

STUDENT RETENTION IN PUBLIC ELEMENTARY SCHOOLS
IN BAHRAIN AND ITS EFFECT ON INPUT/OUTPUT
CAPACITY OF SCHOOLS, COST OF EDUCATION
AND ACADEMIC ACHIEVEMENT

By

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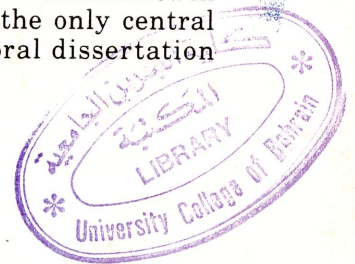
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Indiana University

PH.D.

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CHAPTER I

INTRODUCTION

The Setting for the Study

Bahrain is an Arab Emirate consisting of several islands lying halfway down the Arabian Gulf, 14 miles off the east coast of Saudi Arabia. Bahrain has an area of 321 square miles and was inhabited by a population of 216,815 in 1971 (the year of the census) of which 20 per cent belonged to foreign communities, i.e., Indians, Persians, Europeans, and Americans.

Oil discovered in Bahrain in 1932 provides about 65 per cent of the Emirate's income. Before the discovery of oil, pearling and fishing were the main economic activities of the people of Bahrain. At present, oil revenues constitute the background of Bahrain's economy. In 1979 these revenues constituted 75 per cent of the total government budget. The services sector comes second after the oil sector and increasingly it is playing a crucial role in the development of the economy of the country.

Bahrain's population is very young and fast-growing. The annual growth of the population is estimated at 3.2 per cent. The age structure of the population shows that more than 48 per cent of the total population is under

the age of 16 years.¹ This growing number of young people places a heavy burden on public services in general and on education in particular.

The System of Public Education

Bahrain has a long tradition in education. The history of Koranic schools in Bahrain goes back to 700 A.D. when Islam became the main religion of the people. These religious schools were scattered all over the country; their main aim was to teach the Holy Koran to children and promote religious education.

Bahrain first knew modern schools in 1893 when the American Dutch Reformed Church established a missionary elementary school where Arabic, English, mathematics, and religion were taught.² Modern public education started in 1919 when the first public elementary school for boys was opened by voluntary efforts in Muharraq, the second largest city of Bahrain. The school was called "Al-Hedaya" which means "The Enlightenment." In the same year a public educational committee was formed to administer public schools.

¹Government of Bahrain, Directorate of Statistics, Population Census, 1971, p. 3.

²Encyclopedia Americana, 1976 ed., s.v., "Bahrain."

The government did not start to assist public schools by providing them with financial help until 1925. Then in 1928, the first modern elementary school for girls was established. The year 1930 witnessed the government's take-over of the administration of all public schools. This step, as government reports say, was necessary to help public schools out of their administrative and financial problems.³

The public school system at present forms an integral part of the government administration. The Minister of Education, a cabinet member, is the supreme head of the Ministry. He has the power to issue directives and regulations of a general character in relation to the whole field of public education, adult education, religious education, the national museum and public libraries. In performing his duties, the Minister is assisted by the Central administrative machinery of the Ministry of Education which is composed of the following offices:

The Office of the Undersecretary

The Office of the Assistant Undersecretary for Educational Planning, Curriculums, and Cultural Affairs

The Office of the Assistant Undersecretary for General and Technical Education.

³Charles D. Beligrave, Personal Column (London: Hutchinson & Co., 1960), pp. 90-94.

Under the above-mentioned offices there are ten directorates and offices. Each is concerned with specific functions in the field of education and administrative services, general education, technical education, educational planning, and curriculum development.

Public education is provided free for all children who want it and who join government schools for it. In 1980 the number of public schools reached 122 with a total enrollment of 67,379 students.

The Problem

Elementary education in Bahrain is for six years and is provided free for all children from the age of six years. In the academic year 1978/79, there were 72 public elementary schools with a total enrollment of 37,072 students. This enrollment constituted 68 per cent of the total enrollment of all kinds and types of public schools.

The main emphasis in elementary education is on the mastery of the subject matter taught. Regular school attendance and passing of examinations represent the two main criteria in deciding whether the student should be promoted from one grade to the next grade or not. The Examinations Regulations of 1980 say that the student should remain in grade if he does not pass the required

examinations.⁴

Consequently, many students are held back in their grades every year. The educational statistics of 1978/79 show that there were 8,304 students being retained in their grades in elementary schools that academic year. This figure constituted 18.6 per cent of the total enrollment in public elementary schools in that academic year.

This high percentage of grade repetition may increase the unit cost of education because the number of student-years needed for a given number of children to complete education is higher than the optimum time that would be required if there were no repetition. In addition, grade repetition may decrease the input/output capacity of schools by hindering the ordinary flow of students in grades.

Moreover, most of the studies done on student retention in the United States and in other countries show that students do not benefit academically from being retained. For example, the study of Coffield and Bloomers⁵ on the effects of non-promotion on educational achievement showed that the educational progress of failed

⁴Government of Bahrain, Ministry of Education, Examinations Regulation of Elementary Schools, 1980.

⁵William H. Coffield and Paul Bloomers, "Effects of Non-Promotion on Educational Achievement in the Elementary School," Journal of Educational Psychology 47 (April 1956): 235-50.

pupils during the two years following failure was not significantly greater than that made by promoted pupils.

Researchers noticed also that retention had undersirable personal and social effects on retained students. In studying the social and personal adjustment of promoted and non-promoted pupils Goodlad,⁶ for example, found a decline in desirable adjustment, i.e., self-reliance, sense of personal worth, etc. for non-promoted children and an improvement for promoted children.

On the basis of the above-mentioned discussion, it seems that student retention practices in Bahrain public schools are in need of investigation, especially when it is recognized that these practices have never been studied.

Objectives of the Study

The study addressed the issue of student retention in public elementary schools in Bahrain. First, an investigation of the magnitude of student retention in the seventy-two elementary schools scattered throughout the country was undertaken. A second objective was to determine the effects of retention on the input/output

⁶John Goodlad, "Some Effects of Promotion and Non-Promotion Upon the Social and Personal Adjustment of Children," Journal of Experimental Education 22 (June 1954): 301-328.

capacity of schools and on the cost of education. Thirdly, the study tested the assumption that retention does not improve student academic achievement.

More specifically, the objectives of the study were

1. to describe the magnitude of student retention.
2. to examine the changes in the magnitude of student retention from 1969/70 to 1979/80.
3. to determine the effects of student retention on
 - a. the input/output capacity of schools.
 - b. the recurrent cost of education.
4. to test the validity of the assumption that retention and subsequent repetition of the work in a grade will not lead to improvement of academic achievement.

Limitations of the Study

The limitations of the study were the following:

1. This study was partially an ex-post-facto study which examined the effects of student retention on achievement which already occurred in the hope that it would reveal significant generalizations.
2. In examining the effects of student retention on the input/output capacity of a school and on the cost of education the study relied heavily on the statistics

released by the Ministry of Education in Bahrain. Thus, the study was limited by the extent to which these statistics were accurate.

3. The study was limited by the degree of the accuracy and reliability of teachers' examinations as an evaluating device of student achievement as well as by the grading system, the results of which were the basis for school decisions to promote or retain students.

Definitions of Terms

Student retention. The act of holding back a student in a grade for another year or term and asking him to repeat the school curriculum.

Non-promotion. It is synonymous with student retention.

Promotion. The act of shifting a pupil's placement from a lower level to a higher grade level.

Academic promotion. A promotion based on age, personal and social development, and factors other than scholarship.

Accelerated promotion. Promotion of a pupil at a faster rate than usual. If a pupil receives an accelerated promotion, he thereby condenses time customarily spent in a given grade or course.

Continuous progress. A practice of providing an ungraded curriculum, and inter-age grouping within which individual promotions in schools are based on a whole matrix of factors such as physical, emotional, and social factors as well as intellectual, chronological and achievement changes.

Probationary promotion. An arrangement by which a pupil is promoted to the next higher grade on a trial basis in order that his progress and adjustment may be observed; if they are satisfactory, the pupil is retained in the higher grade.

Grade repetition. The process whereby a student repeats a grade for another term or year and re-studies what he studied before.

Organization of the Study

The study is organized in six chapters. Chapter I has described the setting of the study and stated the problem and the objectives of the study. It dwelled also on the limitations of the study and definitions of terms.

Chapter II provides a review of the related literature, and Chapter III presents the research procedures and methods utilized in conducting the study.

Chapter IV describes the magnitude of student retention in elementary education in Bahrain and sets forth the findings of the study concerning the effect of

student retention on the input/output capacity of schools and on the recurrent cost of education.

Chapter V includes a description of the results of the "t" test and the longitudinal investigation of students' achievement records related to the effect of retention on student achievement.

A summary of the study along with conclusions and recommendations is included in Chapter VI.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Student retention is a world-wide practice. It has attracted the attention of many educators in developed as well as in developing countries. There have been a large number of research studies done on student retention and its relation to student achievement and the efficiency of schools.

The review of literature on student retention is of two parts. The first part deals with the research done on student retention in the United States of America and on the effects of this research on the practices of student retention in schools. The second part reviews the literature of student retention in some countries in Europe and Asia.

The United States

Student retention has a long history in American education. It was first introduced by John D. Philbrick in Boston, Massachusetts in 1848.⁷ It is still practiced in many elementary and secondary schools across the country. It is noted alike that the thrust of these

⁷M. D. Franklin, School Organization: Theory and Practice (Chicago: Rand and McNally, 1967), p. 26.

studies was mainly directed toward testing the two main assumptions underlying the practice of student retention: that holding back academically weak students in a grade and asking them to repeat the same work will lead to an improvement in their achievement; and such action improves motivation to do school work, i.e., the threat of non-promotion motivates students to work hard.

The first nation-wide study made on student retention was in 1909 when Ayres⁸ investigated the magnitude of student retention in the United States. The study included a detailed investigation of school records of 20,000 children and employed statistical methods to determine the correlation between retention and some factors such as school attendance and the physical health of students. The main findings of the study could be summarized as follows:⁹

1. There were many children who were older than they should be for grade they were in. These children constituted serious problems for teachers--they were misfits in the classes, required special attention if they were to do satisfactory work and rendered more difficult

⁸Leonard P. Ayres, Laggards in Our Schools (New York: Survey Associates, Inc., 1909).

⁹Ibid., pp. 3-7.

the work with the other children.

2. Many of the retained students did not stay in school until they completed the elementary course. They dropped out without finishing their elementary education.

3. In the country as a whole about one-sixth of all the children were repeating, and the annual expenditure on retention was about \$27,000,000.

4. There were many interacting causes of retention. Late attendance was a potent factor; and irregular attendance was another.

5. Children suffering from physical defects, i.e., eye defects, ear defects, etc., made slower progress than did the children who were found to have no defects.

The main flaw in the research design of this study was that it used correlation methods for investigating the causes of retention. Correlation methods can secure only correlation between two variables under investigation. It does not identify the causes of relationships. However, the main thrust of this nation-wide study was on investigating the magnitude of retention and its costs.

Another nation-wide study on student retention was conducted by Reed in 1927.¹⁰ Reed tackled the problem of student retention more specifically. She studied the

¹⁰May M. Reed, An Investigation of Practices in First Grade Admission and Practices (New York: Teachers College, Columbia University, 1927).

practices of student promotion in relation to school admission requirements. The study investigated the practices for first grade admission and promotion of children in an attempt to identify the main factors which determined promotion.

The data of the study were furnished by 219 responding administrators of different ranks: superintendents, supervisors, principals of public school systems, and directors of laboratory schools who were asked to react to a questionnaire. The findings of the study showed that schools mainly tend to

1. use chronological age as the decisive factor for the admission of children to first grade.

2. use reading as the decisive factor for promotion or progress from low first to high first grade and from high first to second grade.

3. minimize the values in subjects other than reading, particularly pertaining to (1) social relationships, and (2) special subjects such as nature, music and fine arts.

4. place emphasis on curricular content for which children may not be mentally, intellectually, emotionally, or physically ready.

Effects of Retention on Achievement. Besides the nation-wide investigations of student retention, some educators directed their efforts to study of the effects of retention on student achievement. One of the early pieces of research done in this respect was Keyes' research.¹¹ Keyes studied the long-term effects of retention on academic performance of 683 pupils in grades one through nine who had been retained one or more times. He investigated student records and utilized statistical methods to find the correlation between achievement and selected factors, i.e., physical defects, change of school, and low deportment. At the end of this investigation Keyes found that:

1. The age of entrance to school had a definite bearing on the chances for promotion.
2. Prolonged absence from school was an appreciable factor in producing retention especially when it accounted for more than twenty-five days in one school year.
3. Change of school, low deportment, and poor eyes were those factors which correlate positively with retention.

¹¹Charles K. Keyes, Progress Through the Grades of City Schools: A Study of Acceleration and Arrest, No. 42 (New York: Teachers College, Columbia University, 1911).

Keyes concluded his study by saying:

Repeating a grade does not result in any permanent improvement of the scholarship of the retained student. There is usually some improvement the next year after the repeating. Then comes a loss of at least half of all that had been gained; and the third year finds the retained student back to his old level of low scholarship. Of the whole number of retained students, 21% do better after repeating than before, 39% show no change, and 40% actually do worse.¹²

This study has the same deficiency that Ayres' study had. It used correlation method to determine the causes of student retention. It is erroneous to expect that correlation methodology will determine the nature of the causal relationship. However, Keyes's study is strong in its thorough investigation of student records and in determining the main characteristics of the retained students and the changes in their achievements over fairly long period.

Buckingham¹³ used an experimental research design to conduct an interesting experiment in trial promotion in the schools of Decatur and Springfield, Illinois.

¹²Ibid., p. 63.

¹³B. R. Buckingham, "An Experiment in Promotion," Journal of Educational Research 3 (May 1921), 328-335.

Buckingham's interest was to know the effects of the trial promotion on student achievement. In grades two through seven, 1,276 pupils who had been reconsidered for retention by their teachers were advanced to the next grade under the terms of a probationary promotion. During the probation period--the first six weeks of the spring semester--careful progress records were kept on the pupils involved, including a weekly decision on the satisfactory or unsatisfactory nature of their work. In addition, several devices were employed by teachers, i.e., visits to pupil's home, interviews with parents, and sending home pupil's work. The aim was to inform the parents about the progress of their children in the schools, and to obtain their cooperation and support for the experiment.

At the conclusion of the six-week probationary period the teacher was required to enter on the probationary card of each pupil her/his recommendation as to the retention of the pupil in this grade to which he had been advanced on probation. Provision was also made for the recommendation of the building principal on each card and for final action of the superintendent.

The result of the experiment showed that three-fourths of the group did satisfactory work during the six-week period and remained in the grade in which they had been on probation.

The experiment was repeated the next year with 881 probationers in the same schools. The results showed again that 75 per cent achieved permanent promotion.

Buckingham also found that over-all achievement in the schools was not adversely affected. The "percentage rating" of scholarship of all the pupils in these schools showed a mean of 80.4 per cent before the experiment, 81.1 per cent at the end of the first semester during which the experiment was conducted, and 82.2 per cent after the next semester.

Klene and Branson¹⁴ also used an experimental design in their investigation of the effects of retention on student achievement. They equated children, all of whom were to be retained in grade on the basis of age, intelligence, and sex. Half were then promoted and half were retained. Progress records were kept on student achievement. Klene and Branson found that potential repeaters profited more from promotion than did the repeaters from non-promotion in terms of measured achievement.

Although Klene and Branson asked teachers and principals not to show biased attitudes toward the pupils under the experiment, this request was not sufficient to prevent their study from including a biased comparison of retained

¹⁴Vivian Klene and Earnest Branson, "Trial Promotion Versus Failure," Educational Research Bulletin 7 (January 1929): 6-11.

students with probationary promoted students. However, such a warning is insufficient to prevent contamination of the variables.

Caswell¹⁵ tackled the question of student retention slightly differently. He directed his study toward investigating the relation of repetition to school organization and pupil classification. The main purpose of Caswell's study was to determine the effect of non-promotion upon variability in achievement and upon the difficulty of making instructional adjustments. His study was based on data derived from the official reports of state superintendents of public instruction, the research bulletins issued by city school systems, and city and state educational surveys.

The conclusion Caswell reached from his study was:

Regardless of the amount of retardation, schools could be reorganized at once to eliminate all retardation without materially affecting the average achievement or variability of the instruction groups or without materially affecting the number of pupils requiring instructional adjustments of the difficulty of making these adjustments.¹⁶

¹⁵Hollis L. Caswell, Non-Promotion in Elementary Schools: Field Studies No. 14 (Nashville, Tennessee: Division of Field Studies and Survey, George Peabody College for Teachers, 1933).

¹⁶Ibid., p. 67.

Akridge¹⁷ also was interested in the relation of student progress policies to achievement. He sought to determine the cumulative effect of the regularity of pupil progress on achievement at the fourth grade level of the elementary school. He conducted his study in seventeen schools in New Jersey. Nine of these schools were classified as "regular progress schools." In each of these schools at least 90 per cent of the pupils reached the fourth grade without having been retained or accelerated. The remaining eight schools were classified as "irregular progress schools," no more than 80 per cent of the children at the fourth grade level experienced regular progress after entering school.

The pupil population upon which the study was based included all pupils in grade four and all pupils in other grades who were of normal chronological age or normal progress for grade four. All the 1,175 pupils covered by Akridge's study were tested with a mental test (The Multi-Mental Scale, Form I) and achievement tests.

The findings of the study showed that in the regular progress schools achievement test scores for the "grade groups" were on the average higher in reading, spelling, addition and subtraction than those in the irregular

¹⁷Garth H. Akridge, Pupils Progress Policies and Practices No. 691 (New York: Teachers College, Columbia University, 1937).

progress schools. The findings also revealed a greater heterogeneity for the "grade groups" in the regular progress schools in reading, spelling, addition and subtraction.

With regard to the progress and age groups, test results also favored the regular progress schools. The average academic achievement of the progress groups in the regular progress schools was higher than that of the irregular progress schools.

On the basis of these findings, Akridge concluded that non-promotion was not so advantageous to pupils as commonly supposed. He further concluded:

That a strict policy of regular pupil progress for all pupils from the time they enter the first grade, operating either alone or in conjunction with policies that would eliminate underagedness and overagedness, probably would not significantly affect either the average level or the homogeneity of either achievement or mental age in either the regular or the irregular progress schools.¹⁸

Although the study of Caswell and the study of Akridge both could be considered as being in the same field of school organization and pupil classification, they presented differences in objectives, plans of attack, and findings. Caswell studied the effect of retention only, while Akridge considered the effect of both retention and

¹⁸Ibid., p. 56.

acceleration. Caswell also did not consider the chronological age as basis for classification, whereas it was given equal consideration with grade and progress in Akridge's study.

In 1956, Coffield and Bloomers¹⁹ applied two different designs of research in studying the effects of retention on achievement. They made two general types of comparison in which they employed the "t" test as their statistical procedure. In the first type they used matched groups. A group of failed pupils were compared with their promoted matches in achievement, whereas in the second type the failed students were compared with themselves over a two-year period of time. The study showed that the educational progress of failed pupils during the two years following failure was not significantly greater than that made by promoted pupils. This study was of particular interest because it used a longitudinal research approach which promised to be a useful approach in studying the effects of retention on achievement.

Another interesting study was conducted at Wisconsin University.²⁰ The study tested the validity of the

¹⁹Coffield and Bloomers, "Effects of Non-Promotion on Educational Achievement in the Elementary School," pp. 235-250.

²⁰A. Giate, On the Validity of Non-Promotion as an Educational Procedure (Madison: Wisconsin, ERIC Document Reproduction Service, 1959).

hypothesis that retention improves achievement. It compared the marks that a group of retained students achieved over two subsequent years in several subjects in six high schools. The results indicated that though there was an improvement in achievement, it was generally not worth the time taken to achieve it even if one ignored the other undesirable side effects of non-promotion.

It is worth mentioning here that some studies on the effects of retention on achievement reached conclusions contradicting the findings of the foregoing studies. Lobdell²¹ studied the academic progress of 94 elementary school repeaters during and after the year of repeating. Basing evaluation on achievement test scores, he found that 25 students made "good" progress, 38 students made fair progress, and only 29 students made "poor" progress.

Scott and Ames²² reached similar results in their study on the effects of retention on achievement. They compared children's final grades in two consecutive years (1966 and 1967, the repeat year). Their findings showed that retention did appear to have a beneficial effect on student grades for a group of selected subjects. It is

²¹Lawrence O. Lobdell, "Results of Non-Promotion Policy in One School District," Elementary School Journal 54 (February 1954): 333-37.

²²Betty A. Scott and Louise B. Ames, "Improved Academic, Personal, and Social Adjustment in Selected Primary School Partners," Elementary School Journal 69 (May 1969): 431-38.

interesting to note, however, that this research covered twenty-seven retained elementary school children only.

Effects of Retention on Motivation and Social Adjustment. Some educators are concerned with the effects of retention on motivation to school work as well as on the personal and social behavior of students. Otto and Melby²³ studied the effects of the threat of non-promotion on motivation. They matched two groups of pupils on sex, intelligence, chronological age and achievement. They found that children who were told at the beginning of a semester that all would be in the following grade the next term did as well on a comprehensive achievement test as children who through the semester were reminded that they must do good work or suffer non-promotion. This indicated that non-promotion is not a motivating force.

Waetjen²⁴ used another research design to test the effect of retention on motivation. He studied the balance between the learner's predictions, his information seeking, and the classroom activities. Waetjen noticed that when there was dissonance between the information presented and

²³Henry J. Otto and Ernest O. Melby, "Attempt to Evaluate the Threat of Failure as a Factor in Achievement," Elementary School Journal 35 (April 1935): 588-96.

²⁴W. Waetjen, Motivation: The Educator's Dilemma (Maryland: Bureau of Educational Research and Field Services, University of Maryland, 1964).

the child's ability to assimilate the new information with his present knowledge he became anxious and tended to withdraw. This study showed that slow learners have no motivation to do school work and tend to withdraw when they are put under the pressure of achieving more than their abilities permit.

Investigating the effects of retention on the personal and social adjustment of pupils, psychologists at the University of Minnesota and representatives of the National Committee for Mental Hygiene²⁵ studied the seriousness and frequency of behavior problems in an 800-pupil elementary school in Minneapolis. Teachers were asked to complete for each pupil a schedule of 16 types of undesirable behavior. Responses were checked according to the frequency of occurrence: "never", "once or twice", "occasionally", or "frequently." Behavior descriptions on the schedule ranged from "disinterested in school work" and "stealing." Each item was evaluated according to the "degree of social deviation." For example, 1 point for "cheating", 2 points for "unpopularity with children," and 3 points for "stealing."

²⁵M. E. Haggerty, "The Incidence of Undesirable Behavior in Public Schools Children," Journal of Educational Research 12 (September 1925): 102-22.

The results of the evaluation showed that the average behavior score for 77 underage pupils was 5.9; for 443 normal age pupils, 6.6; and for 202 overage pupils, 14.7. This revealed that the children who were making the most rapid progress through school present the fewest behavior problems. However, this study leaves the door widely open to argue that the behavior problems might be with the retained students prior to retention. They may be a cause rather than the result.

Research conducted by McElwee²⁶ and by Sandin²⁷ also revealed a greater incidence of behavior considered troublesome to teachers among retained children than among regular-progress pupils. McElwee studied 300 Brooklyn school pupils with the purpose of comparing the degree to which certain desirable and undesirable traits were possessed by children whose school progress had been normal, accelerated or retained. McElwee asked the teachers in these schools to mark on a check-list of fourteen traits, half of which were considered desirable and half undesirable.

²⁶Edna W. McElwee, "A Comparison of Personality Traits of Three Hundred Accelerated Normal and Retarded Children," Journal of Juvenile Research 15 (July 1931): 31-34.

²⁷Adolf A. Sandin, Social and Emotional Adjustment of Regularly Promoted and Non-Promoted Pupils (New York: Bureau of Publications, Teachers College, Columbia University, 1944).

McElwee concluded that:

All three groups possessed more desirable than undesirable traits. In general, accelerated children seemed to possess to a greater degree all the desirable traits than did the retarded children.²⁸

Sandin investigated the characteristics of social adjustment and attitudes of children who had been non-promoted one or more times during their school career as compared with their regularly promoted classmates. The study covered 277 students who have been retained one or more times.

The study was strong in the variety of research tools it used. The researcher utilized interviews, general observations, behavior rating by teachers, socio-metrics and questionnaires. The reliability of the differences between the regular and slow-progress groups on the data compared was measured by the Chi-square test.

The findings of the study indicated that:

Non-promotion contributed to bring about a situation in which the differences between the regularly promoted children and their slow progress classmates constituted a barrier to good social relations. It was found that non-promotion, in effect, placed the slow-progress children with classmates who for

²⁸McElwee, "A Comparison of Personality Traits of Three Hundred Accelerated, Normal and Retarded Children," 31-34.

the most part were 1) younger, 2) smaller, and 3) physically less mature. In addition, differences in interests, behavior, and likes and dislikes were noted between them. These dissimilarities contributed to bring about a cleavage between the progress groups when they selected friends from their own classes.²⁹

Sandin made no attempt to equate the groups studied or to select them at random. This factor is likely to affect the validity of his findings.

In an apparent attempt to take over where Sandin left off, Goodlad³⁰ conducted a carefully controlled experiment to determine whether or not differences in social or personal adjustment exist between two groups of promoted and non-promoted children. Goodlad compared 55 second graders, who had not repeated a grade with 55 first grade repeaters. The two groups were matched on the basis of mental age, achievement, and chronological age. The research tools Goodlad employed in his study were a sociometric device the California Test of Personality and The Haggerty-Olson-Wickman Behavior Rating schedule. Goodlad found that all sources of data pointed to the general

²⁹Sandin, Social and Emotional Adjustment of Regularly Promoted and NonPromoted Pupils, p. 134.

³⁰Goodlad, "Some Effects of Promotion and Non-Promotion Upon the Social and Personal Adjustment of Children," pp. 301-328.

difficulty of the non-promoted children in making satisfactory personal and social adjustment. Promoted children, however, tended to be more disturbed personally over their school progress.

More recent studies have brought hope that retention may have no adverse effects on personal and social development of pupils. Worth³¹ studied the effect of promotion and non-promotion on social and personal adjustment. The subjects of Worth's investigation were two groups of promoted and non-promoted children. The two groups were matched with respect to sex, mental age, chronological age, and total achievement. Teachers were asked to evaluate the children of the two groups on the following seven personality traits: emotional control, creativeness, judgement, cooperation, dependability, courtesy, and work habits. A socio-metric test was used to measure the social-personal development of the children.

The findings of the study³² showed that: 1) The non-promoted group was better than the promoted group in desirability as a work companion and dependability. There were no differences between the two groups in emotional

³¹Walter H. Worth, "Promotion or Non-Promotion?," Educational Administration and Supervision 46 (January 1960): 16-25.

³²Ibid., pp. 19-20.

control, creativeness, judgement, cooperation, courtesy, work habits, undesirable work companion, desirable play companion, and undesirable play companion.

These findings led Worth to conclude:

The findings of this study concerning the effect of promotion and non-promotion on the social-personal development seem to run counter to those reported in the bulk of previous research on this problem. Non-promotion does not appear to have an adverse effect on the social-personal development of low-achievers. On the contrary, low-achievers who are non-promoted tend to be rated as high or higher on personality traits, and be accorded the same, and sometimes better, socio-metric status than those who are promoted. Thus the possibility that greater gain in achievement made by the promoted pupils may have been at the expense of their social-personal development.³³

The main flaw of this study is that it did not match the two groups in personality traits prior to the investigation of the effect of non-promotion on these traits. The researcher left this variable uncontrolled and thus one can argue that the difference between non-promoted and promoted children in personality traits may not be caused by promotion/non-promotion practice.

In 1977 Finlayson³⁴ reported about a longitudinal study on the effect of non-promotion upon the self-concept

³³Ibid., p. 23.

³⁴Harry J. Finlayson, "Non-Promotion and Self-Concept Development," Phi Delta Kappan 59 (November 1977): 205-207.

of pupils in elementary grades. The results of his study included a sample of non-promoted and borderline pupils. The study followed the children through the 1973/74 and 1974/75 school years. The pupils' self-concepts were measured on four separate occasions by the investigator. The instrument used to measure self-concept was FACES Scale, developed by Jack R. Frymier at Ohio State University.

Finlayson found to his surprise that non-promotion did not create self-concept problems. The self-concept scores for all three groups rose during the first year. During the second year, the non-promoted group of pupils continued to increase their self-concept scores significantly, while scores of the borderline and promoted groups dropped slightly, but not significantly. Finlayson concluded, that non-promotion appears not to hurt self-concept at least of very young students.³⁵

The effects of retention on the attitudes of students and parents toward school has also been studied by some educators, but the research in this field is limited. Russell³⁶ tried to discover the effects of

³⁵Ibid., p. 207.

³⁶David H. Russell, "The Influence of Repetition of a Grade and Regular Promotion on the Attitudes of Parents and Children Toward School," California Journal of Elementary Education 21 (August 1952): 9-41.

regular promotion and non-promotion on children's and parent's attitudes toward school. In 1952 he conducted a questionnaire study involving 1,929 pupils and 1,205 of their parents. The children were in grade 5 and grade 8 in urban and rural schools in central and northern California. Three hundred forty-five of the parents had children with non-promotion records.

The researcher asked the students as well as their parents to answer questionnaires. The analysis of the replies showed that the retained students and their parents had more negative attitudes toward school than the regularly promoted pupils and their parents, but the difference was not great.³⁷

A similar but more comprehensive and interesting study was made in 1956 by the administrative and instructional staff of the Whitehall, Ohio public schools.³⁸ The staff was unable to decide between a policy of "social promotion" or a promotion policy based on minimum grade standards. They sent questionnaires to 90 high school students who had failed a grade in the past and to their parents.

³⁷Ibid., p. 40.

³⁸Erren Brudage, "Staff Study of Students Failures," Educational Administration and Supervision 42 (November 1956): 429-35.

The responses to these questionnaires showed that

1. tudents generally felt rather strongly about retention and a large number of them (36%) said that it bothered them a great deal. Parents felt there were usually minor emotional problems involved.

2. tudents, more than parents, were inclined to think retention was not a good thing, though more than half of them believed it was for the best.

After examining the returns from the questionnaires, personally talking with the students, and examining their mental capacity and achievement, the staff agreed on the following points:

1. Students with good mental ability who are retained for various reasons are often benefited.

2. Students who are socially immature are often benefited.

3. Retention of students with low academic ability is seldom beneficial.

4. Students who were retained at the lower grades appear to have been benefited more often than were those who were retained at higher grades.

5. Responses of students and parents indicated that there had often been a lack of communication between the school and the students and parents at the time of retention.

6. Responses of the students and the parents indicated that failing a grade was a severe emotional experience for the student in which he often lost self-confidence and initiative. It was therefore recommended that the teacher think very carefully before failing a student.

Retention Practices. The literature shows that American schools have a long tradition in student retention practices. Ayres' study³⁹ of 1909 indicated that student retention was practiced widely across the country, and 33 per cent of all the pupils in public schools were retained at that time. It seems that negative effects of retention on both achievement and the personal and social development of pupils reflected in the pioneering studies made educators and school administrators reduce non-promotion practices in schools.

Reviewing the effects of research of retention on non-promotion practices, Ellinger⁴⁰ identified several procedures made in an attempt to counter non-promotion. Some of these procedures are 1) the "St. Louis Plan" which sought to reduce the rigidity of the graded structure by

³⁹Ayres, Laggards in Our Schools, p. 3.

⁴⁰Bernice D. Ellinger, "Non-Promotion: A Review Essay," Theory Into Practice 4 (February 1965): 122-127.

reclassifying students at six-week intervals, 2) the "Pueblo Plan" in which all students study all units, but progress through them at their own rates, 3) the "Dalton Plan" and the "Winnetka Plan" which differentiate "academic" from "non-academic" phases of the curriculum and then encourage students to move through the academic work at their own rates. 4) The attempt to base school work on a theory of continuous progress. 5) The attempt to individualize instruction and tailor school programs to meet individual needs and abilities.

The National Education Association (NEA), Research Division, conducted a survey on promotion policies in urban elementary schools in 1958/59.⁴¹ This survey revealed that promotion based on meeting academic standards alone had almost disappeared. In most districts, pupils were considered individually, the decision being based on their special needs and abilities. In less than 1 per cent of the school districts having elementary grades was promotion based upon academic achievement alone.

However, the literature shows that the promotion/retention question has not yet been resolved. Long before continuous promotion had established itself firmly in schools as an alternative to achievement promotion, the

⁴¹NEA, "Promotion Policies in Urban Elementary Schools," NEA Journal 51 (December 1962): 57.

pendulum of education practice had begun to swing back to non-promotion. Dissatisfied with the low-level academic achievement of an increasing number of graduates, many educators and other concerned people began, in the form of the back-to-basics movement, to emphasize the demand for specifying a minimum standard of competencies that children have to master before they proceed to a higher level of education. In a review of the literature of promotion practices, Reiten⁴² noted that continuous promotion failed to prove itself the easy panacea for which its proponents had hoped. He indicated that a study of inner-city schools sponsored by the council for basic education had found continuous promotion harmful in that it does not engender self-confidence. To unperceptive pupils, promotion obtained without effort can give a false estimate of their abilities; to the disillusioned it is less than an earned reward.

He added that when pupils are socially promoted, the inadequately achieving pupil still tends to be mal-adjusted and at the bottom of his class scholastically. And even when his individual learning experiences are adapted to his abilities he may find the classroom group

⁴²R. G. Reiten, The Promotion/Retention Dilemma, What Research Tells, Report No. 7416 (Philadelphia School District, Pa. Office of Research and Evaluation, 1973).

activities frustrating beyond his ability to cope.⁴³

It seems that the effects of the back-to-basics movement are profound on school practices with regard to the promotion/non-promotion question. Many school systems and school districts have begun to return to student retention after years of moving away from the use of non-promotion. The present educational scene has witnessed a very fast eradication of continuous promotion. From 1975 to 1977 twenty-four states introduced 67 bills regarding minimal competency requirements for graduation and promotion. Student retention rates showed also an alarming increase. For example, student retention in Virginia was up 22 per cent in just one year (1977-1978). Retention in Mobile, Alabama elementary schools increased from 1,500 in 1975 to 3,800 in 1978. And in June 1978, one-third of the eighth graders in the Richmond, Virginia schools were held back.⁴⁴

Student Retention in Some Developing Countries

Educators in developing countries are also concerned with student retention and its effects on school performance. UNESCO has played an active role in investigating

⁴³Ibid., p. 11.

⁴⁴Margery Thompson, "Because Schools Are Burying Social Promotion, Kids Must Perform to Pass," The American School Board Journal 166 (January 1979): 30-32.

student retention practices in many developing countries. On the basis of data supplied by UNESCO, Brown⁴⁵ examined student retention and dropouts in elementary education in twenty-one countries in Asia, Africa and Europe. He found that student retention was commonly followed by dropping out. He found also that there were many interacting causes of student failure in schools. Therefore, he argued that reduction of grade repetition cannot be obtained by a single procedure but involves the whole educational system.

Chowdhury⁴⁶ studied the problem of retention and dropouts in Bengal in 1965. He ascribed the problem mainly to economic backwardness and to parental indifference to education.

In Bangkok, the Institute of Child Study⁴⁷ investigated the causes of grade repetition. The investigation compared 25,000 promoted and retained students in sampled schools and employed achievement tests. The findings indicated that the differences in children's achievement largely reflected economic and social variables. It also

⁴⁵R. I. Brown, A Survey of Wastage Problems in Elementary Education (Bangkok: UNESCO Regional Office for Education in Asia, 1966).

⁴⁶P. Chowdhury, Report of an Investigation in the Problem of Wastage and Stagnation in Primary Schools in the District of 24 Paraganas (Calcutta: Directorate of Education, 1965).

⁴⁷M. A. Brimer and L. Pauli, Wastage in Education: A World Problem (UNESCO, IBE, 1971), p. 26.

showed that children's achievement was positively correlated with the educational qualifications of parents. The final conclusion was that grade repetition appeared to hold no advantages in raising achievement levels.

A number of interesting studies on dropouts and retention were conducted in India. These studies utilized different methods, i.e., interviews, questionnaires, document analysis and statistical analyses. It is noticeable from the review of literature of student retention in India done by Sapra⁴⁸ that most studies were concerned with the investigation of causes of retention. The main causes of student failure identified by these studies were 1) the economic backwardness of parents, 2) the excessive involvement of children in domestic work which leaves no time for them to study at home, 3) the low educational status of parents, 4) the poor school environment, i.e., poorly prepared teachers, inadequate school buildings, etc., 5) illness of students and irregular school attendance. Too many absences and poor health make students unable to study properly.

It is worthwhile to mention here that these studies revealed that student retention was one of the major factors behind dropout from schools. In this respect, the

⁴⁸C. L. Sapra, Educational Wastage and Stagnation in India (Delhi: National Council of Educational Research and Training, 1967).

Hartog Committee report⁴⁹ says,

The longer a child remains in one class the more he is discouraged and probably neglected. While his continued presence at school not only confers no benefit on himself but also affects adversely teaching of the other pupils.

In a review of the literature of student retention in Yugoslavia, Brimer and Pauli⁵⁰ reported about a study done by Capar in which he claimed that 38 per cent of pupils in one generation failed to complete their schooling in normal time. The study stressed that the economic and social conditions of the family had a general but not significant influence on student failure in school.

Another study conducted by Mujovic⁵¹ (1968) on student retention in Yugoslavia showed that the major reasons for grade repetition and dropout were 1) the long distances between the pupil's home and school, 2) the over burdening of the syllabuses and curricula, 3) the lack of qualified teaching staff, and 4) parent's misconceptions about the need for educating children, particularly girls.

⁴⁹Ibid., p. 35.

⁵⁰Brimer and Pauli, Wastage in Education, A World Problem, p. 27.

⁵¹Ibid., p. 28.

Brimer and Pauli also reviewed a study done by Akolinska in Poland during the period 1959-1964. Akolinska studied retention and dropout in primary levels of general education. He found that retention usually preceded dropout, and the socio-economic status of parents was a decisive attributing factor in retention. This led many schools to change their enrollment procedures by a new procedure whereby an inquiry into the child's living circumstances in his home is carried out prior to enrollment; factors in the family environment which might be detrimental to his studies are identified, and subsequent care is taken to counteract adverse influences. After the 1962/63 school year, both dropouts and repetition decreased as a direct consequence of this new enrollment procedure.⁵²

In Poland also, Kupisiewicz (1969) concerned himself with analysing the factors associated with the organization, content, and methodologies of education which may be responsible for school failure. The researcher stressed in his findings that a large proportion of dropouts and repetition could be avoided if teachers had a better knowledge of the techniques of educational science and paid more attention to the pupil's personalities and to

⁵²Ibid., p. 28.

maintaining individual contacts with them.⁵³

Concluding their review of the literature in some developing countries in Asia and Europe, Brimer and Pauli⁵⁴ mentioned that reports of tested remedies for student retention were less numerous than hortatory.

In summary, the foregoing review of the literature showed us that student retention had attracted--and is still attracting--the attention and concern of educators throughout the world.

In tackling student retention, educators used different approaches, i.e., the study of the effect of retention on achievement, the study of the effect of retention on personal and social and economic causes of student retention, etc., as well as a variety of research designs, experimental designs, longitudinal study, etc. But the complexity of the problem and the variety of the social, educational, and economic variables which interact with it, made it difficult for educators and researchers to reach a concrete finding about the educational worth and value of student retention.

⁵³Ibid., p. 29.

⁵⁴Ibid., p. 31.

Student retention is still a controversial issue, and educators are still searching their way with the hope of finding an educational alternative to student retention which can provide a better incentive for students to learn and to proceed smoothly in their study on the one hand and can maintain and enhance their academic as well as their personal and social development on the other hand.

CHAPTER III

THE PROCEDURES

In conducting the study, the researcher utilized four different research methods and procedures which he saw as pertinent to the objectives of the study as set forth in Chapter I. The methods and procedures as applied to the different areas of study are described below.

The Magnitude of Student Retention

In surveying the student retention problem in Bahrain public elementary schools and describing its magnitude and the changes which occurred in this magnitude over the period from 1969/70 to 1978/79, the following procedures were used:

1. An inventory of the statistical data required for the description of the magnitude of student retention was developed. The inventory included:
 - a. the number of public elementary schools for the period 1969/70 to 1979/80 classified by year.
 - b. the number of students attending public elementary schools classified by school, sex, grade, and year (1969/70 to 1979/80).

- c. the number of promoted and retained students in public elementary schools classified by school, grade, sex, and year (1969/70 to 1979/80).
- d. a list of all public elementary schools classified by name, sex of students, and enrollment (1979/80).

2. The aforementioned data were then secured from the Office of Educational Statistics at the Ministry of Education through direct, personal contact. The obtained data were checked to insure that they did not include any inconsistency or missing points such as a sharp decrease or increase in student enrollment from one year to the next.

3. The researcher then pursued the problem of student retention further in a search for some inside-school clues which might explain why elementary schools were different in the magnitude of student retention. He investigated the relationship of this problem to three different variables inside the schools, namely, the proportion of qualified teachers, the availability of school libraries, and the size of school enrollment. The conduct of the investigation required the collection of the following additional data:

- a. The proportion of qualified teachers in elementary education classified by school.

b. The availability of school libraries
classified by school.

c. The size of enrollment by school.

4. The data were tabulated and analyzed. The analysis and the description of the magnitude of student retention were made by means of comparing the proportions of student retention in each year, school, and grade.

5. The public elementary schools then were classified into three categories on the basis of the proportion of student retention they had. The first category included the schools which had proportions ranging from 0 to 10 per cent. The second category covered the schools which had 10.01 to 20 per cent. The third category included the schools that had 20.01 per cent and above.

6. In determining the relationship of the magnitude of student retention to the aforementioned variables, a comparison among the three categories of schools in terms of qualified teachers, the availability of school libraries, and the size of enrollment was conducted. The results of these comparisons are described in detail in Chapter IV.

Effect of Student Retention on School Capacity

In determining the effect of student retention and dropout on the elementary school's input/output capacity (the input/output ratio), the "cohort" method developed by

UNESCO was used.⁵⁵ This method included the following procedures:

1. Use of the previously gathered statistical data on enrollment in public elementary education by grade and sex for the period 1969/70 to 1979/80, and use of calculating formulas indicated in the appendix, the rates of promotion, retention, and dropout for male and female students were obtained.

2. The rates of promotion, retention, and dropout were then applied to the actual cohort groups of students (boys and girls were treated separately) who were enrolled in the first grade in 1969/70. By this means, the actual movement of these two cohort groups through school grades was reconstructed. This movement then was depicted in two figures (one for boys and the other for girls).

3. The reconstruction of the students' movement in the school cycle yielded two pieces of information: first, the number of students (males and females separately) who were graduated out of the total number of student who were enrolled in the first grade in 1969/70, and, second, the number of years invested to graduate those students.

4. By dividing the number of years invested by the number of graduates obtained in step no. 3, the average

⁵⁵UNESCO, A Statistical Study of Wastage at School (Paris: UNESCO, 1972), pp. 25-47.

number of years spent per graduate (males and females separately) was obtained.

5. Having obtained the average number of years spent per graduate, the calculation of the input/output capacity (ratio) of the elementary school in Bahrain was calculated by using the following formula:

$$\text{Input/output school capacity} = \frac{\text{Average number of years spent per graduate}}{\text{Duration of elementary school}}$$

Recurrent Cost of Student Retention

1. The calculation of the recurrent cost of student retention needed three different pieces of information: first, the average number of years spent per graduate (this information was secured as mentioned earlier); second, the duration of elementary school cycle in Bahrain; and third, the actual recurrent cost per student in 1979/80 (for boys and girls separately) in elementary education. The Office of Educational Statistics at the Ministry of Education in Bahrain provided all this information directly to the researcher.

2. Having secured the three aforementioned pieces of data, the following formulas were used to calculate the increase in the annual recurrent cost per student (for boys and girls separately) caused by retention and dropout:

$$\begin{array}{lcl} \text{The ideal recurrent} & & \text{The actual} \\ \text{cost per student per} & = & \text{recurrent cost} \\ \text{year (where there is} & & \text{per student per} \\ \text{no retention + drop-} & & \text{year} \\ \text{out)} & & \end{array} \times \frac{\text{Normal school duration}}{\text{The average number of years spent per graduate}}$$

Effect of Retention on Student Achievement

In examining the effect of retention on student achievement, two different research designs were employed. The first design was a statistical design. The second design was a longitudinal study of the achievement progress of a sample of seventy-seven retained students over a six-year period of time. The procedures which were followed in the two research designs were as follows:

1. The statistical design. This design involved a sample of 297 retained students with 938 incidences of retention. The difference in number of students and number of retentions was because some students failed more than one subject. The "t" test for correlated groups was administered to test the validity of the assumption that retention does not improve student achievement. The procedures included in this design were these:

- a. A selection of a sample of six schools was drawn at random from the seventy-two elementary schools in Bahrain. The sample schools drawn were

- El-Jasra School
- El-Zallaq School
- Bani Jamra School
- Kurtoba School
- Omar Abdul-Aziz School
- El-Hidd School.

The retained students who were enrolled in the aforementioned schools constituted the subjects of the investigation. The sample schools' records which were obtained from the Department of Examination and Educational Evaluation at the Ministry of Education showed that there were 356 retained students in 1978/79 with 1,175 retention incidences.

- b. Data on the final marks in the five main subjects (religion, Arabic, English, science, and mathematics) for the academic year 1978/79, and for the following academic year 1979/80 for the sample students were collected from the six schools' records. (It is on the basis of these final marks that students were promoted or required to repeat the grade.)

While collecting the data, the researcher found that marks of 59 students were missing from the schools' records. Therefore, these 59 students were eliminated from the sample of the study. Accordingly, the total number of retained students who were covered by the study in this respect was 297 with 938 retention incidences. (This figure constitutes 80% of the original sample.)

- c. The students' marks were tabulated by subject and grade. In this manner, a total of twenty-seven subject groups were obtained (English starts from fourth grade): four subject groups in each of the first three grades, and five subject groups in each of the remaining three grades, each consisting of two sets of marks (marks for 1978/79 and marks for 1979/80).
- d. A "t" test for correlated groups was calculated. The objective was to test the difference between the means of the two sets of marks for each subject group, and to identify whether this difference was statistically significant at the one per

cent level. The results of the "t" test were described and analyzed. They are presented in Chapter V.

2. The longitudinal study. The longitudinal study was directed to identification of relationship of retention to improvement in student achievement. The sample of students covered by this study was the total number of students whose records were available who were held back in the first grade in the aforementioned six schools in 1974/75. The schools' records, which were obtained from the Department of Examination and Evaluation at the Ministry of Education, showed that the number of these students was seventy-seven.

The basic procedures which were followed in the longitudinal study were these:

- a. Identification of the students who were retained in the first grade in 1974/75 in the sample six schools.
- b. Collection of the required data on student academic achievement in different subjects from the year of their first retention in 1974/75 until 1979/80. The data obtained also included the number of retentions the students experienced after their first retention, the grade they were able to reach by 1979/80, and the observations and

remarks of the schools' administrators about their academic progress.

- c. Investigation of the students' academic achievements from 1974/75 until 1979/80 as expressed by examination marks and the comments of school officials. The results of this investigation were calculated and described. They are reported in Chapter V.

CHAPTER IV
THE MAGNITUDE OF STUDENT RETENTION AND
ITS EFFECT ON SCHOOL CAPACITY
AND EDUCATION COST

Public elementary schools in Bahrain classify children by grades. Schooling is divided into six grade units of equal time length. One academic year covers nine months. Each school grade signifies an anticipated level of achievement in each subject matter area; examinations are devised to measure the knowledge and skills that each child has achieved and whether his knowledge and skills are up to the expected academic standards and the required level of mastery.

These examinations, which determine the promotion of the student from one grade to the next, are largely teacher-written examinations. They are given by subject matter teachers two times a year; one in mid-year and the other at the end of the academic year. The average marks on the examination in each subject matter area determine whether or not the student has proven capacity to be promoted. According to the 1979/80 Examination Regulations,⁵⁶

⁵⁶Ministry of Education, Examination Regulations of Elementary, Intermediate, and Secondary Schools, 1979/80, p. 5.

the student is considered eligible for promotion to the next grade when he obtains at least 50 per cent of the maximum mark in each subject he studied in his grade except fine arts and home economics. In fine arts, the student is required to obtain 20 per cent of the maximum mark and in home economics the student is required to obtain 40 per cent of the maximum mark. Moreover, the Examination Regulations oblige the student who is held back in his grade to re-study not only the subjects he failed but all the subjects taught in the grade he is repeating.

Magnitude and Rates of Student Retention From 1969/70 to 1978/79.

It is important to identify the magnitude and proportion of student retention over a period of time. Such an investigation yields a useful information base and reveals trends in student retention indicating whether the magnitude of retention is increasing or decreasing. The data on the status of student retention in public elementary schools in Bahrain from 1969/70 to 1978/79 are presented in Table 1. As can be seen from the table, the proportion of student retention is fluctuating greatly, and the range between the highest and the lowest proportion is very wide. The highest proportion of student retention was 24.0 per cent (in 1970/71), and the lowest proportion was 16.7 per cent (1967/68). However, the magnitude of

student retention witnessed a steady decrease during the four year period, 1970/71 to 1974/75. Student retention proportion decreased steadily from 24.0 per cent in 1970/71 to 19.3 per cent in 1974/75.

The statistical data in Table 1 show also that there were clear differences between retention of male students and retention of female students. A higher proportion of males was retained than of females in every year. Retention proportions during the period ranged from 26.1 per cent to 18.1 per cent for boys, while the range for girls was from 21.5 per cent to 14.9 per cent. In addition, the ratio of the total retained students to the total enrollment during the period was higher for boys than for girls. In the case of boys the ratio was 21.66 per cent while in the case of girls the ratio reached 17.86 per cent.

TABLE 1

ENROLLMENT, RETENTION, AND PROPORTION OF STUDENT
RETENTION IN PUBLIC ELEMENTARY EDUCATION IN
BAHRAIN, 1969/70 TO 1978/79 BY SEX AND YEAR.

Academic Year	Category and Proportion	Sex		Total
		Male	Female	
1969/70	E*	19,929	16,051	35,980
	R	5,193	2,832	8,025
	P	26.1	17.6	22.3
1970/71	E	20,590	15,423	36,013
	R	5,318	3,310	8,620
	P	25.8	21.5	24.0
1971/72	E	21,196	15,568	36,764
	R	5,173	3,208	8,381
	P	24.4	20.6	22.2
1972/73	E	21,568	16,273	37,841
	R	4,836	3,109	7,945
	P	22.4	19.1	21.0
1973/74	E	22,058	16,704	38,762
	R	4,684	2,924	7,608
	P	21.2	17.5	19.6
1974/75	E	22,805	17,630	40,435
	R	4,834	2,971	7,805
	P	21.2	16.9	19.3
1975/76	E	23,532	18,160	41,701
	R	5,232	3,156	8,388
	P	22.2	17.4	20.1
1976/77	E	23,920	18,761	42,690
	R	4,348	2,791	7,139
	P	18.2	14.9	16.7
1977/78	E	24,122	19,293	43,415
	R	4,380	3,046	7,426
	P	18.1	15.8	17.1
1978/79	E	24,496	19,602	44,098
	R	4,585	3,643	8,228
	P	18.7	18.6	18.6
Total E		224,216	173,465	397,681
Total R		48,583	30,995	79,578
Ratio of R to Total E		21.66	17.86	20.00

*E = Enrollment

R = Retained

P = Proportion of Retention = $\frac{\text{Number of Retained Students in a Grade}}{\text{Enrollment in the same grade}}$

Student Retention by Grade

To know the magnitude of retained students in each grade is to have valuable information about the grades which are usually repeated most frequently by students, as well as to pinpoint the bottlenecks which mostly hinder the flow and progress of students in public elementary schools in Bahrain.

The data presented in Table 2 show the amount and proportion of students retained by grade in public elementary schools in Bahrain from 1969/70 to 1978/79. These data indicate that the proportion of student retention varies widely from grade to grade and from year to year. The figures indicate the following:

1. The lowest retention proportion was 14.1 per cent at grade six in 1971/72.
2. The highest retention proportion was 33.2 per cent occurring at grade four in 1971/72 also.
3. Grade two had the lowest average proportion of retention. Even so, the average proportion of retention in this grade was 16.3 per cent.
4. Grade four had the highest average proportion of repeaters. The average proportion of retention in this grade reached 25.7 per cent. This means that this grade was the most frequently repeated grade by students during the period under investigation.

TABLE 2

ENROLLMENT AND RETENTION PROPORTION IN PUBLIC
ELEMENTARY EDUCATION IN BAHRAIN, 1969/70
TO 1978/79 BY GRADE AND YEAR.

Year and Category		1	2	3	4	5	6
1969/70	E	6,281	5,715	6,460	6,599	5,153	4,772
	R	956	1,050	1,343	1,920	1,493	1,263
	P	15.2	18.4	20.8	29.1	29.0	21.9
1970/71	E	6,503	5,939	5,896	7,137	5,391	5,147
	R	1,140	1,020	1,497	2,246	1,212	1,613
	P	17.5	17.2	25.4	31.5	22.5	31.3
1971/72	E	7,257	6,159	6,012	6,719	5,677	6,940
	R	1,429	1,190	1,330	2,230	1,220	982
	P	19.7	19.3	22.1	33.2	21.5	14.1
1972/73	E	7,410	7,014	6,183	6,753	5,404	5,068
	R	1,212	1,269	1,357	2,123	1,122	862
	P	16.3	18.1	22.0	31.4	20.8	17.0
1973/74	E	7,547	7,195	6,834	6,350	5,921	4,915
	R	1,301	1,344	1,260	1,657	1,136	901
	P	17.2	18.7	18.6	26.1	19.2	18.3
1974/75	E	7,593	7,290	7,186	7,181	5,830	5,355
	R	1,296	1,199	1,249	1,616	1,282	1,163
	P	17.1	16.4	17.4	22.5	22.0	21.7
1975/76	E	7,461	7,352	7,290	7,590	6,640	5,568
	R	1,391	1,224	1,320	1,774	1,334	1,345
	P	18.6	16.6	18.1	23.4	20.1	24.1
1976/77	E	7,422	7,263	7,457	7,585	6,887	6,076
	R	1,180	1,058	1,205	1,521	1,153	1,022
	P	15.9	14.6	16.1	20.0	16.7	16.8
1977/78	E	7,792	6,977	7,296	7,574	7,120	6,647
	R	1,200	1,107	1,202	1,435	1,190	1,292
	P	15.4	15.9	16.5	19.0	16.7	19.4
1978/79	E	7,922	7,273	6,994	7,685	7,202	7,017
	R	1,402	1,241	1,263	1,608	1,049	1,365
	P	17.7	17.1	18.1	21.0	18.7	19.4
Average Proportion		17.1	16.3	19.5	25.7	20.7	20.4

Student Retention by School

An examination of student retention in individual schools may throw more light on the status of this problem in public elementary education in Bahrain and provide more detailed information about the scope and magnitude of student retention at various school levels.

Table 3 presents interesting data about the level of retention in the different public elementary schools in Bahrain. Although the practices of student retention are identical in all Bahrain elementary schools because they are dictated officially by the central office of the Ministry of Education, the variation in the amount of student retention in individual schools is striking. As shown in Table 3, in 1978/79 the proportion of repeaters to the total enrollment in individual schools ranged from 26.7 per cent in Madeenat Essa school to 5.3 per cent in Bani Jamra school.

It is also interesting to note, as shown in the table, that the majority of schools had student retention proportions that did not deviate far from the average retention proportion, which is 15.0 per cent. For example, the number of schools with a 20 per cent or greater retention rate is only four and the number of schools which have a 10 per cent retention rate or lower is seven.

TABLE 3

AMOUNT OF ENROLLMENT, REPEATERS, AND PROPORTIONS OF
RETENTION IN PUBLIC ELEMENTARY SCHOOLS IN BAHRAIN
IN 1978/79 BY SCHOOL (EX. JOINT ELEMENTARY/
INTERMEDIATE SCHOOLS).

School	Enroll- ment	Repeaters	Propor- tion
1. El-Mamoon	193	22	11.4
2. Eman Ali	1,081	165	15.3
3. Othman	230	48	20.9
4. Om-El-Hasam	702	88	12.5
5. Ebn-Sina	484	96	19.8
6. El-Noam	383	48	12.5
7. El Khamees	1,107	215	19.4
8. Al Aly	569	99	17.4
9. Ab-Khildoon	278	52	18.7
10. El-Motanabi	468	26	5.5
11. Hassain	294	38	12.9
12. Ras El-Raman	228	27	11.8
13. El-Rashad	355	56	15.8
14. El-Jazeera	115	18	15.7
15. Abo Obaida	275	25	9.2
16. El-Halia	401	60	15.0
17. Omar Abdul-Aziz	489	82	16.8
18. El-Khalil	378	60	15.9
19. Abu Faras	335	61	18.2
20. El-Maari	533	47	8.9
21. El-Basaiteen	305	63	20.6
22. El-Hidd	384	61	15.9
23. Kalaly	140	19	13.6
24. El-Muthana	378	40	10.6
25. Arrad	329	56	17.0
26. Khalid	799	135	16.9
27. Tobli	665	85	12.8
28. Sanad	52	7	13.5
29. Madeenat Essa	1,094	292	26.7
30. El-Budaik	854	125	14.6
31. Barbar	634	68	10.7
32. El-Jasra	250	31	12.4
33. Karzakan	997	138	13.8
34. El-Zalaiq	99	13	13.1
35. Shehrakan	381	35	9.3
36. East Rofa	589	79	13.4
37. Askar (Boys)	39	4	9.3
38. Bo-Saibi	953	169	17.7
39. Emam Sadeq	1,175	136	11.6
40. Sanibes	932	118	12.7

TABLE 3 (Con't.)

School	Enroll- ment	Repeaters	Propor- tion
41. Maameer	858	135	15.7
42. Fatema El-Zahra	1,013	111	10.9
43. Zainab	603	111	18.4
44. Sakeena	603	100	16.6
45. Khawla	602	68	11.3
46. Om-Aiman	710	133	18.7
47. El-Adwia	708	120	16.9
48. Sumiah	469	47	10.1
49. El-Noam	250	48	19.2
50. Um-El-Hasan	464	59	12.7
51. Belad Kadeem	1,174	185	15.7
52. Amina	527	74	14.1
53. Safia	562	91	16.2
54. Zobaida	459	48	10.5
55. El-Halla	484	84	17.3
56. El-Hidd (Girls)	646	107	16.6
57. El-Basaiteen (Girls)	243	38	15.6
58. El-Kudis	420	58	13.8
59. Kurtoba	371	64	17.2
60. Rogiah	326	49	15.1
61. El-Dair	780	117	15.0
62. Mariam Bint Omran	518	90	17.4
63. Khawla	883	165	18.7
64. Hafsa	320	34	10.6
65. Askar (Girls)	48	4	8.3
66. Duraz	591	97	16.4
67. El-Budiak (Girls)	319	36	11.3
68. Barbar	463	69	14.9
69. Bani Jamra	358	19	5.3
70. Fatema Bent Asad	801	113	14.1
71. El-Zallaq (Girls)	262	53	20.2
72. Nowidrat (Girls)	290	40	13.8
Total and Average	37,072	5,593	15.0

The question which imposed itself here was why do these schools differ so widely in their number of student retentions while they are almost identical in their curriculums and their pattern of administration? (They are parts of one centrally controlled educational system and have the same supervision to insure that they are following the approved curriculum and using the same textbooks.)

To shed more light on this issue, the researcher made a comparison between these schools in the following three areas: the number of qualified teachers each school has, the availability of school libraries, and the size of enrollment.

The findings of the comparison, as presented in Table 4, interestingly show that there is no single pattern of relationship between the amount of student retention on the one hand and the combination of the three variables.

With regard to the qualified teacher variable, the results show that the schools with the lowest proportion of retention had the highest proportion of qualified teachers, and the greater the proportion of qualified teachers the lower the proportion of student retention. Table 4 shows that the schools which fell in the lowest range of retention (0-10 per cent) had 63.6 per cent of their teaching staff qualified, while the schools which fell in

TABLE 4

PROPORTION OF QUALIFIED TEACHERS, SIZE OF THE SCHOOLS,
AND THE AVAILABILITY OF SCHOOL LIBRARIES IN PUBLIC
ELEMENTARY SCHOOLS IN BAHRAIN (1978/79).

Retention Proportion (%)	School	Propor- tion of Quali- fied Teachers	Availa- bility of School Library	School Enroll- ment
0-10	El-Motanabi	69.5	1	468
	Abo-Obaida	93.7	0	275
	El-Maari	15.0	0	533
	Shehrakan	94.4	0	381
	Askar	0.0	0	39
	Askar (Girls)	88.8	0	48
	Bani Jamra	84.1	0	358
	<u>Average</u>	<u>63.6</u>	<u>0.14</u>	<u>300</u>
10.01-20	El-Mamoon	40.0	1	193
	Emam-Ali	42.8	0	1,081
	Om-El-Hasam	75.0	1	702
	Ebin-Sina	71.4	1	484
	El-Moam	43.7	0	383
	El-Khames	50.0	0	1,107
	El-Aly	33.3	0	569
	Abin-Khildoon	23.1	1	278
	Hassain	92.9	1	294
	Ras-El-Roman	66.9	1	228
	El-Rashad	87.7	1	355
	El-Jazeera	50.0	1	115
	El-Halia	50.0	0	401
	Omar Abdul-Aziz	31.8	0	489
	El-Khaleel	47.1	1	378
	Abu-Faras	68.7	0	335
	El-Hidd	26.6	1	384
	Kalaly	47.0	1	140
	El-Muthana	47.0	0	378
	Arrad	40.0	1	329
	Khalid	81.5	1	799
	Tobli	68.1	0	665
	Sanad	60.0	0	52
	Barbar	50.0	0	634
	El-Jasra	55.5	0	250
	Karzakan	50.0	0	997
	El-Zallaq	55.5	1	99
	East-Rofa	40.0	0	589

TABLE 4 (Con't.)

Retention Proportion (%)	School	Proportion of Qualified Teachers	Availability of School Library	School Enrollment
	Bu-Saibi	53.3	0	953
	Emam El-Sadeq	47.2	0	1,175
	Sanibes	33.3	1	932
	Maameer	53.3	0	858
	Fatema El-Zahra	65.0	1	1,013
	Zainab	58.3	1	603
	Sakeena	55.6	1	603
	Khawla	80.8	1	602
	Om-Aiman	14.8	1	710
	El-Adwai	76.7	1	708
	Sumiah	69.6	1	469
	El-Noam	90.9	1	250
	Um-El-Hassam	68.8	1	464
	Belad Kadeem	88.1	1	1,174
	Amina	73.9	1	527
	Sffia	77.4	0	562
	Zubiaida	72.7	0	459
	El-Halla	74.4	0	484
	El-Hidd (Girls)	59.2	1	646
	El-Besaiteen (Girls)	57.1	0	243
	El-Kudis	88.9	0	420
	Kurtoba	55.5	0	371
	Rugaih	57.1	0	326
	El-Dair	48.9	0	780
	Mariam Bint Omran	57.9	1	518
	Khawla	80.8	1	883
	Hafsa	66.7	0	320
	Duraz	90.9	0	591
	El-Budiak (Girls)	92.3	1	319
	Barbar	92.9	0	463
	Fatma Bent Asad	91.3	0	801
	Nuwaidrat (Girls)	100.0	0	290
	El-Budiak (Boys)	44.0	0	854
	<u>Average</u>	<u>61.2</u>	<u>0.49</u>	<u>542</u>
20.01 and Above	El-Zallaq (Girls)	91.7	0	262
	Othman	40.0	1	230
	El-Basaiteen (Boys)	44.4	0	305
	Madeenat Essa	62.5	0	1,094
	<u>Average</u>	<u>59.6</u>	<u>0.25</u>	<u>473</u>

the highest range of retention proportion (20.01 per cent and above) had 59.6 per cent of their teachers qualified.

When the availability of school libraries was considered, the findings indicated that there was no steady relationship between this variable and student retention. As it can be seen from Table 4, only 14 per cent of the schools which fell in the lowest range of student retention proportion (0-10 per cent) had school libraries, while 49.0 per cent of the schools which fell in the medium range of retention proportion (10.01-20 per cent) had school libraries. However, it is worthwhile mentioning also that the schools with the highest retention proportions (20.01 per cent and above) had the medium percentage of school libraries.

With reference to the third variable, namely, school size, the results of the investigation point out that there was no one pattern of relationship between this variable and retention proportion. As is shown in Table 4, the schools which fell in the lowest range of retention proportions (0-10 per cent) had the lowest average number of students (300 students), and the schools which are in the medium range of retention proportion (10.01-20 per cent) had the highest average student enrollment (542 students) while the schools with the highest proportion of retention (20.01 per cent and above), had the medium

average student enrollment (473 students).

The main conclusion which can be drawn from this comparison is that the qualified teacher variable seems to be negatively related to the proportion of student retention in schools. This means that the more qualified teachers schools employ, the fewer student retentions they are likely to have.

Effects of Student Retention on Schools' Capacity

One of the main objectives of this study was to measure the effects of student retention on the input/output capacity of schools. To satisfy this objective, the researcher utilized the "cohort" method to calculate the input/output efficiency of public elementary schools in Bahrain. The "cohort" method refers to a group of students enrolled in a given grade in a particular year. The progress of the group is followed through successive years and grades until the completion of the school cycle.

The measurement of the input/output efficiency of schools by means of the "cohort" method was conducted as follows:

1. Based on the statistical data on enrollment in public elementary education by grade and sex for the period from 1969/70 to 1979/80 (see Tables 5 and 6), and using the formulas indicated in the appendix, the rates of

TABLE 5

ENROLLMENT AND REPEATERS IN PUBLIC ELEMENTARY
EDUCATION IN BAHRAIN, CLASSIFIED BY GRADE
AND YEAR (BOYS ONLY) 1969/70-1979/80.

Year & Category	G r a d e					
	1	2	3	4	5	6
1969/70						
Enrollment	3,566	3,120	3,518	4,011	2,903	2,811
Repeaters	530	630	795	1,343	1,052	839
1970/71						
Enrollment	3,652	3,323	3,171	4,422	3,174	2,848
Repeaters	567	523	748	1,665	835	980
1971/72						
Enrollment	4,277	3,461	3,327	3,922	3,279	2,930
Repeaters	813	689	720	1,501	754	696
1972/73						
Enrollment	4,161	4,014	3,443	3,932	3,077	2,941
Repeaters	798	716	715	1,320	691	596
1973/74						
Enrollment	4,240	4,109	3,804	3,713	3,394	2,798
Repeaters	719	864	694	1,070	713	624
1974/75						
Enrollment	4,234	4,059	4,002	4,128	3,385	2,997
Repeaters	744	727	665	998	835	865
1975/76						
Enrollment	4,153	4,125	4,130	4,245	3,675	3,204
Repeaters	810	738	867	1,117	835	865
1976/77						
Enrollment	3,899	4,100	4,211	4,362	3,890	3,467
Repeaters	615	592	699	942	772	728
1977/78						
Enrollment	4,054	3,755	4,142	4,383	3,993	3,795
Repeaters	652	593	684	937	721	793
1978/79						
Enrollment	4,184	3,882	3,840	4,485	4,139	3,966
Repeaters	701	618	698	962	810	796
1979/80						
Enrollment	4,247	3,958	3,955	3,998	4,169	3,895
Repeaters	718	602	676	903	809	603

TABLE 6

ENROLLMENT AND REPEATERS IN PUBLIC ELEMENTARY
EDUCATION IN BAHRAIN, CLASSIFIED BY GRADE
AND YEAR (GIRLS ONLY) 1969/70-1979/80.

Year & Category	G r a d e					
	1	2	3	4	5	6
1969/70						
Enrollment	2,715	2,595	2,942	2,588	2,250	2,961
Repeaters	426	416	548	577	441	424
1970/71						
Enrollment	2,851	2,616	2,725	2,715	2,217	2,299
Repeaters	573	497	749	581	377	633
1971/72						
Enrollment	2,980	2,698	2,685	2,797	2,398	2,010
Repeaters	616	501	610	729	466	286
1972/73						
Enrollment	3,258	3,000	2,740	2,821	2,327	2,127
Repeaters	414	553	642	803	431	266
1973/74						
Enrollment	3,307	3,086	3,030	2,637	2,527	2,117
Repeaters	582	480	575	587	423	277
1974/75						
Enrollment	3,359	3,231	3,184	3,053	2,445	2,358
Repeaters	552	472	584	618	447	298
1975/76						
Enrollment	3,308	3,227	3,160	3,345	2,765	2,364
Repeaters	581	486	453	657	499	480
1976/77						
Enrollment	3,523	3,163	3,246	3,223	2,997	2,609
Repeaters	565	466	506	579	381	294
1977/78						
Enrollment	3,738	3,222	3,154	3,191	3,136	2,852
Repeaters	548	514	518	498	469	499
1978/79						
Enrollment	3,738	3,391	3,154	3,200	3,068	3,051
Repeaters	701	623	565	646	539	569
1979/80						
Enrollment	3,835	3,657	3,185	3,138	3,072	2,919
Repeaters	697	654	572	621	490	510

TABLE 7

RATES OF PROMOTION, RETENTION, AND DROPOUT IN PUBLIC
ELEMENTARY EDUCATION IN BAHRAIN, CLASSIFIED BY
GRADE AND YEAR (BOYS ONLY) 1969/70-1978/79.

Year & Category		G r a d e					
		1	2	3	4	5	6
1969/70	aP	78.5	77.6	78.6	58.3	64.3	b65.1
	R	15.9	18.9	21.2	14.3	28.8	34.9
	D	5.6	3.5	0.2	27.4	6.9	0.0
1970/71	P	75.9	78.4	76.3	57.1	70.4	b67.9
	R	22.3	20.7	22.7	33.9	23.7	24.4
	D	1.8	0.9	1.0	9.0	5.9	7.7
1971/72	P	77.1	78.8	78.5	60.8	71.5	b73.5
	R	18.6	20.6	21.5	33.6	21.1	20.3
	D	4.3	0.6	0.0	5.6	7.4	6.2
1972/73	P	78.0	77.5	76.8	68.2	70.6	b74.6
	R	17.3	21.5	20.1	27.2	23.2	21.2
	D	4.7	1.0	3.1	4.6	6.2	4.2
1973/74	P	78.5	81.2	82.2	68.7	62.8	b75.2
	R	17.5	17.6	17.4	26.9	24.6	21.4
	D	4.0	1.2	0.4	4.4	12.6	3.4
1974/75	P	79.9	80.4	78.2	68.8	69.1	b66.5
	R	19.2	18.1	21.6	27.0	24.7	28.9
	D	0.9	1.5	0.2	4.2	6.2	4.6
1975/76	P	84.4	85.1	82.8	73.4	74.5	b72.9
	R	14.8	14.3	16.9	22.2	21.0	22.7
	D	0.8	0.5	0.3	4.4	4.5	4.4
1976/77	P	81.1	84.3	81.8	75.0	77.2	b73.5
	R	16.7	14.4	16.2	21.4	18.5	22.9
	D	2.2	1.3	2.0	3.6	4.3	3.6
1977/78	P	80.5	83.6	83.1	75.8	79.3	b79.0
	R	17.3	16.4	16.8	21.9	20.3	21.0
	D	2.2	0.0	0.1	2.3	0.4	0.0
1978/79	P	80.2	84.5	80.5	74.9	80.0	b78.5
	R	17.2	15.5	17.6	20.1	19.6	21.0
	D	2.6	0.0	1.9	5.0	0.4	0.5

^aP = Promotion
R = Retention
D = Dropout

^bThe reported percentage of success in the final examination.

TABLE 8

RATES OF PROMOTION, RETENTION, AND DROPOUT IN PUBLIC
ELEMENTARY EDUCATION IN BAHRAIN CLASSIFIED BY
GRADE AND YEAR (GIRLS ONLY) 1969/70-1978/79.

Year & Category		G r a d e					
		1	2	3	4	5	6
1969/70	a ^a P	78.0	76.1	72.9	71.1	74.5	b ^b 70.1
	R	21.0	19.1	25.4	22.4	16.7	27.2
	D	1.0	4.8	1.6	6.5	8.8	2.7
1970/71	P	77.1	79.3	75.9	71.2	77.8	b ^b 78.8
	R	21.6	19.1	22.4	26.8	21.0	12.4
	D	1.3	1.6	1.7	2.0	1.2	8.8
1971/72	P	82.1	77.8	75.1	67.8	77.6	b ^b 84.1
	R	13.9	19.6	23.9	28.7	18.0	13.2
	D	4.0	2.6	1.0	3.5	4.4	2.7
1972/73	P	80.0	81.8	74.8	74.6	79.1	b ^b 86.6
	R	17.9	16.0	21.0	20.9	18.2	13.2
	D	2.1	2.2	4.2	4.5	2.7	0.2
1973/74	P	83.4	84.2	80.4	75.8	81.5	b ^b 84.8
	R	16.6	15.3	19.3	23.4	17.7	14.1
	D	0.0	0.5	0.3	0.8	0.8	1.1
1974/75	P	81.6	83.8	84.4	74.2	77.1	b ^b 76.5
	R	17.2	15.0	14.2	21.5	20.4	20.3
	D	1.2	1.2	1.4	4.3	2.5	3.2
1975/76	P	81.5	84.9	83.7	78.2	83.7	b ^b 84.9
	R	17.2	14.4	16.0	17.3	13.8	12.4
	D	1.3	0.7	0.3	4.5	2.5	2.7
1976/77	P	76.9	83.3	83.0	82.7	78.5	b ^b 81.2
	R	15.6	16.3	15.9	15.5	15.6	17.2
	D	7.5	0.4	1.1	1.8	5.9	1.6
1977/78	P	74.1	80.3	81.0	79.3	79.1	b ^b 78.4
	R	18.7	19.3	17.9	20.2	17.2	19.9
	D	7.2	0.4	1.1	0.5	3.7	1.7
1978/79	P	80.3	77.1	79.8	80.6	78.5	b ^b 83.2
	R	18.6	19.3	18.1	19.4	16.0	16.7
	D	1.1	3.6	2.1	0.0	5.5	0.1

^aP = Promotion
R = Retention
D = Dropout

^bThe reported percentage of success in the final examination.

promotion, retention and dropout for males and females were obtained. They are presented in Tables 7 and 8 respectively.

It should be noted that the calculation of the rates of promotion, retention and dropouts in grade six were based on information on pupils having successfully passed the final examinations in 1969/70 through 1979/80. Taking 1969/70 (boys) for example, the computations are as follows:

$$\begin{aligned}\text{Rate of Promotion} &= \frac{\text{the reported percentage of success in}}{\text{the final examination (1969/70)}} \\ &= 65.1\%\end{aligned}$$

$$\begin{aligned}\text{Rate of Retention} &= \frac{\text{Retention in grade 6 (1970/71)}}{\text{Enrollment in grade 6 (1969/70)}} \\ &= \frac{980}{2811} = 34.9\end{aligned}$$

$$\begin{aligned}\text{Rate of Dropout} &= 100 - (\text{Rate of promotion} + \text{Rate of Retention}) \\ &= 100 - (65.1 + 34.9) = 0.00\end{aligned}$$

2. The second step was the application of these rates to the actual cohort groups of 3,566 boys and 2,715 girls who were enrolled in the first grade in 1969/70 (see Tables 5 and 6). By this means it was possible to reconstruct the actual movement of these two cohort groups through the elementary school cycle. This

movement of the two groups is expressed and depicted in Figure 1 for boys and in Figure 2 for girls. In these two figures the sign  means "promotion," and the sign  means "retention," and the sign  means "dropout."

3. As is seen in Figure 1, the total number of years invested to graduate 2,589 male students from elementary education was 24,625 years. Thus, the average number of years spent per male graduate was equal to

$$\frac{24,625}{2,589} = 9.51 \text{ years}$$

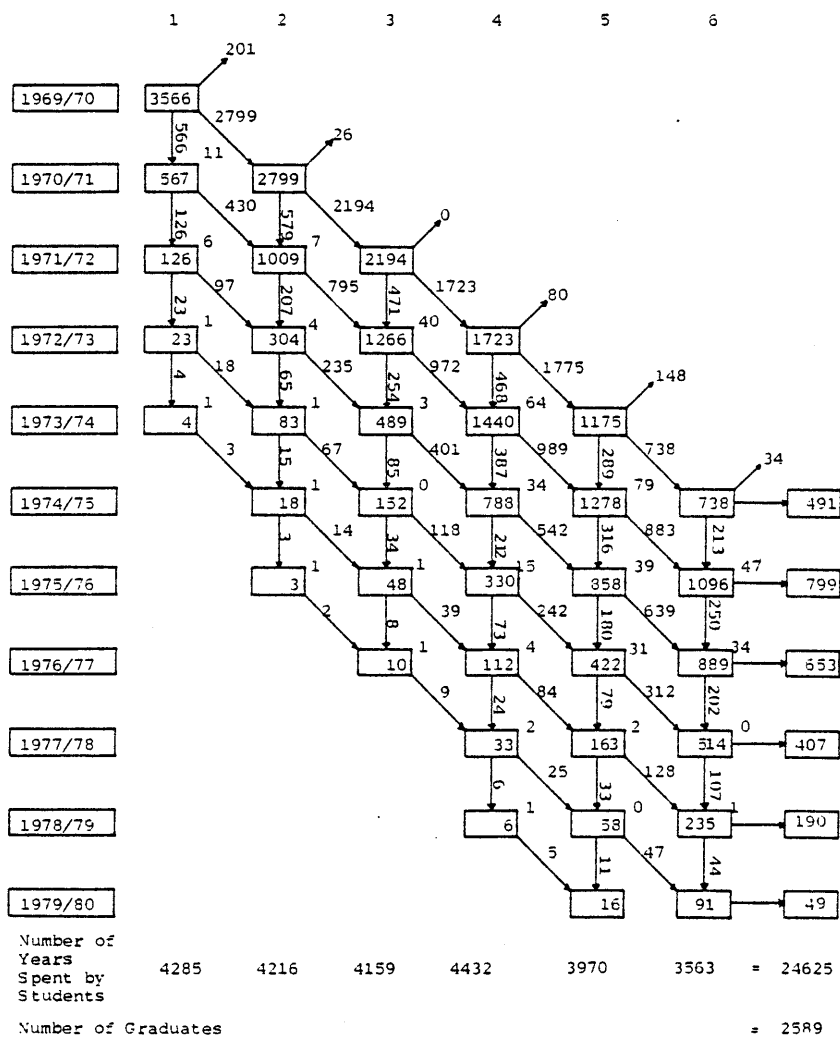
Accordingly, the input/output capacity of elementary boys' schools was

$$\begin{aligned} \text{Input/output capacity} &= \frac{\text{Years per graduate}}{\text{Duration of elementary school}} \\ &= \frac{9.51}{6} = 1.59 \end{aligned}$$

This means that retention and dropouts inflated the annual cost per male student in elementary education by 59 per cent.

FIGURE 1

ACTUAL FLOW OF STUDENTS THROUGH PUBLIC
ELEMENTARY EDUCATION IN BAHRAIN
(BOYS ONLY) 1969/70-1979/80



In cases of girls' schools, as is seen in Figure 2, it took a total of 19,205 years to get 2,315 students to graduate with a six-year elementary education. Thus, on the average, the number of years spent per graduate was

$$\frac{19,205}{2,315} = 8.30 \text{ years}$$

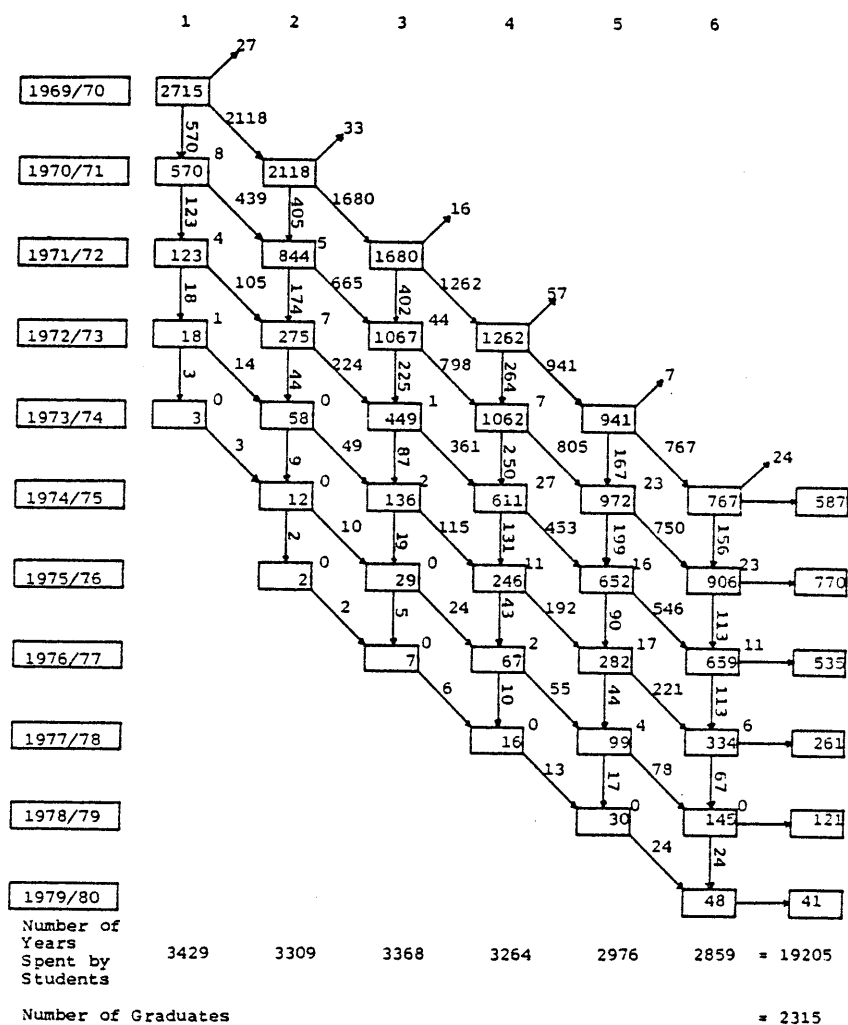
Accordingly, the input/output capacity of elementary girls' schools was

$$\frac{\text{Years per graduate}}{\text{Duration of Elementary Education}} = \frac{8.30}{6} = 1.38$$

This means that retention and dropouts inflated the annual cost per female student in elementary education by 38 per cent.

FIGURE 2

ACTUAL FLOW OF STUDENTS THROUGH PUBLIC
ELEMENTARY EDUCATION IN BAHRAIN
(GIRLS ONLY) 1969/70-1979/80



Effect of Retention and Dropout on Recurrent Cost of Education

According to a recent study made by the Ministry of Education in Bahrain,⁵⁷ the recurrent annual cost per student in elementary education in 1979/80 was 336 dinars (equal to \$840.00) for boys and 326 dinars (equal to \$815.00) for girls. Since we know from the foregoing calculation that student retention and dropouts inflated the annual cost per male student in elementary education by 59 per cent and the annual cost per female student by 38 per cent, the increase in the annual cost per student in elementary education which was due to retention and dropout was as follows:*

1. For Boys:

$$\begin{array}{lcl}
 \text{The ideal recurrent} & \text{The actual recurrent} & \text{Normal school} \\
 \text{cost per student per} & \text{cost per student} & \text{duration} \\
 \text{annum (when there is} & \text{per year} & \text{x} \quad \frac{\text{The average}}{\text{number of years}} \\
 \text{no retention nor} & & \text{spent per} \\
 \text{dropouts)} & & \text{graduate} \\
 & & \\
 & & = 336 \times \frac{6}{9.55} = 211.10 \text{ Bahraini dinars}
 \end{array}$$

⁵⁷Latifa El-Manai, The Cost of Education in Bahrain, (Bahrain: Ministry of Education, 1980), p. 6.

*Since information on the recurrent cost per student per year for 1969/70 to 1979/80 is not available, the recurrent cost per student of 1979/80 was used to calculate the cost of retention and dropouts. This may inflate the cost a little bit.

The increase in the annual cost per student due to retention and dropouts	=	The actual recur- rent annual cost per student	-	The ideal recurrent cost per student per annum
				= 336 - 211.10 = 124.90 Bahraini dinars

2. For Girls:

The ideal recurrent
cost per student
per annum = $326 \times \frac{6}{8.30} = 235.66$ dinars

The increase in the annual cost per student due to retention and dropouts	=	The actual recur- rent cost per student	-	The ideal recurrent cost per student per annum
				= 326 - 235.66 = 90.34 dinars

In conclusion, the foregoing investigation of student retention has pointed out clearly that student retention inflates school enrollments and increases the annual recurrent cost per student. The question which may be asked now is this: "Is student retention practice a waste which has no educational returns or benefits? Or is it an investment which helps students to improve in their academic achievement?"

Educators in Bahrain hold different opinions about this issue. Some of them consider student retention a waste which hinders the movement of students in the educational cycle and thus impedes the expansion of education. Others, on the contrary, see student retention

as an appropriate educational investment which helps students to recover and improve their academic achievement.

To put this debate on a sounder foundation the researcher investigated the effect of student retention on academic achievement and discusses his findings in the following chapter.

CHAPTER V
EFFECT OF STUDENT RETENTION
ON ACADEMIC ACHIEVEMENT

The assumption that will be verified in this chapter is that student retention and subsequent repetition of school work by students in public elementary schools in Bahrain does not improve the academic achievement of students as measured by school examinations.

To test the validity of the aforementioned assumption, the research utilized two different research procedures. The first procedure included the use of the "t" test for related groups. The second required a longitudinal study of the achievement progress of a sample of seventy-seven retained students over a six-year period of time.

The Statistical Procedure

The investigation carried out in this respect covered a sample of six schools drawn at random from among the seventy-two elementary schools scattered throughout the country. The students attending these six sample schools who were repeating a grade were the subjects of this study. The records of the sample schools showed that there were a total of 356 retained students in 1978/79

with 1,175 retention incidences. (This is because some students failed more than one subject.)

Data on the final marks of the 356 retained students for the first year of retention (1978/79) and the following year (1979/80) were collected. The subjects for which the marks were collected were

Religious Education

Arabic Language

English Language (Grades 4-6)

Mathematics

General Science

While collecting the data, the researcher found that marks of 59 students with 237 retention incidences were missing from the schools' records. Therefore, the 59 students with the 237 retention incidences were eliminated from the sample of this portion of the study. The eliminated retention incidences constitute 19.8 per cent of the total sample retention incidences. Accordingly, the total number of retention incidences which were covered by the investigation was 938. Table 9 shows the 938 retention incidences classified by grade and subject.

The aforementioned classification of data provided twenty-seven subject groups (5 subjects x 6 grades, excepting English which is taught in three grades beginning from Grade 4), each consisting of two sets of marks (marks

TABLE 9

THE NUMBER OF RETENTION INCIDENCES UNDER
INVESTIGATION CLASSIFIED BY GRADE
AND SUBJECT 91978/79).

Grade	Subject					Total
	Reli- gious Educ.	Arabic	English	Math.	Science	
1	33	25	-	33	13	104
2	16	30	-	22	6	74
3	35	47	-	37	24	143
4	69	68	38	19	35	229
5	42	43	29	28	20	162
6	59	33	44	42	48	226
Total	254	246	111	181	146	938

for the first year 1978/79 and for the following year 1979/80.

The "t" test for correlated groups was administered in each set to test the difference between the means of the two sets of marks for each subject group and to measure whether this difference was statistically significant at the one per cent level ($\alpha = .01$). This provided the basis for determining whether to accept or reject the null hypothesis which stated that retention does not improve student academic achievement. The summary of the results of the "t" test is shown in Table 10. As can be seen from the table, the obtained "t" values of all subject groups, except the science group at second grade,

TABLE 10

THE "t" VALUES AND THE STATISTICAL DIFFERENCES BETWEEN THE MEANS OF STUDENTS' MARKS FOR THE TWO SUCCESSIVE YEARS IN THE FIVE SELECTED SUBJECTS BY GRADE.

Grade/ Subject	N	$\bar{D}^*$	S_D^{**}	S_{diff}^{***}	Obtained "t" Value	Absolute "t" Value	Statisti- cally Sig- nificant
<u>First Grade</u>							
Religious							
Education	33	14.27	10.69	1.86	7.59	2.75	Yes
Arabic	25	53.12	20.42	4.08	13.02	2.79	Yes
Math	33	35.90	17.20	2.99	2.94	2.75	Yes
Science	13	40.61	13.51	3.75	10.82	3.05	Yes
<u>Second Grade</u>							
Religious							
Education	16	14.31	12.69	3.17	4.51	2.95	Yes
Arabic	30	26.30	15.08	2.75	9.56	2.76	Yes
Math	22	15.77	20.66	4.40	3.58	2.83	Yes
Science	6	2.66	18.69	7.66	0.34	4.03	No
<u>Third Grade</u>							
Religious							
Education	35	21.54	15.84	2.68	8.03	2.75	Yes
Arabic	47	27.23	15.30	2.23	12.21	2.75	Yes
Math	37	24.89	17.32	2.84	8.76	2.75	Yes
Science	24	22.54	13.96	2.85	7.90	2.81	Yes
<u>Fourth Grade</u>							
Religious							
Education	69	12.27	7.22	0.87	14.10	2.75	Yes
Arabic	68	27.70	12.08	1.46	18.97	2.75	Yes
English	38	26.00	8.68	1.40	18.57	2.75	Yes
Math	19	12.21	12.30	2.82	4.32	2.88	Yes
Science	35	14.62	12.50	2.11	6.93	2.75	Yes
<u>Fifth Grade</u>							
Religious							
Education	42	11.85	8.87	1.36	8.71	2.75	Yes
Arabic	43	11.44	13.50	2.06	5.55	2.75	Yes
English	29	17.34	14.22	2.64	6.57	2.76	Yes
Math	28	20.67	15.78	2.98	6.93	2.77	Yes
Science	20	17.30	14.34	3.21	5.39	2.86	Yes
<u>Sixth Grade</u>							
Religious							
Education	59	22.77	7.91	1.03	22.11	2.75	Yes
Arabic	33	30.00	13.92	2.42	12.39	2.75	Yes
English	44	28.25	13.97	2.18	12.95	2.75	Yes
Math	42	53.42	16.92	2.60	20.55	2.75	Yes
Science	48	38.02	11.45	1.65	23.04	2.75	Yes

* $\bar{D}$ = the mean of difference between the two sets of subject marks.

** S_D = the standard deviation of the difference between means.

*** S_{diff} = the standard error of the difference between means.

were larger than the absolute "t" values at the one per cent level. This indicated that retention did improve student academic achievement in all selected subjects in all elementary grades with the exception of the science group in grade two. Therefore, our null hypothesis which says that retention does not improve student achievement was rejected for the twenty-six groups because their obtained "t" values were larger than the absolute "t" values.

With regard to the science group in grade two, the obtained "t" value was smaller than the absolute "t" value at the one per cent level. In this case our null hypothesis which says that retention would not improve student achievement was accepted. However, we have to be cautious about this result because the science group in grade two was small. It consisted of six students only.

Based on the results of the "t" test which were discussed earlier, we can conclude that retention in public elementary education in Bahrain seems to help students improve their academic achievement in the five subjects under investigation except in the science subject in the second grade.

However, it is worth noting here that a close investigation of the records of the sample students revealed that 91 retained students (31 per cent of the sample students) did not achieve the required academic

level whereby they could be promoted to the next grade despite the academic improvement they achieved as measured by the school examinations. For example, in the Hidd Boys' School, only one student out of the six students who were retained in grade two because of failure in mathematics achieved the required academic level whereby he could be promoted to the next grade. Another example is in the Omar Abdul-Aziz School. In this school only five students out of the fourteen students who were retained in grade five because of their failure in Arabic achieved the required academic level which made them eligible to be promoted to the next grade.

Thus, the conclusion that can be drawn from this investigation is that although retention helps students to improve their achievement it does not seem to help a considerable number of them to achieve the required academic level of achievement by which they can be promoted to the next grade level.

In order to shed more light on these findings, the researcher utilized an additional research procedure, namely, "a longitudinal study," to further test the assumption that retention does not improve students' academic achievement.

The Longitudinal Study

The longitudinal investigation covered all the students who were retained in the first grade in 1974/75 in the six sample schools. The sample schools' records show that the total number of these retained students was seventy-seven.

The researcher traced the academic progress of these students from 1974/75 until 1979/80 with the aim of investigating the effect of retention on their successive academic progress.

As summarized and reported in Table 11, the academic profiles of the seventy-seven retained students present us with the following interesting information:

Out of the seventy-seven retained students

1. only fifteen students (this constitutes 19.5 per cent of the total) were able to proceed smoothly and reached the fifth grade in 1979/80 with no more retentions after being retained in the first grade in 1974/75.
2. thirty-two students (41.5 per cent of the total) were retained once after their first retention in 1974/75.
3. twenty students (26 per cent of the total) were retained two times after their first retention in 1974/75.

TABLE 11

THE ACADEMIC PROGRESS OF THE STUDENTS WHO WERE
RETAINED IN THE FIRST GRADE IN 1974/75 IN
THE SIX SAMPLE SCHOOLS (1974/75-1979/80).

Student Number	Retention After First Year	Grade Reached in 1979/80	Other Observations
1	1	5*	
2	2	3	
3	1	5*	
4	2	3	Retained for 3 yrs. in first grade
5	2	3	
6	0	5	a*"Borderline" achiever
7	1	4	
8	1	4	
9	2	3	
10	-	-	Dropped out from first grade
11	2	4*	
12	2	3	
13	0	5	b*"good" achiever
14	-	-	Dropped out from second grade
15	0	5	"Borderline" achiever
16	1	4	
17	0	5	"Borderline" achiever
18	1	4	
19	2	3	Retained for 3 yrs. in second grade
20	0	-	Dropped out from second grade
21	1	4	
22	2	3	Retained for 3 yrs. in second grade
23	0	5	C*"Fairly good" achiever
24	-	-	Dropped out from first grade
25	1	5*	
26	1	4	
27	1	5*	
28	1	4	
29	1	4	
30	1	4	
31	2	3	Retained for 3 yrs. in third grade
32	2	4*	
33	2	3	Retained for 3 yrs. in third grade
34	1	5*	
35	0	5	"Borderline" achiever
36	2	3	
37	2	4*	
38	1	4	
39	2	3	
40	1	4	
41	1	4	
42	0	5	"Borderline" achiever
43	-	-	Dropped out from first grade
44	2	3	Retained for 3 yrs. in first grade
45	2	4*	
46	1	4	

TABLE 11 (Con't.)

Student Number	Retention After First Year	Grade Reached in 1979/80	Other Observations
47	0	5	"Borderline" achiever
48	0	5	"Fairly good" achiever
49	1	5*	
50	1	4	
51	1	5*	
52	1	4	
53	0	-	Dropped out from third grade
54	1	4	
55	1	4	
56	2	3	
57	2	4*	
58	0	5	"Fairly good" achiever
59	1	4	
60	1	4	
61	0	-	Dropped out from second grade
62	0	-	Dropped out from third grade
63	2	4*	
64	0	5	"Borderline" achiever
65	1	-	Dropped out from second grade
66	1	4	
67	1	5*	
68	2	3	
69	1	4	
70	0	5	"Good" achiever
71	0	5	"Fairly good" achiever
72	1	4	
73	0	5	"Fairly good" achiever
74	1	4	
75	-	-	Dropped out from third grade
76	0	5	"Good" achiever
77	1	4	

*Retained in their grades in 1979/80.

^aA "Borderline" achiever is the achiever whose marks are within the range 50 to 64 marks out of 100 marks.

^bA "good" achiever is the achiever whose marks are within the range of 70 to 80 marks out of 100 marks.

^cA "fairly good" achiever is the achiever whose marks are within the range of 65 to 69 out of 100 marks.

4. Ten students (13 per cent of the total) dropped out of the school.

5. Six students of the fifty-two students who were retained for one or two times after the first retention in 1974/75 were held back for three years in a grade.

It is also interesting to know that of the fifteen students who proceeded in their study smoothly without any more retention after being retained in the first grade

a. only three students were considered by their schools as "good" achievers

b. five students were evaluated by their schools as "fairly good" achievers

c. the remaining seven students were evaluated by their schools as "borderlines."

In addition the students' profiles indicated that as many as forty-five students out of fifty-two who were retained for one time or more after their first retention in grade one in 1974/75 failed the same subjects they were retained for in the first grade.

The foregoing discussion has shown that the academic progress of the seventy-seven students under investigation was of three main patterns: some of the students proceeded in their study without any more retention after the first retention in the first grade in 1974/75. Others were retained for one or more years, while a third group dropped out of school before completing their elementary education.

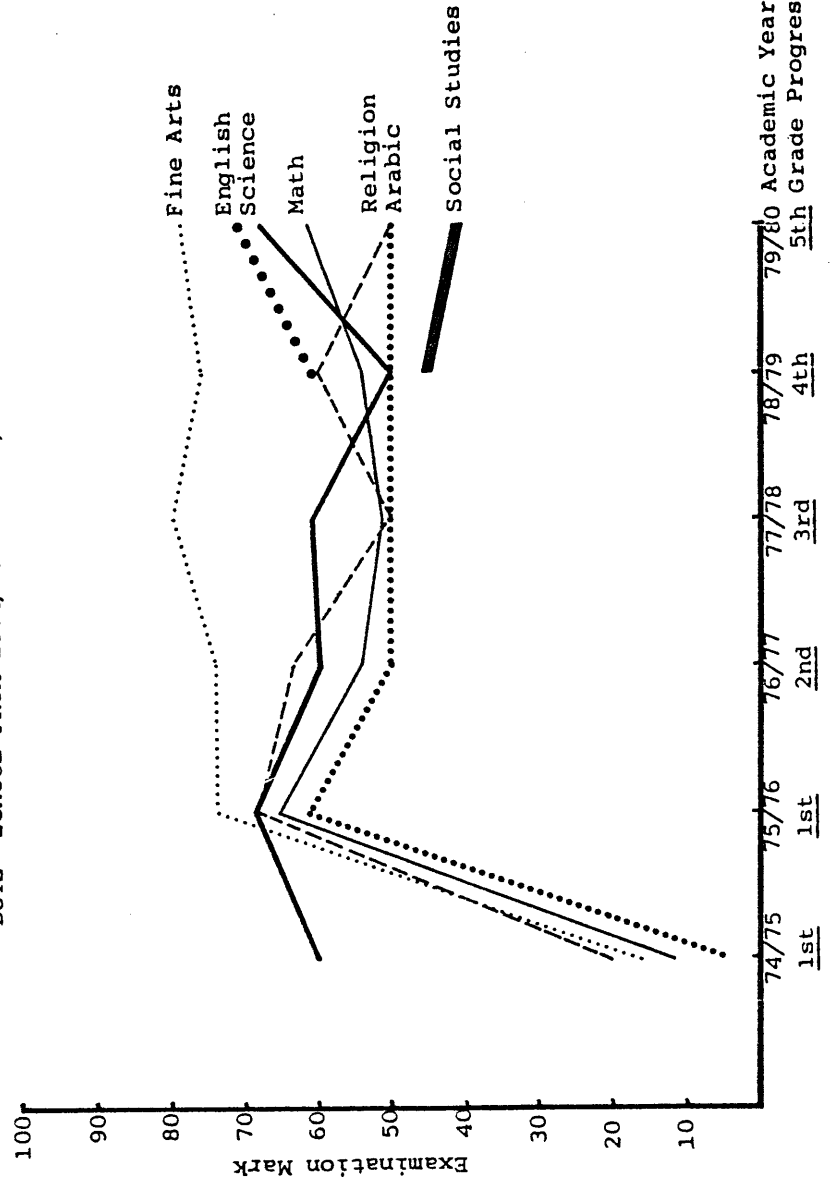
In order to shed more light on the nature of these patterns of academic progress, the researcher looked in detail at three different patterns of academic progress made by three students selected from the seventy-seven students under investigation. The descriptions which follow cover the academic achievement and progress of three students in all the subjects they studied, i.e., religion, Arabic, English (Grades 4-6), mathematics, science, social studies (Grades 4-6), home economics (Grades 4-6), females only), and fine arts, from the time they entered the school in 1974/75 until the academic year of 1979/80.

Student "A"

This is a male student. He is from Omar Abdul-Aziz School, and he is one of the students who proceeded in his study without any further retention after his first retention in grade one in 1974/75. During his first year in grade one in 1974/75 he was a poor achiever. As Figure 3 shows the final marks of this student at the end of the academic year showed that he failed religion (in which he obtained 20 per cent of the maximum mark of the subject), Arabic (in which he obtained 5 per cent of the maximum mark only), fine arts (in which he obtained 16 per cent of the maximum mark), and mathematics (in which he

FIGURE 3

THE ACADEMIC ACHIEVEMENT PROGRESS OF STUDENT "A" IN OMAR ABDUL-AZIZ
BOYS' SCHOOL FROM 1974/75 TO 1979/80 BY SUBJECT



obtained 12 per cent of the maximum mark). The only subject he passed was science, and in this subject his mark was 60 per cent of the maximum mark. Accordingly, this student was not considered by his school to be eligible for promotion and was asked to repeat his grade for another year.

In the following year (1975/76), and as shown in Figure 3, the student repeated the first grade, and re-studied all the subjects taught in that grade. The examination marks he obtained at the end of the year showed that he achieved considerable academic improvement. He was rated as "good" achiever in fine arts, a "fairly good" achiever in religion, mathematics, and science; and he was "borderline" in Arabic. His total marks were 61 per cent of the total maximum marks of all the subjects. He was ranked as "borderline" and promoted to the second grade.

The achievement of this student in the second grade in 1976/77 was considered satisfactory by his school. He obtained passing marks in all the subjects he studied. Comparing his achievement to that which he obtained in his second year in grade one, he declined a few percentage points in religion (in which he received 64 per cent of the maximum mark), in Arabic (in which he obtained 50 per cent of the maximum mark), in mathematics (in which he obtained 54 per cent of the maximum mark), and in science

(in which he obtained 60 per cent of the maximum mark). His over-all achievement (the total marks he received in all subjects divided by the total maximum marks of the subjects) was ranked as "borderline" and he was promoted to the third grade in 1977/78.

This student continued to be a "borderline" achiever in grade three in 1977/78. His profile shows that although he succeeded in all subjects taught in this grade, he was "borderline" in all these subjects except in fine arts where he received 80 per cent of the maximum mark and, thus, was ranked as a "good" achiever. However, his over-all achievement was at the "borderline" level. Since he did not fail any subject, he was permitted to proceed to the fourth grade in 1978/79.

In the fourth grade in 1978/79 this student continued to be a "borderline" achiever in all the subjects taught in his grade except fine arts in which he achieved 76 per cent of the maximum mark and was considered to be a "good" achiever. Nevertheless, his over-all achievement in the grade was ranked as "borderline." Since he did not fail any subject, he was promoted to the fifth grade in 1979/80.

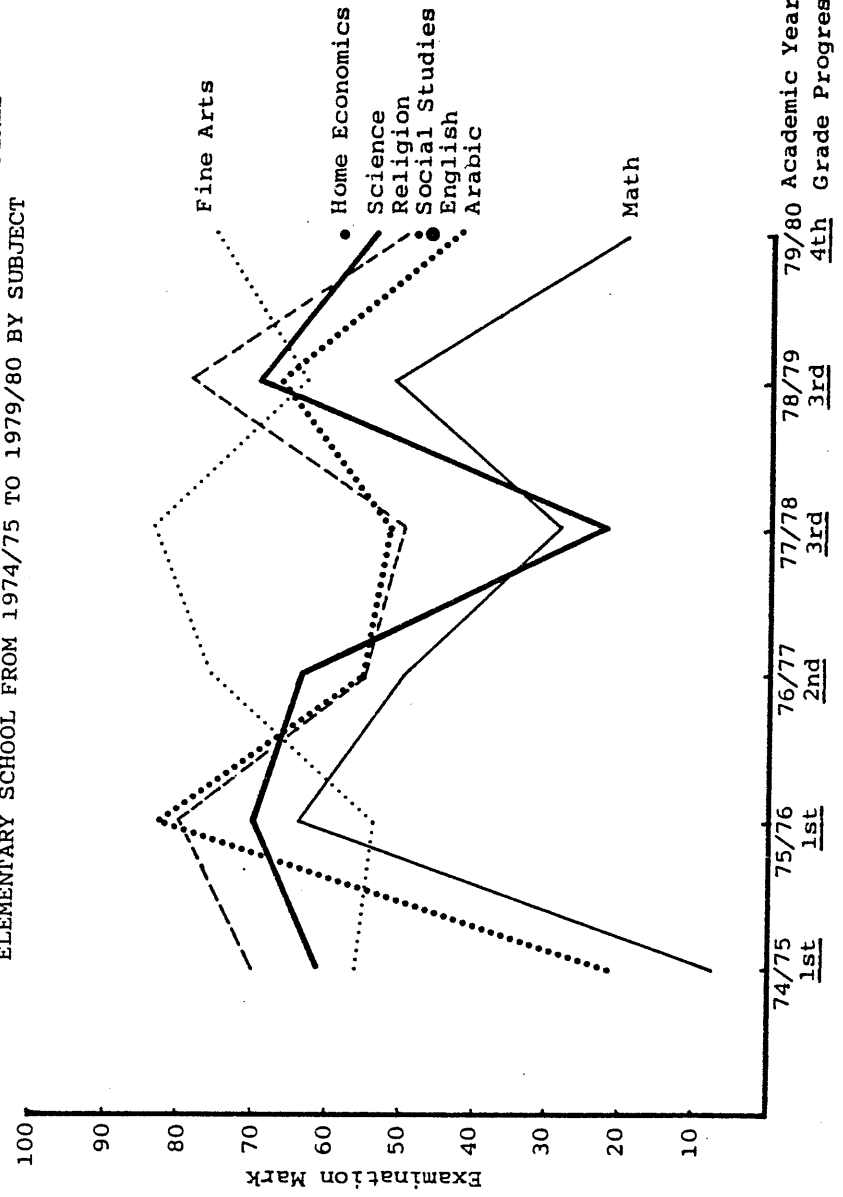
In his fifth grade, he improved his achievement slightly. The figure shows that he obtained "borderline" marks in most subjects. However, in English and fine arts

he was considered a "good" achiever. He achieved 71 per cent of the maximum mark in English, and 78 per cent of the maximum mark in fine arts. However, on the average, he continued to be a "borderline" achiever, and his total marks were 63 per cent of the total maximum marks of all the subjects he studied. With this level of achievement, he was considered eligible for grade six in 1980/81.

Student "B"

This student is one of the students who was retained two times after her first retention in grade one in 1974/75. She is a female student from Kurtoba School. She entered the first grade in 1974/75. Her achievement in this grade, as can be seen in Figure 4, showed that she failed two subjects, namely Arabic (in which she received 22 per cent of the maximum mark), and mathematics (in which she obtained 7 per cent of the maximum mark). She was a "borderline" achiever in science (in which she obtained 61 per cent of the maximum mark), and fine arts (in which she obtained 56 per cent of the maximum mark). However, she was a "good" achiever in religion (in which she obtained 70 per cent of the maximum mark). Her overall achievement at the end of the year was considered unsatisfactory because she failed two subjects and thus was required to repeat the grade for another year.

FIGURE 4
THE ACADEMIC ACHIEVEMENT PROGRESS OF STUDENT "B" IN KURTOBA GIRLS' ELEMENTARY SCHOOL FROM 1974/75 TO 1979/80 BY SUBJECT



In 1975/76 she repeated the first grade, and re-studied all the subjects taught in that grade. Her record at the end of the year showed that she improved considerably in Arabic (in which she got 83 per cent of the maximum mark), and in mathematics (in which she obtained 64 per cent of the maximum mark). She also became a "good" achiever in science and continued to be a "good" achiever in religion (in which she obtained 80 per cent of the maximum mark). Nevertheless, her mark dwindled a little bit in fine arts. Her over-all achievement was considered "good" (she obtained 70 per cent of the total maximum marks of all the subjects). Accordingly, she proceeded to the second grade in 1976/77.

In the second grade, the figure shows that the achievement of this student declined to a "borderline" level. Her achievement declined sharply in religion and Arabic. In these two subjects she became a "borderline" achiever (she received 55 per cent of the maximum mark in religion as well as in Arabic). The achievement of this student also dwindled in mathematics and science. She got "borderline" marks in both subjects. However, her achievement in fine arts was "good"; she obtained 76 per cent of the maximum mark. Her over-all achievement in the grade at the end of the year was rated "borderline," and she was considered eligible for the third grade in 1977/78.

In the third grade in 1977/78, this student continued to decline in her achievement, particularly in mathematics in which she received 28 per cent of the maximum mark, and in science in which she received 23 per cent of the maximum mark. But she continued to improve in fine arts (in which she got 84 per cent of the maximum mark). Since she failed mathematics and science she was retained in her grade and asked to repeat it for another year (1978/79).

In her second year in the third grade (1978/79) this student was able to improve her marks in all the subjects taught in her grade except fine arts in which her achievement declined to 64 per cent of the maximum mark. She was rated as a "good" achiever in religion and science and as "fairly good" in Arabic. But in mathematics she was "borderline" (her achievement was 52 per cent of the maximum mark). However, her over-all achievement in the grade was ranked as "borderline," and she was promoted to the fourth grade in 1979/80.

The student's achievement in the fourth grade in 1979/80, as shown in Figure 4, showed a sharp decline once again. Her marks dwindled sharply in all the subjects she studied in this grade except in fine arts (in which she obtained again a "good" achievement level). She received "borderline" marks in religion, science, and home economics,

and failing marks (below 50 per cent of the maximum subject mark) in Arabic, English, mathematics and social studies. Her over-all achievement at the end of the year was "poor." She got 49 per cent of the total maximum marks of the subjects of this grade only. Thus, she was required to repeat her grade for another year in 1980/81.

Student "C"

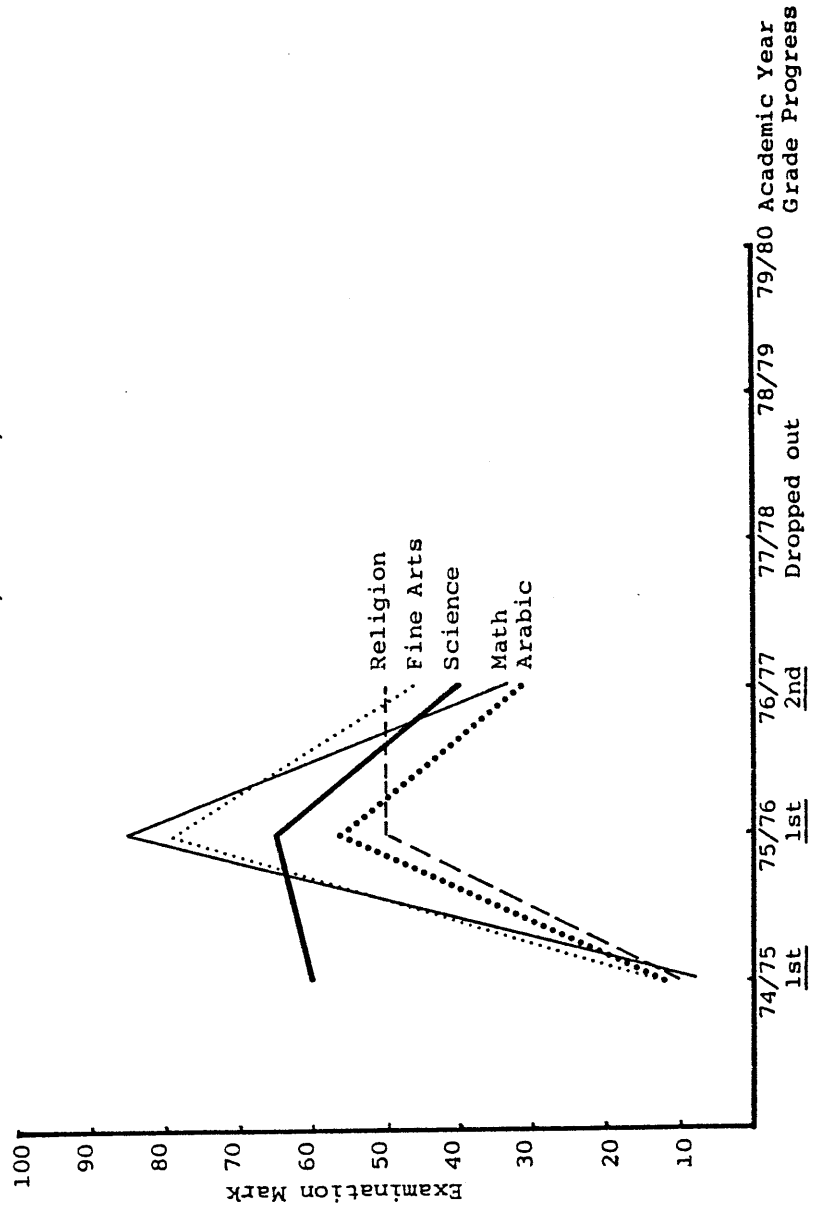
This student is from the students who dropped out of the school. He was from El-Hidd Boys' School. He joined the school in 1974/75 as a first grader.

Figure 5 shows the achievement profile of this student from 1974/75 to 1976/77. In grade one this student was a "poor" achiever in religion, Arabic, mathematics, and fine arts. The percentage of his marks to the maximum subject marks were 10 per cent in religion, 12 per cent in Arabic, 8 per cent in mathematics, and 12 per cent in fine arts. The only passing mark he was able to achieve was in science (his mark in this subject was 60 per cent of the maximum mark). Accordingly, he was denied promotion to grade two and held back in his first grade.

The student repeated his first grade in 1975/76. Interestingly, he was able to improve his marks considerably in all the subjects he re-studied. The percentage of his marks to the maximum subject marks were 50 per cent in

FIGURE 5

THE ACADEMIC ACHIEVEMENT PROGRESS OF STUDENT "C" IN EL-HIDD BOYS' ELEMENTARY SCHOOL FROM 1974/75 TO 1976/77 BY SUBJECT



religion, 56 per cent in Arabic, 85 per cent in mathematics, 65 per cent in science, and 78 per cent in fine arts. The over-all achievement of this student in this grade was considered "fairly good" and he was promoted to the next grade (second grade) in 1976/77.

In the second grade in 1976/77, this student was not able to maintain and enhance the improvement he achieved in his second year in the first grade. His academic achievement dwindled sharply. He got failing marks in all the subjects taught in the grade except religion in which he received 50 per cent of the maximum mark. The result was that his over-all achievement was rated by his school as "poor." He achieved 40 per cent of the total maximum marks of the subjects he studied. Therefore, he was asked to repeat his grade for another year (1977/78).

In 1977/78, the records of the school showed that this student disappeared and did not enroll himself in the second grade. He apparently dropped out of the school, and by doing so he brought his elementary schooling to an early end.

The foregoing description of the patterns of academic progress made by the three students (A, B, and C) showed that retention helped Student A to improve his academic achievement. However, the help was meager and the student's academic progress was "borderline." In the

case of student B retention did not seem to help this student to proceed in her study without further retention. Although she showed improvement after each retention, she continued to fail her studies and to be an underachiever. Student C also did not maintain continuous improvement. He showed "good" academic recovery after the first retention, but then his achievement dwindled sharply and he discontinued his study at grade two.

To sum up, the main result from the longitudinal investigation of the achievement records of retained students indicated that retention generally helps students to improve their academic achievement. But this help is meager and not sufficient to the extent that it enables the "repeaters" to recover and proceed smoothly and efficiently in their successive school work.

These findings seem to support in partial manner the earlier findings discussed in the first part of the chapter. Both findings determined that retention improves students' achievement but does not prevent "repeaters" from failing their successive study again.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Problem and the Objectives of the Study

The proportion of student retention in public elementary schools in Bahrain is high. In 1978/79 the retained students constituted 18.6 per cent of the total enrollment in schools.

The study concerned itself mainly with the investigation of the magnitude of student retention in the seventy-two public elementary schools in Bahrain, and sought to determine the effect of retention on the input/output capacity of schools and on the annual recurrent cost of education and to test the assumption that retention does not improve student academic achievement.

The Literature Review

A literature search was conducted to see how the problem of student retention was approached and studied by educators in the United States of America and in some developing countries, to identify the main research designs used to tackle this problem, and the results the research yielded with regard to the effect of retention on student achievement and student social development. The literature search tried also to pinpoint the effects of the research

findings on the practices of student retention in schools. The literature search yielded the following information:

1. Student retention is a world-wide practice. It has attracted the attention of many educators in the United States of America as well as in developing countries.
2. Many different research methods and procedures were utilized in studying student retention and its effects on academic achievement and the personal and social development of students. Some of these methods, for example, were statistical, i.e., correlation method and the "t" test; experimental; longitudinal; and questionnaires to school principals, teachers, parents, etc.
3. The main thrust of the studies done on student retention in the United States was directed toward the investigation of the effects of retention on academic achievement and on the personal and social development of students. In the developing countries, the main emphasis of the research was on identifying the economic and social causes of student failure and retention. Variables studied were the economic and educational status of parents and the relation of retention to dropping out.
4. Most of the studies which concerned themselves with identifying the effect of retention on academic achievement (ten out of the twelve studies reviewed) showed

that retention did not help retained students to improve their academic achievement.

5. The earlier studies done on the effect of retention on motivation and social development of students, Otto (1935), Haggerty (1925), and Sandin (1944), showed that retention did not motivate students to do school work and adversely affected their social development. The more recent studies, i.e., Worth (1960) and Finlayson (1977), brought some hope that retention may have no adverse effect on personal and social development of students.

6. It seems that the negative effects of retention on both achievement and the personal and social development of students reflected in the studies made educators and school administrators in the United States reduce non-promotion practices in schools. Ayres' study indicated that student retention was practiced widely across the United States in the first decade of this century, while in 1959, the survey conducted by the National Education Association showed that less than one per cent of the school districts covered by the survey used achievement as the only basis for student promotion.

The Procedures

Four different methodologies were used in conducting the study. In examining the magnitude of student retention from 1969/70 to 1978/79, a calculation of the

proportion of student retention by year, grade, school, and sex was made. The retention proportions obtained then were analyzed and compared. A comparison was also conducted of the proportion of retention and the ratio of qualified teachers, the availability of school libraries, and the size of enrollment in the individual schools to identify the relationship between the magnitude of retention and the three aforementioned variables.

In determining the effect of student retention on the school input/output capacity, the "cohort" method and arithmetical formulas developed by UNESCO for calculating the input/output school capacity were used. These procedures included the calculation of the rates of promotion, retention, and dropout, and the reconstruction of the actual movement of students in the school cycle in order to obtain the required information for calculating the input/output school capacity, i.e., the number of the students who successfully finished the school and the number of years invested to graduate these students.

In calculating the annual recurrent cost of retention, the obtained input/output capacity of the school and the actual recurrent cost per student per year (which was obtained from the Ministry of Education) were used as the basis for the calculation.

In testing the assumption that retention does not improve academic achievement two different research designs were used; one was statistical and the other was a longitudinal follow-up of particular students. The investigation in this respect covered a sample of six schools chosen randomly. The sample schools were El-Jasra School, El-Zallaq School, Bani Jamra School, Kurtoba School, Oma Abdul-Aziz School, and El-Hidd School.

The statistical design covered 938 retention incidences in the six schools and included the use of the "t" test for correlated groups to test the difference between the means of the marks the retained students obtained in five main subjects (religion, Arabic, English, science and mathematics) in two successive academic years, 1978/79 and 1979/80.

The longitudinal study covered the students who were retained in the first grade in the six sample schools in 1974/75. The number of these students was seventy-seven. The study investigated the students' achievement profiles and traced their academic progress from their first retention in 1974/75 until 1979/80.

The evaluation of the students' academic achievement was made on the basis of the marks the students achieved in the different subjects, the grade level they were able to reach by 1979/80, the number of retentions they

experienced after their first retention in 1974/75, and the remarks of school officials about the students' progress.

The required data for conducting the whole study were obtained from official documents of the Ministry of Education in Bahrain.

The Findings of the Study

The findings of the study can be summarized in the following manner:

1. The proportion of student retention in public elementary schools in Bahrain is high. The proportion reached 18.6 per cent in 1978/79, and the average proportion for the period from 1969/70 to 1979/80 was 20 per cent.

2. The proportion of student retention for the period 1969/70 to 1978/79 fluctuated greatly--the range between the highest and the lowest proportions being 7.3 per cent.

3. The magnitude of student retention decreased steadily from 24.0 per cent in 1970/71 to 19.3 per cent in 1974/75. Then it increased again, and the highest level it reached between 1975/76 to 1978/79 was 20.1 per cent.

4. There were clear differences between retention of male students and retention of female students. In general, a higher proportion of males were retained than of females in every year. Retention proportions during the period (1969/70 - 1978/79) ranged from 20.1 per cent to 18.1 per cent for boys, while the range for girls was from 21.5 per cent to 14.9 per cent. In addition, the ratio of the total retained students to the total enrollment during the period was higher for boys than for girls.

5. The proportion of student retention varies widely from grade to grade and from year to year. The lowest retention proportion was 14.1 per cent at grade six in 1971/72, and the highest retention proportion was 33.2 per cent which occurred at grade four in 1971/72 also.

6. Grade four had the highest average retention proportion. The average proportion of retention in this grade reached 25.7 per cent.

The highest rate of retention usually occurs at fourth grade. From the investigator's first hand experience with public elementary school curriculum in Bahrain and with the achievements of students in grade four, he believes that the causes of high student retention in this grade are attributable, at least in part, to the marked increase in the amount of knowledge and subject content that students are expected

to study and grasp at the fourth grade level; and to the fact that many students come to this grade from the third grade without having mastered basic skills, i.e., the skills of writing, reading, and calculating, to a level which makes them capable of dealing successfully with the relatively large body of knowledge they are required to study and absorb.

7. Grade two had the lowest average proportion of retention. The average proportion of retention in this grade was 16.3 per cent.

8. The variation in the amount of student retention in individual schools is striking. The proportion of repeaters to the total enrollment in individual schools ranged from 26.7 per cent in Madeenat Essa school to 5.3 per cent in Bani Jamra school.

9. The majority of schools had student retention proportions that do not deviate far from the average retention proportion which is 15.0 per cent.

10. There is no one pattern of relationship between the amount of student retention and the three inside-school variables investigated, namely: the proportion of qualified teachers each school has, the availability of school libraries, and the size of enrollment.

11. With regard to the qualified teacher variable, the findings indicated that the schools with the

lowest proportion of retention had the highest proportion of qualified teachers, and the more qualified teachers schools had, the smaller the proportion of student retention.

12. The findings indicated that there was no steady relationship between the school library variable and student retention.

13. With reference to the third variable, namely, school enrollment, the findings pointed out that there was no one pattern of relationship between this variable and retention. The schools which fell in the lowest range of retention proportions (0-10 per cent) had the lowest average number of students, and the schools which were in the medium range of retention proportion (10.01-20 per cent), had the highest average of student enrollment, while the schools with the highest retention proportion (20.01 per cent and above) had the medium average of student enrollment.

14. Student retention hinders the normal flow of students in the educational system, inflates school enrollment, and has an adverse effect on the input/output school capacity. The calculations indicated that on the average, the number of years spent per elementary school graduate was 9.51 years instead of 6 years (the normal school duration) for boys, and 8.30 years instead of 6

years for girls. Thus, the input/output school ratio for boys was 1.59 and for girls was 1.38.

15. Student retention and dropouts inflated the annual recurrent cost per student by 59 per cent for boys and by 38 per cent for girls. In monetary terms, the increase in the annual recurrent cost per student due to retention and dropouts reached 124.90 Bahraini dinars (equal to \$312.25) for boys and 90.34 Bahraini dinars (equal to \$225.85) for girls.

16. The "t" test results indicated that the achievement of the retained students did improve in all the subjects investigated except in science in the second grade. The improvements were statistically significant at the one per cent level. However, further investigation of the records of the students showed that 31 per cent of the students did not achieve the academic level required by their schools.

17. The longitudinal investigation of the achievement profiles of the seventy-seven students who were retained in the first grade in the six sample schools in 1974/75 sheds more light on the effect of retention on achievement. The results of the investigation showed that

- a. only fifteen students were able to proceed smoothly with no more retention.

- b. thirty-two students were retained once after their first retention in 1974/75.
- c. twenty students were retained two times after their first retention in 1974/75.
- d. ten students dropped out of school.
- e. six students of the fifty-two who were retained one or two times after their first retention in 1974/75 were held back for three years in a grade.

The findings concerning the fifteen students who proceeded in their study smoothly without any more retention indicated that

- 1. only three students were considered by their schools as "good" achievers. (Their achievement marks were within a range of 70 to 80 percentage marks out of a possible 100.)
- 2. five students were evaluated by their schools as "fairly good" achievers. (Their achievement marks were within the range of 65 to 69.)
- 3. the remaining seven students were evaluated by their schools as "borderline." (Their achievement marks were within the range of 50 to 64 marks.)
- 4. as high as forty-five students of the fifty-two who were retained for one time or more after their first retention in grade one in 1974/75 failed the same

subjects they were retained for in the first grade.

Conclusions

The findings of this study mainly showed that though there was improvement in the academic achievement of the retained students when they spent an additional year or years in a grade, it appeared to be small improvement that did not help the retained students enough to permit them to proceed in their subsequent school work without any more retention.

In addition, it seems that the meager academic improvement achieved is costly in both educational and monetary terms. Costly in educational terms because retention, as indicated by the study, hinders the normal flow of students in the educational system, inflates schools' enrollments, and thus lowers to a great extent the input/output capacities of schools, depriving some students of space in crowded classes. The loss in terms of personal time and self-concept may be great since students have to spend an extra year or years finishing their schooling.

Student retention is also costly in monetary terms because, as the study revealed, it is highly expensive. It causes a rise in the annual recurrent cost of education by 59 per cent for boys and by 38 per cent for girls.

Taking all these personal, educational and financial costs of retention into consideration, it seems sensible to conclude that the meager academic improvement that students can obtain from retention is not worth the educational and financial costs involved in retention. Furthermore, if the consideration of the Ministry of Education in Bahrain is solely a matter of educational achievement, it seems clear that little is gained by requiring the repetition of a grade.

It should be clearly recognized here that many other variables not examined in this study enter into the problem of student retention. Among these are the effect of retention on the personal and social development of students; the effect of retention on dropout rate; and the economic, social and educational factors which directly affect student retention such as the suitability of school curriculums to student abilities and interests, different teaching strategies used by schools, and the educational and economic status of parents.

Recommendations

The problem is far from simple. The whole field pertaining to the problem of student retention in Bahrain is still largely virgin territory for valuable research. More research and studies, especially in the field of the

relationship of retention to teachers' professional performance, to school curriculums, and to the problem of dropouts, are needed to contribute to a more intelligent understanding of student retention practice and its effects on student educational and social development in the school.

However, the researcher anticipates that the proportion and the cost of retention can be immediately reduced in elementary education in Bahrain without an adverse effect on the academic level of education by a variety of steps.

1. One step might include the revision and modification of retention regulations and educational practices in a way which would allow the retained student to re-study only the subjects he failed and not all the subjects taught in the grade which he is repeating; and at the same time permit him to move to the next grade to further his achievement in the subjects he succeeded in. By doing so, the school is likely to be more responsive to the educational needs of students and to their aspirations. Moreover, such a modification of retention procedures will accelerate the movement of students in the educational cycle and, thus, promote the input/output capacity of schools. This will lead in itself to a reduction in the costs of student retention.

2. Another strategy would be to improve regulations and practices in a way which would provide closer attention

and individual help to retained students, especially those who are repeating their grades for two or more years. This special care and individual help can be in many forms such as educational guidance that seeks to help students to identify their educational and emotional problems and to take the fullest advantage of the educational system. This help also could be in the form of assignment of experienced teachers in the school to work directly with the retained students, to help them in their pressing needs and to provide them with specific educational remediation.

3. The wide difference between schools in proportion of student retention deserves detailed investigation. Such an investigation may reveal that the schools with low retention proportion have certain characteristics, i.e., good administration, imaginative teaching strategies, etc. which enable them to provide better quality education for their students than the schools with a high retention proportion. Or perhaps the opposite is the case in that these schools are following permissive educational practices which allow low achievers to proceed in the educational cycle with a minimum percentage of retention. The discovery of the real causes of this educational phenomenon would be of value for improving the existing retention practices and policies in Bahrain elementary schools.

4. The study showed that schools are heavily dependent on teachers' marks for determining promotion or retention of students. Teachers' marks are subjective and in many cases are unreliable devices for evaluating the progress and development of children in the school. It may be useful if the existing system of student evaluation in Bahrain elementary schools is enhanced by the use of standardized achievement tests, aptitude tests and IQ tests. The College of Liberal Arts, Science and Education may be of help in this respect. The utilization of different evaluation devices may help teachers to know their students better and thus to evaluate them more objectively and reliably.

5. The part of the study which dealt with the investigation of students' achievement profiles showed that students are different in their patterns of achievement and in their progress in the school cycle. More detailed study of these patterns is needed. Such a study would be of interest to curriculum developers and school administrators for it may reveal a necessity for breaking away from the existing single curriculum and establishing instead a differentiated curriculum which involves adjustment to the different needs and abilities of children.

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A P P E N D I X

COMPUTATION OF RATES OF PROMOTION
RETENTION AND DROPOUT

Example

	Total Enrollment		Number of Repeaters	
	Grade X	Grade X+1	Grade X	Grade X+1
Year a	A	B	C	D
Year a+1	E	F	G	H

When data are applied to the above chart it appears as follows:

	Total Enrollment		Number of Repeaters	
	Grade X	Grade X+1	Grade X	Grade X+1
1967	1,019,967	628,069	246,532	125,036
1968	1,056,066	659,476	244,402	118,862

The proportion rate for grade "X" in year "a" is the number of "new" pupils in grade "X+1" in year "a+1" (without repeaters from the previous year's enrollment) expressed as a proportion of the total enrollment in grade "X" in year "a", i.e.,

$$\frac{F - H}{A} \quad (1)$$

$$= \frac{659,476 - 118,862}{1,019,967} = 0.530 \text{ (or 53 per cent)}$$

The repetition rate for grade "X" in year "a" is the number of repeaters in grade "X" in year "a+1"

expressed as a proportion of the total enrollment in grade "X" in year "a", i.e.,

$$\frac{G}{A} \quad (2)$$

$$= \frac{244,402}{1,019,967} = 0.240 \text{ (or 24 per cent)}$$

The dropout rate for grade "X", year "a" is the number who dropped out in grade "X", year "a" expressed as a proportion of the total enrollment in "X", year "a", i.e.,

$$\frac{A - (F-H) - G}{A} \quad (3)$$

$$= \frac{1,019,967 - (659,476 - 118,862) - 244,402}{1,019,967}$$

$$= 0.230 \text{ (or 23 per cent)}$$

Thus, we have found the corresponding rates, equal to the percentages previously computed and this type of computation presents no practical difficulty.

Exactly the same operation can be formulated in somewhat more functional terms by using symbolic algebraic conventions in educational statistics. The result is then as follows for each of the above formulas:

(i) The promotion rate may be expressed as:

$$p_y^g = \frac{p_{y+1}^{g+1}}{E_y^g} \quad (1a)$$

where: p = promotion rate
P = pupils promoted (i.e., enrolled in that grade minus repeaters)
g = grade
y = year
E = enrollment

i.e., the proportion of "new" pupils in a given grade (enrollment not including the repeaters) to the total enrollment in the previous grade the previous year.

(ii) The repetition rate will be:

$$r_y^g = \frac{R_{y+1}^g}{E_y^g} \quad (2a)$$

where: r = repetition rate
R = repeaters

i.e., the proportion of repeaters in a given grade to the total enrollment in that grade the previous year.

The repetition rate should not be confused with the repetition proportion which may be expressed as

$$\frac{R_y^g}{E_y^g}$$

i.e., the proportion of repeaters in a given grade to the total enrollment in that grade the same year. This is often erroneously used as the repetition rate.

(iii) The dropout rate is obtained as a residual:

$$d_y^g = 1.00 - (p + r) \quad (3a)$$

It follows from the above formula that:

$$p + r + d = 1.00$$

except in those cases where unusual circumstances (migration into the country, important reintegration of pupils into education system in the previous year, etc.) determine a negative dropout rate.

SOURCE: Unesco, Statistical Study of Wastage at School.
Paris, IBE, 1972, pp. 32-33.

VITA

Hamad Ali Sulayti was born in Bahrain on January 3, 1942. He completed his elementary and secondary education in Bahrain. He worked as an elementary school teacher in public schools from 1958 to 1960. He also worked for the Bahrain Petroleum Company for a year as a writer in its newspaper "The Weekly Star." He continued his university education in Baghdad University in Iraq where he received his B.A. in educational psychology in 1966. From 1966 to 1968 he worked as a teacher of psychology and education in the Bahrain Teacher Training Institute. In 1969 he resumed his graduate education in the American University of Beirut, Lebanon where he obtained his M.A. in educational planning and administration in 1970.

From 1970 to 1971 he worked for the Ministry of Education in Bahrain as a specialist in educational planning. In 1973 he became the Director of Educational Planning for public schools in Bahrain. From 1976 on he has served as the Assistant Undersecretary for Education in Bahrain.

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