the schools during the semester operation.

3. Personnel can be more efficiently utilized during the quarter system than the semester system according to the responses of administrators that participated in the study.

4. The student population did realize more educational advantages during the quarter operation which were significantly

different from those realized during the semester. These advantages were reflected in increased enrollment per 1000 students in remedial courses, in enrichment courses and in increase in the number of students who graduated early.

5. The drop-out rate for the schools during the quarter operation did not show a decrease that was significantly different from the drop-out rate for the schools during the semester operation.

Implications. The findings and conclusions from this research justify the following implications:

1. Much emphasis has been placed on the number of courses offered in the schools during the quarter system. Indications are that greater emphasis is needed on the number of courses actually taught rather than the number of courses offered.

2. The increase in the number of courses offered during the quarter system warrants an increase in the number of counselors employed to guide students in planning their programs.

3. With the inception of the quarter system, the students' chances of failing were increased to three as compared to two chances of failing under the semester system.

4. The three quarter plan with a tuition summer school may favor those students who are able to pay and may work a hardship on those students who are not able to pay.

5. There is a need for more flexibility in the State's formula for funding schools and in allocating personnel. Funds should be allocated on the basis of total number of days attended during the calendar year rather than 180 days per school year.

6. The practice of utilizing instructional aides has not gained wide acceptance by the schools that participated in this study.

Recommendations. The findings, conclusions and implications derived from this research warrant the following recommendations:

1. That administrators maintain quarterly, semester and yearly records of the number of courses taught in relation to the number of courses offered so that

administrators and other personnel can assess the effectiveness of the quarter system and determine whether the program is meeting the needs of the school population.

2. That an analysis of courses offered be made to determine whether content is being duplicated as a result of the increased number of courses offered.

3. That continuous research on the quarter and semester system be conducted so that information will be available to assess the effectiveness of the two systems.

4. That school personnel and State Department personnel work cooperatively to develop a plan for funding the summer quarter so that students who cannot afford to pay for summer school can attend.

from this research warrant the following recommendations:

1. That schools keep yearly, quarterly and semester records of the number of courses taught in relation to the number of courses offered in order to validate assumed advantages based on an analysis of the number of courses,

2. That a serious analysis of the courses offered be made to see if content is being duplicated,

3. That the State Department and school officials make a cooperative effort to reduce the number of courses required of all students and to increase the number of enrichment and remedial courses offered as further means of encouraging more potential drop-outs to continue their education,

4. That a comprehensive study of the basic reasons why students drop-out before graduating be made,

5. That follow-up studies comparing the accomplishments of early graduates with students who took the full four years to graduate be made to determine whether or not it is an advantage for students to graduate early,

6. That continuous research on the quarter and semester systems based on hard data be conducted so that information will be available for confirming the effectiveness of the quarter system.

APPENDICES

APPENDIX A

ATLANTA UNIVERSITY
ATLANTA, GEORGIA 30314

School of Education

I am conducting a study comparing the Semester Plan with the Quarter Plan in a selected group of secondary schools located in Metropolitan Atlanta and North Georgia relative to selected standards as reported in the literature. The study is being conducted in partial fulfillment of the requirements for the Ed.D. degree in Administration and Supervision. I am asking for your help in securing the data.

The purpose of the questionnaire is to secure information on the last two years of the semester operation and the first two years of the quarter operation.

The data gathering instrument is easy to execute even though it is designed to secure as much hard data as possible. It may necessitate your referring to some past and existing annual reports, master schedules, class enrollments and book inventories, but this should not make it too time consuming to execute. If you are able to arrange a time and date, I shall be happy to call at your school in person to sit down and fill out the instrument with you.

All data will be regarded as confidential. Schools will not be identified. A copy of findings will be sent to each school upon request. This study will be beneficial to schools interested in assessing the effectiveness of the quarter system.

I will call within a few days to arrange an appointment at which time we can complete the instrument.

Your cooperation in this study will be genuinely appreciated.

Sincerely yours,

/s/ Walter R. Bush
Walter R. Bush

WRB/tj

A COMPARISON OF THE SEMESTER PLAN WITH THE QUARTER PLAN RELATIVE TO SELECTED STANDARDS OF REPORTED IN THE LITERATURE

Questionnaire

Strictly Confidential

Directions: The questionnaire consists of two parts: Demographic Characteristics and Educational Characteristics. There are five sub-parts to educational characteristics.

They Are:

1. Curriculum
2. Personnel
3. Resources
4. Student Activities
5. Drop-outs

(Please answer all questions in Part I).

PART I. DEMOGRAPHIC CHARACTERISTICS

1. Name of School_____

2. Location_____

3. Enrollment: Grades 9-12 Boys_____ Girls_____ Total_____

4. Number of Teachers: Male_____ Female_____ Total_____

5. Number of years Quarter Plan used_____

6. Indicate the type of quarter plan used in your school by placing a check by the appropriate model.

   a._____ The Staggered Quarter Plan (three-fourths of students in school each quarter and one-fourth on vacation each quarter)

   b._____ The 45-15 Plan (students are in school 45 days per quarter and are on vacation 15 days between quarters)

   c._____ Fall, Winter and Spring Quarter with a Voluntary Tuition-free Summer School for all students

   d._____ Fall, Winter and Spring Quarter with Voluntary Summer Quarter with tuition paid by students.

PART II. EDUCATIONAL CHARACTERISTICS

Standard I - Curriculum

Semester Plan

Directions: The information requested refers to the last two years of the semester operation. If you do not have information for the period requested, give information for one year. Answer all questions as accurately as possible.

1. What were the last two years of of the semester operation?

   19_____ to 19_____

3. Indicate the enrollment for each of the two years. (1-year prior to final year; 2-final year).

   1_____ 2_____

5. Indicate the frequency with which curriculum revisions were made during the last two years of the semester plan

   a._____Every year
   b._____Every two years
   c._____Other

7. Indicate by year the total number of courses offered during the last two years of the semester plan operation.

   a. ___Total number of courses offered during year prior to final year of semester operation.

   b.____Total number of courses offered during final year of the semester plan operation.

Quarter Plan

Directions: The information requested refers to the first two years of the quarter plan operation. If you do not have information for the period requested, give information for one year period. Answer all questions as accurately as possible.

2. What were the first two years of the quarter plan operation?

   19_____ to 19_____

4. Indicate the enrollment for each of the two years.

   1st_____ 2nd_____

6. Indicate the frequency with which curriculum revisions were made during the first two years of the quarter plan operation.

   a. _____Every year
   b. _____Every two years
   c. _____Other

8. Indicate by year the total number of courses offered during the first two years of the quarter plan operation.

   a.____Total number of courses offered during first year of quarter plan operation.

   b.____Total number of courses offered during second year of quarter plan operation.

c.___Indicate number of new courses developed during year prior to final year of semester operation

d.___Indicate number of new courses developed during final year of semester plan operation.

e.___Indicate number of enrichment courses offered during year prior to final year of semester plan operation.

f.___Indiate number of enrichment courses offered during final year of semester plan operation.

g.___Indicate number of remedial courses offered during year prior to final year of semester plan operation.

h.___Indicate number of remedial courses offered during final year of semester plan operation.

i.___Indicate number of required courses offered during year prior to final year of semester plan operation.

j.___Indicate number of required courses offered during final year of semester plan operation.

k.___Indicate number of prerequisite courses offered during year prior to final year of semester plan operation.

l.___Indicate number of prerequisite courses offered during final year of semester plan operation.

c.___Indicate number of new courses developed during first year of quarter plan operation.

d.___Indicate number of new courses developed during second year of quarter plan operation.

e.___Indicate number of enrichment courses offered during first year of quarter plan operation.

f.___Indicate number of enrichment courses offered during second year of quarter plan operation.

g.___Indicate number of remedial courses offered during first year of quarter plan operation.

h.___Indicate number of remedial courses offered during second year of quarter plan operation.

i.___Indicate number of required courses offered during first year of quarter plan operation.

j.___Indicate number of required courses offered during second year of quarter plan operation.

k.___Indicate number of prerequisite courses offered during first year of quarter plan operation.

l.___Indicate number of prerequisite courses offered during second year of quarter plan operation.

Standard II-- Personnel, Grades 9-12

9. Indicate by year the number of personnel employed in each category during the last two years of the semester plan operation.

   a. Year prior to final year of semester plan operation.

      _____ Administrators

      _____ Instructors

      _____ Supportive Personnel (counselor, librarian)

      _____ Teacher Aides

   b. Final Year of semester plan operation

      _____ Administrators

      _____ Instructors

      _____ Supportive Personnel (counselor, librarian)

      _____ Teacher Aides

10. Indicate by year the number of personnel employed in each category for the two-year period of the quarter plan operation.

   a. First Year

      _____ Administrators

      _____ Instructors

      _____ Supportive Personnel (counselor, librarian)

      _____ Teacher Aides

   b. Second Year

      _____ Administrators

      _____ Instructors

      _____ Supportive Personnel (counselor, librarian)

      _____ Teacher Aides

11. Indicate by year the number of remedial teachers and the number of enrichment teachers assigned to each area during the last two years of the semester plan operation.

   a. Year Prior to final year of semester plan operation.

      _____ Remedial teachers

      _____ Enrichment teachers

   b. Final year of semester plan operation.

      _____ Remedial teachers

      _____ Enrichment teachers

12. Indicate by year the number of remedial teachers and the number of enrichment teachers assigned to each area during the first two years of the quarter plan operation.

   a. First year of quarter plan operation.

      _____ Remedial teachers

      _____ Enrichment teachers

   b. Second year of quarter plan operation.

      _____ Remedial teachers

      _____ Enrichment teachers

Standard III—Utilization of Personnel

13. Please check one of the following:

Personnel can be utilized:

a._____ More effectively in a quarter plan than in a semester plan.

b._____ As effectively in a quarter plan as in a semester plan.

c._____ Less effectively in a quarter plan than in a semester plan.

Standard IV—Student, Grades 9—12

14. Indicate by year the number of students enrolled in enrichment courses during the last two years of the semester plan operation.

a.___Number of students in enrichment courses during year prior to final year of semester plan operation

b.___Number of students in enrichment courses during final year of semester plan operation.

c.___Number of students in remedial courses during year prior to final year of semester plan operation.

d.___Number of students in remedial courses during final year of semester plan operation.

15. Indicate by year the number of students enrollment in enrichment courses during the first two years of the quarter plan operation.

a.___Number of students in enrichment courses during first year of quarter plan operation.

b.___Number of students in enrichment courses during second year of quarter plan operation.

c.___Number of students in remedial courses during first year of quarter plan operation.

d.___Number of students in remedial courses during second year of quarter plan operation.

16. Indicate by year the number of failures in grades 9-12 for the last two years of the semester plan of operation.

a.___Number of failures during year prior to final year of semester plan operation.

b.___Number of failures during final year of semester plan operation.

17. Indicate by year the number of failures in grades 9-12 for the first two years of the quarter plan operation.

a.___Number of failures during first year of quarter plan operation.

b.___Number of failures during second year of quarter plan operation.

18. Indicate by year the number of students who graduated early during the last two years of semester plan operation.

    a.___Number of students who graduated early during year prior to final year of semester plan operation.

    b.___Number of students who graduated early during final year of semester plan operation.

19. Indicate by year the number of students who graduated early during the first two years of quarter plan operation.

    a.___Number of students who graduated early during first year of quarter plan operation.

    b.___Number of students who graduated early during second year of quarter plan operation.

Standard V—Drop-outs

20. Indicate by year the number of students who dropped out during the last two years of semester plan operation.

    a.___Number of students who dropped out during year prior to final year of semester plan operation.

    b.___Number of students who dropped out during final year of semester plan operation.

21. Indicate by year the number of students who dropped out during first two years of quarter plan operation.

    a.___Number of students who dropped out during first year of quarter plan operation.

    b.___Number of students who dropped out during second year of quarter plan operation.

Dalton City Schools
100 Hamilton Street
Dalton, Georgia 30720
May 19, 1974

Dear Sir:

I would like to visit your area on_____

_____. My tentative plans would be interviews at 9:00 A.M., 11:00 A.M., 1:00 P.M., 3:00 P.M. and any other time that is convenient for you.

Please indicate the time most convenient for you on the enclosed card.

Thank you very much.

Sincerely yours,

/s/ Walter R. Bush
Walter R. Bush

POSTCARD

May 15, 1975

Dear Sir:

Please indicate a date and time that I may call at your school to sit down and complete the instrument with you or a person designated by you.

I hope your schedule will permit you to give me a date before June 17.

Thank you very much,

/s/ Walter R. Bush
Walter R. Bush

You may call at my school:

Date:_____ Time: _____

Summary of Responses to Questions Asked by the Researcher During the Execution of the Instrument

The following is a summation statement to the questions that were asked by the researcher:

What do you think about advantages of the quarter system?

How has it worked in your school?

The quarter system works well, but a real concern is that too many of the students graduate too early. They need more maturity and their leaving early makes it difficult to offer the more indepth courses.

The quarter plan has tremendous potentials. If administrators, teachers and persons responsible for planning and implementing are not fully committed to the program, students, parents nor the community can reap the full benefits of the quarter system.

The responses from the administrators showed that the majority of the administrators who responded to the two questions favored the quarter system.

One administrator stated that the quarter system had little effect on the general operation of the school. One other administrator stated that the quarter system had not worked too well.

APPENDIX B

SCHOOLS INCLUDED IN THE STUDY

Name of School	Principal	Date Instrument Mailed	Date of Phone Contact	Date of Interview	Date of Interview
Cobb County Schools					
Campbell High School South Atlanta Rd.	Mr. Robert L. Ash Smyrna, GA 30080	5-19-74 Before June 17	Returned Questionnaire	6-15-74	OK 9:00
North Cobb High	Mr. Ed. Bowers Ackworth, GA 30101	5-19-74 Before June	Responded Without Phone	6-11	9:00
Pebblebrook High Pebblebrook Cir. 948-8219	Mr. Robert D. Murphy Mableton, GA 30059	5-19-74 Before June 15	6-5-74	6-10	11:00
Sprayberry High Allgood Rd. 971-6060	Mr. Jack Cotter Marietta, GA 30060	5-19-74 Before June 15	6-5-74	6-11	1:00
F. T. Wills High Power Springs St. 432-0177	Mr. B.B. Williams Smyrna, GA 30080	5-19-74 Before June 17	6-5-74	6-10	1:00

Name of School	Principal	Date Instrument mailed	Date of Phone Contact	Date of Interview	Date of Interview
DeKalb County Schools					
Avondale High School 1192 Clarondon Rd. 289-7188	Mr. J. C. Womack Avondale Estates, Fa 30022	Mailed Main P. O.	6-17-74	6-17	9:00
Chamblee High 3688 Chamblee-Dunwoody 457-4323	Mr. Jerry Rochelle Chamblee, Ga 30341	5-19-74 Before June 17	6-18-74	6-18	2:30
Gordon High School 2190 Wallingford Rd. 241-5576	Mr. Carey Wynn Decatur, Ga 30033	5-19-74 Before June 17	6-17-74	6-17	11:00
Lakeside High 3801 Briarcliff Rd. NE 636-2676	Mr. John Kicklighter Atlanta 30319	5-19-74 Before June 17	6-18-74	6-18	9:00
Peachtree High 4664 Peachtree Rd. 451-4613	Mr. Henry C. Eddleman Chamblee, Ga 30341	5-19-74 Before June 17	6-18-74	6-18	1:00
Shamrock High 3100 Mt. Olive Dr. 633-9235	Mr. Travis J. Ouzts Decatur, Ga 30033	5-19-74 Before June 17			
Stone Mountain High 5265 Mimosa St. 469-8351	Mr. Charles H. Roach Stone Mountain, Ga 30083	5-19-74 Before June 17	6-17-74	6-17	2:30

Name of School	Principal	Date Instrument mailed	Date of Phone Contact	Date of Interview	Date of Interview
Tucker High 5036 LaVista Rd. 938-4272	Mr. James R. Allgood, Jr. Tucker, Ga 30084	5-19-74 Before June 17	6-18-74	6-18	11:00
Fulton County Schools					
Briarwood High 2816 Briarwood Blvd. 349-3735	Mr. Max E. McBrayer East Point, Ga 30337	5-22-74 Before June 21	6-19-74	6-19	9:00
College Park High 3605 Main Street 766-8303	Mr. Billy R. Jones College Park, Ga 30337	5-22-74 Before June 21	6-19-74	6-19	11:00
Hapeville High 579 Scott Street 766-7888	Mr. John M. Givens Hapeville, Ga 30354	5-22-74 Before June 21	6-19-74	6-19	1:00
Lakeshore High 2134 Lakeshore Dr. 762-7387	Mr. George W. Woodruff College Park, Ga 30337	5-22-74 Before June 22	6-19-74	6-19	2:30
Northsprings High 7447 Roswell Rd. 394-4076	Mr. Victor Hansard Atlanta, Ga 30328	5-22-74 Before June 21	6-10-74	6-10	9:00
Roswell Ridge High 1131 Alpharetta St. 993-6211	Mr. Ralph V. Wilson Roswell, Ga 30075	5-22-74 Before June 22	6-20-74	6-20	1:00

Name of School	Principal	Date Instrument mailed	Date of Phone Contact	Date of Interview	Date of Interview
Sandy Springs High 227 Sandy Springs Dr. 255-1200	Mr. David A. Boyer Atlanta, Ga 30328	5-22-74 Before June 21	6-20-74	6-20	2:30
Other Schools					
Calhoun High River Street	Mr. Thomas S. Upchurch Calhoun, Ga 30701	5-17 Before June 10	5-31-74	6-3-74	9:00
Chattooga High 857-2402	Mr. Jack Herring Summerville, GA 30747	5-17 Before June 10	5-31-74	6-3	1:00
Floyd County					
Coosa High School Rt. 5 235-6519	Mr. J. Sanford Payne Rome, GA 30161	5-17-74 Before June 12	5-31-74	6-6	9:00
Model High School	Dr. Nevin Jones Shannon, GA 30712	5-17-74 Before June 12	5-17-74	6-6	11:00
Rome City					
East Rome High 234-8286	Mr. David Holland Rome, GA 30161	5-17-74 Before June 12	5-17-74	6-6	1:00

Name of School	Principal	Date Instrument mailed	Date of Phone Contact	Date of Interview	Date of Interview
West Rome Redmond Cir. 235-88363	Mr. D. H. McPhee Rome, Ga 30161	5-17-74 Before June 12	6-6-74	6-6	2:30
Paulding County High Rt. 5 445-2751	Mr. Dave Hardin Dallas, Ga 30132	5-17-74 Before June 12	June 1	6-5	9:00
Polk County					
Cedartown High 748-0490	Mr. R. T. Guillebeau Cedartown, Ga 30125	5-17-74 Before June 12	6-1-74	6-5	11:00
Rockmart High 684-5322	Mr. B. J. Keller Rockmart, GA 30153	5-17-74 Before June 12	6-1-74	6-5	1:00
Hall County					
East Hall High Rt. 10 536-9921	Mr. Jack Pirkle Gainesville, Ga	5-22-74 Before June 4	6-1-74	6-4	9:00
Johnson High Rt. 3 536-2394	Don Loggin Gainesville, Ga 30501	5-22-74 Before June 4	6-1	6-4	11:00
North Hall Rt. 9 983-7331	Benny Fouts Gainesville, Ga	5-22-74 Before June 4	6-1	6-4	1:00

Name of School	Principal	Date Instrument mailed	Date of Phone Contact	Date of Interview	Date of Interview
Whitfield County					
Eastbrook 226-2753	Mr. Jimmie Witherow Dalton, GA 30720	5-17-74 Before June 10	6-2-74	6-7	9:00
North Whitfield 259-3381	Mr. Jerry Howell Dalton, Ga 30720	5-17-74 Before June 10	6-2-74	6-7	3:00
Valley Point High 278-2219	Mr. Jasper Rogers Dalton, Ga 30720	5-17-74 Before June 10	6-2-74	6-7	11:00
Westside High 673-2611	Mr. L. D. Crawford Dalton, Ga 30720	5-17-74 Before June 10	6-2-74	6-7	1:00
Douglas High School	Dr. Robert Shigley Douglasville, Ga 30134	6-3-74			

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