A STUDY OF CHILDREN'S ATTITUDES
TOWARD SCHOOL IN GENERAL
IN A SECONDARY SCHOOL IN BANGKOK

THESIS

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by

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CHAPTER I

INTRODUCTION

A child is born into a social system. He occupies a status in which he plays his roles. As he plays his roles, his ideas, interests and attitudes are shaped. And as each status and role is different, so each individuals' ideas, interests and attitude are formed differently.

"Attitude" is an abstract term, derived from Latin aptus. It means "fitness" or "adaptedness" which implies a subjective or mental state of preparation for action. The earliest psychologists, such as Herbert Spencer (1862) reported that it has two meanings. The first one is preserved in the phrase "mental attitude" and the second meaning in "motor attitude." But in recent years, the meaning of this term has been changed. It connotes "a neuropsychic state of readiness for mental and physical activity."[1]

Many psychologists (e.g. Ach, 1905, Bartlett, 1932) stated that attitudes operate in an individuals' perception, judgment, memory, learning and thought. They further write that attitudes determine for each individual what he will see and hear, what he will think and do. In William James' words, attitudes "engender meaning upon the world." And Washburn (1916) defined attitude as "static movement system" within the organs of body and of brain.

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[1] Gardner Lindzey, editor, Handbook of Social Psychology, Addison - Wesley Publishing Company, Inc., Cambridge, U.S.A., 1956, p. 43.

According to the sociologists' point of view, attitudes and values are much the same phenomenon. Since attitude is directed toward some object, it may be regarded as "a state of mind of the individual toward value." And values are objects of common regard on a part of socialized men, such as money fame and political doctrine, etc.

The concept of attitude does not imply any one specific response of an individual only. It is an abstraction from many related acts or responses which are consistent toward the objects or situations. That is to say his statements and action concerning objects or situations are favorable or unfavorable.

The definition of attitudes according to Allport (1935) is "a mental and neural state of readiness exerting a directive influence upon the individuals' responses to all objects and situations with which it is related."[1]

From this, it is apparent that the concept of attitude is determined by a consistency or predictability of variety of individuals' responses to some social objects or situations.

Attitudes as understood are a part of an individual's personality which are affected by the attitudes and behavior of the group or groups with which he associates. In other words, attitudes are human qualities constructed out of the individual's previous experiences, accompanied by feeling tones. Attitudes, naturally have their bases in individual's inner urges.

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[1] Ibid., p. 335.

Attitudes are expressed through a person's behavior. They operate in specific behavior patterns and are closely related with emotional reactions. They may be determined as dynamic forces in human activities. Attitudes have degree or intensity in operating behavior. In a conflict situation, the strength of the motive results from the high intensity of attitude.

Attitudes of children in the early stage cannot be sharply differentiated. They have an attitude of general favorableness toward all objects indiscriminately. Their favorable attitudes mean "good" and they want to approach. Their unfavorable ones mean "evil" and they try to avoid. It takes them many years in their socialization to learn the process of differentiation and integration. Then, specific favorable and specific unfavorable attitudes are organized in them.

1.1 The Research Problem

The child's school life is a source of social living. He learns to associate with his peers and teachers. He has an opportunity to experience satisfaction as well as troublesome conflict. Attitudes are organized through these experiences which affect his personality and action. He requires in the school situation the response patterns or tendencies to act in a particular way toward his school. He may regard the school as a pleasant place and like to spend most of his time at school. Then, he willingly serves the school in every way he can, even after he leaves the school. Conversely, if the school environment causes him pain, behavior problems may appear. Very often,

school teachers experience such problems as truancy, general lack of interest in school work, boredom with particular subjects and rebellious reactions. These problems may indicate that there is something wrong in the school which has given rise to a negative attitude in the child toward school.

Stendler and Young suggest that "the majority of children at the beginning of attending school like school very much, but since they reach the sixth or seventh grade, their attitudes toward school have been changed considerably. Tenenbaum finds that by this time only about two-thirds of girls and slightly less than half of boys still like school. Those who like it do not consider going to school a pleasant activity. They like it because they believe that an education would help them in later life."[1]

In the study of attitudes of adolescents, Garrison says, "unfavorable attitudes of adolescents toward school result from teachers who lack an understanding of adolescents, a school curriculum out of harmony with the interests and goals of many adolescents, and procedures of an authoritarian nature that fail to furnish the students with opportunities to preserve and enhance ego."[2]

Children learn many of their attitudes from their parents, their teachers and their other associates. In school, the teacher's

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1 Thompson, G. George, Child Psychology, Houghton Mifflir Company, Boston, 1952, p. 533.

2 Garrison, Karl C., Psychology of Adolescence, Prentice-Hall Inc., Englewood Cliffs, N.J., 1956, p. 173.

own personality, emotions and attitudes greatly influence children's feelings. In some cases, the teachers themselves create in children such attitudes as sportsmanship, democratic feeling, neatness and the like. Children's dislike of school may result from negative feelings to the behavior of the teachers. The function of the teacher is to stimulate students toward acquisition of attitudes that are individually and socially acceptable.

In Thailand about thirty years ago, children were afraid of going to school. They feared severe punishment from teachers. Teachers at that time were likely to frighten pupils. Pupils hardly ever met friendly relationship with their teachers. The Primary Education Act played a great part in children's school-life; and many were forced by parents to attend school. During their school-life, such children felt unhappy, and wait for the time they might leave school. Truancy was a great problem in school. But now the situation at school is improving. Seeing their peers going to school everyday, most children imagine that it is a pleasant thing to do. They like to go to school. Most children, when they reach the age of five or six, will follow their friends to school without the force of Primary Education Act or parents' persuasion. In general, children have a favorable attitude toward school.

And to-day in Thailand, adults regard school as the place where children can be trained in manners and habits, as well as obtaining a general education. They believe that school attendance results in good conduct; and parents hope to depend on the help of the school in training their children. They look upon teachers as candles giving light to their

children. And to-day, adults who have never attended school lose social status.

1.2 Statements of Purpose

The purposes of the present study are:-

1) to discover positive and negative attitudes of children to school as compared -
   (1) between sexes
   (2) among grades
   (3) with school achievement,
2) to determine whether the average responses to the distributed aspects of the school (as measured by test form I) are in agreement with the responses to the school as a whole (as measured by test form II),
3) to investigate the rank order of desirable aspects of children's "best" school in order to determine some of the most important factors that contribute to the children's positive attitude toward school and
4) to explore children's attitudes toward school in each grade.

1.3 Significance of the Study

This study is performed to illustrate how to measure the children's attitudes toward school. It is valuable in the field of education, particularly for teachers to study their students' attitudes toward some other objects or situations. As attitudes can be caught and changed, teachers should study them in order to eliminate or lessen unfavorable attitudes

and create the more pleasant ones or to change them whenever necessary. This accomplishment may be one way to motivate children to attend school regularly and to prevent stubbornness and some other problems.

Greene says, "the results from the measurement of attitudes are useful in a variety of ways both in school and in social situations, for certainly attitude changes occur as one type of instructional outcome and the attitudes of pupils undoubtedly influence their adjustment in the school."[1]

Cronbach suggests that attitude measurement is used in school for evaluation of teaching, particularly in the field of citizenship education.[2] He expresses his view that the major purpose of educating children is to form attitudes which apply to such characteristics as appreciation of literature, scientific open-mindedness toward debatable problem. To be sure that favorable attitudes function in children, the school must measure them.

1.4 Survey of Related Literature

The study of attitude and its measurement has been performed by many investigators.[3] Among these, Thurstone with his associates worked out a method of equal appearing intervals. This method was first applied to the construction of a scale of attitude toward the church. They collected 130 items believed to represent all degrees

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1 Greene, Harry A., Measurement and Evaluation in the Elementary School, Longmans Green & Co., New York, 1954, p. 59.

2 Cronbach, Lee J., Essential of Psychological Testing, Harper & Brothers, Publishers, New York, 1949, pp. 381-382.

3 Newcomb, Theodore M., Social Psychology, The Dryden Press, Publishers, New York, 1952, pp. 167-169.

of favoring or opposing the church. These statements, each were written on separate cards. Then each subject was asked to classify these items into eleven classifications ranging in order from extremely pro-church to extremely anti-church statements. From this study Thurstone found that most judges agreed reasonably well in the classifying most of the statements. By this procedure the scaling of attitude has been assigned by Thurstone. And thereafter Likert (1932) developed his own one, i.e. the five-point scale.

Likert's five-point scales[1] aim is to place an individual at a specified point on a continuum ranging from favorable to unfavorable attitudes. The difference between Likert scale and Thurstone scale is that Likert scale values are influenced by the degree to which subject favor or oppose attitude statements. The Likert scale was first applied to measure attitude toward the Negro. The items are presented to subjects in the system: SA (strongly agree), A (agree), ? (uncertain), D (disagree) and SD (strongly disagree). Subjects are asked to encircle one of these symbol according to their opinions to the statements. The statements collected are all favorable and unfavorable ones. Statements thought to be "neutrel" are not included. In scoring, responses to the favorably worded statements are scored as follows: SA = 5, A = 4, ? = 3, D = 2, SD = 1. Responses to unfavorably worded statements are scored in reverse manners, as follows: SA = 1, A = 2, ? = 3, D = 4, SD = 5.

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1 Ibid., pp. 170-172.

[1]

Monroe L. Spivak of Barringer High School, New Jersey studied the school problems as reported by two groups of children. One group consisted of 160 students who entered the junior high school at the seventh-grade level and the other consisted of 136 students who entered the same school at the ninth-grade level.

The purpose of this study was to explore the reaction of these two groups to the situations in this school. The test was administered to students one month after they had entered the school.

The data obtained were 714 problems checked by the seventh-grade children, and 823 problems by the ninth-grade children.

In the analysis Spivak attempted to discover whether there was any difference in the kinds of problems reported by these two groups of children.

In the conclusion he suggested that the ninth graders need far more help in expressing themselves in writing and in class recitation. The seventh graders need some more individual help and more training in how to study. They expressed their marked dissatisfactory feeling with their teachers, and need more interest in them from the teachers.

[2]

Crow and Crow write in their work that the success of the school in educating pupil is the establishing favorable attitude in him. To meet this purpose, the teachers must behave in the way that the expression of their attitudes is worthy to imitate. They must help him to meet his

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1 Spivak, Monroe L., "School Problems Reported by Seventh and Nineth-Grade Children Entering the Same Junior High School," Journal of Educational Research, 50: 631-633, April 1957.

2 Crow, Lester D., and Alice Crow, Mental Hygiene, McGraw-Hill Book Company Inc., New York, 1951, pp. 100-101.

needs in a socially acceptable way. And the school administration must satisfy him. They further confirm that the attractiveness of the school building; a light and airy room; the teachers' kindness and sympathy to pupils; a learning task in which they can succeed are important factors that organize desirable attitudes to school in children. If he is successful in his school-work, he will have a joy in it. Satisfaction in his work will develop in hin a favorable attitude to learning.

Remmers states that "the development of children's attitudes involves integration of specific responses of similar type. Such attitudes affect the adjustment of the individual to school. If a child is frustrated by his class-room teacher and bolieves that the teacher is not in favor of him, he will tend to react negatively to the teacher hinself and his teaching."[1]

Fessler[2] of University of Nothingham, in summary of his thesis, points out attitudes toward, and interests in, educational topics of 504 girls aged 15 - 18 years. Students were classified according to age and ability. The work was carried out during normal teaching sessions over a period of three years. The topics discussed were, for example, attitude to school life, attitude to co-education, attitude to further education, attitude to curriculum, etc. The results suggest that:

1) Favorable reactions to school life are more prevalent than unfaborable ones.

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1 Remmers, H.H., Educational Measurement and Evaluation, Harper & Brothers Publisher, New York, 1955, pp. 372-373.

2 Fessler, Audrey M., "The Attitudes and Interests of Girls Attending a Day Continuation College," The British Journal of Educational Psychology, 28: 176-177, June, 1958.

2) Attitude to co-education is predominantly favorable, especially amongst those who have experienced it.

3) In discussion of curriculum, Domestic science, English and Physical education were claimed to be the most popular subjects and social studies the least popular.

Friedmann[1] of Child Guidance Clinic, City of Oxford connotes the role of attitudes in comprehension. Forty-nine subjects were drawn from an undergraduate and graduate population. The experimental material consists of short political statements collected from political party pamphlets. Among these statements, some were easy, some average and some very difficult. This study was held to find out the relation between attitudes and understanding. Subjects' intelligence and political knowledge were held constant. A comprehension test was constructed by asking subjects to explain in detail, wherever possible with concrete examples, in as simple terms as possible, what the statements meant. To ascertain whether attitudes influence on understanding statements, subjects were asked to judge immediately after reading a statement by putting a mark to show how much they liked or disliked that statement. After the analysis of data he reports that these experimental results do not show the relation between comprehension of statements and direction of subjects' attitudes toward them. In addition he says that one should be cautious in generalizing these results, since the sample was relatively small.

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[1] Friedmann, S., "The Role of Attitudes in Comprehension," The British Journal of Psychology, 49: 222-229, August, 1958.

Rath[1] of Utkal University, India, studied the trends and shifts in attitudes and opinions of a group of college students toward six socio-cultural, three educational issues, and three state nationalities belonging to three neighbouring states namely the Bengalis, the Biharis, and the Telugus. The questionnaire is formulated on a five-point scale ranging from the most favorable to most unfavorable attitudes, with an undecided opinion in the middle. The following example is given by way of illustration.

1) I am very much in favor of co-education.

2) I am moderately in favor of co-education.

3) I am undecided about co-education.

4) I am moderately opposed to co-education.

5) I am very much opposed to co-education.

A sample of 450 students were tested in 1956. The scores of this sample were compared with those of the sample which was also tested exactly in the similar manner in 1952. The results from this investigation reveal that the correlations between the test and retest scores were positively significant in all cases except for Basic Education of which the correlation was negatively significant.

Josephina[2] announced that the school environment is the breeding ground for both positive and negative attitude growth. If the outstanding attitudes of the world around the pupil have been hostile, unfriendly,

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1 Rath, R., "A Comparison of Attitude Scores on Some Socio-cultural and Educational Issues between two Samples of College Students After An Interval of Four Years," The Journal of Social Psychology, 50: 57-63, August, 1959.

2 Josephina, Sister, "A Study of Attitude in the Elementary Grades," The Journal of Educational Sociology, 33: 56-60, October, 1959.

dissatisfied, he will view his environment in a similar manner.

She used the School Attitude Questionnaire, the scale constructed by Tenenbaum to examine the attitudes of pupils in the elementary schools in New York City. This scale was administered to 900 pupils in grades 5 through 8 in nine parochial schools. Only the 4 following items from the School Attitude Questionnaire have been selected for an analysis:-

1. I like my present teacher
   a. very much
   b. a lot
   c. pretty much
   d. don't like her
   e. hate her
   f. no response
2. My best liked subject is.....
3. My least liked subject is.....
4. I like school.....
   . or I do not like school.....

In evaluating their present teacher, the children's replies to item "I like my teacher very much" noted that girls showed a larger per cent than boys in each grade. Studying the responses for "hate her", the boys in grades 5, 6 and 7 showed rather small findings while the girls gave no response to this item. For item "don't like her", the largest per cent of both boys' and girls' responses appeared in grade 8. In over-all per cents of responses, it indicates that boys in all grades tend to be more moderate in the degree of expressing their likes to their teacher.

For the "best" and "least" liked school subjects, they claimed many subjects, but the three "best liked" subjects for all grades are spelling, arithmetic, and history. For English as their "best liked" subject, the percentage is small.

For the percentages of responses to the "least liked" subjects, arithmetic and English are the first two rank positions. The element of drill and progressive difficulty connected with English and arithmetic may be the cause.

The researcher concluded that the subject preference of pupils depends upon the personality of the teacher. Her knowledge of subject and use of the techniques in presenting it have a significant influence upon the pupils' liking or disliking a specific learning. Again, the success or failure in a learning situation will form attitude for that subject in pupils.

For item "like or dislike school," it appeared that the girls exceeded the boys in each grade by a significant higher percentage in "liking school", and conversely gave a lower percentage for "dislike school."

1.5 Definition of Terms Used in this Study

i. "mathyom": "secondary grade": in this study is abbreviated as "m".

ii. "Attitude" is defined as "a generally consistent expression of feelings toward persons, objects or situations. An attitude may be positive, negative or neutral".

iii. "Attitude toward school" mentioned in this study means

"attitude toward school in general."

iv. "School in general" means the various aspects concerning the school, such as school-building, teachers, pupils, learning project, social relationship among individuals and the like.

v. "Secondary school in Bangkok" means the city school.

vi. "School achievement" means the average school marks the pupils obtained in the first and second term-examination of the year 1959.

CHAPTER II

METHODS AND TECHNIQUES

2.1 Background of the Study

The writer developed the test used in the study following a suggestion of the research committee. A pre-test was given to primary grade children. As a result of it, the writer found out that these children were too young to comprehend the test thoroughly. Therefore, he chose secondary grade children to be subjects for this investigation.

2.2 The Sample

The socio-economic background of children's families was considered to be the important variable in the educational situation. It was thought that the school selected for this investigation should represent the average socio-economic background of Bangkok people. The writer chose a school in which the majority of pupils come from families of average socio-economic status.

To determine the socio-economic status of parents of children attending the schools, the method of "jury technique" was used, i.e. those schools were classified into three levels, higher, average and lower by persons from the teaching profession in Bangkok, the students of the twilight-school of the College of Education, Prasanmitr.

Nearby co-educational schools were selected.

One school was selected at random from the schools that met the criteria for the study.

This selected school arranges that boys sit separately from girls. It uses a two-shift system and the morning shift classes were chosen.

Table 1

Number of Subjects Selected for this Study

Mathyom	Boys	Girls
1	32	39
3	36	40
6	27	40
Total	95	119

As a rule, each class has forty-five students, but the figures above show the numbers of students who did two forms of test completely on two visits.

The number of boys in mathyom 6 is smaller than the number of boys or girls in other classes. This was because, the second form of the test was given to them on the day just after they finished their term-examination. Many boys were absent and thus missed the second form of test.

Table 2

Age Distribution in Six Experimental Classes

Age-group	Mathyom 1		Mathyom 3		Mathyom 6		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
8/6 - 9/5	2	1	-	-	-	-	3
9/6 - 10/5	7	5	-	-	-	-	12
10/6 - 11/5	8	11	1	-	-	-	20
11/6 - 12/5	6	14	7	2	-	-	29
12/6 - 13/5	9	6	9	9	-	-	33
13/6 - 14/5	-	-	10	14	-	-	24
14/6 - 15/5	-	2	7	10	1	1	21
15/6 - 16/5	-	-	2	5	1	12	20
16/6 - 17/5	-	-	-	-	12	13	25
17/6 - 18/5	-	-	-	-	9	8	17
18/6 - 19/5	-	-	-	-	3	4	7
19/6 - 20/5	-	-	-	-	1	2	3
Total	32	39	36	40	27	40	214
Average	11/5	11/6	13/7	14/0	17/5	17/10	14/3

Table 2 shows that the age-range of girls in mathyom 1 is greater than that of boys in the same class. The reason is that some older children repeated the class. Conversely, the age-range of boys in mathyom 3 extends further to the lower end than that of girls. This is because some parents send their children to school at an earlier age.

For mathyom 6, the table shows that the age-range of boys and girls is equal. But the real situation is not so. A few older boys were excluded, because they did only one form of test.

2.3 Procedures of Gathering Data

The present study was conducted by using two forms of test.

Form I is a test adapted from a Likert-type scale. The subjects were asked to express their judgments on the statements by means of five-point scales. At each point the numbers are assigned to show the intensity of attitudes. The figure 1 and 2 at the left hand side show the negative attitudes while the figure 4 and 5 at the right hand side, the positive and 3 at the middle, the neutral. On both extreme sides, the phrases "least favorable" and "most favorable" are mentioned.

The statements given in Thai, as follows:-

1) How do you feel toward your school-building?

2) How do you feel toward your school-compound?

3) How do you feel toward the method of teaching in general?

4) How do you feel toward the teacher-pupil relationship?

5) How do you feel toward the pupil-pupil relationship?

6) How do you feel toward the co-curricular activities?

7) Do you like to do your homework?

8) Do you like to learn the mathematics?

9) Do you like to learn the Thai language?

10) Do you like to learn the English language?

11) Do you like to learn science?[1]

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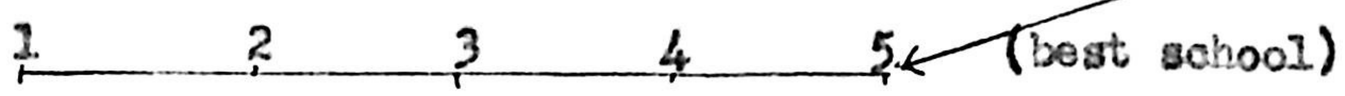
[1] The instruction and the scale test sheet are shown in Appendix E, pp. 98-100.

Form II consists of two open-ended questions and one five-point scale. The subjects are asked to answer the questions and check a mark to express their opinions about their school as a whole.

The questions given are:-

(1) Give the description of a "best" school according to your opinion.

(2) If the "best" school you mentioned in (1) comes at this point,



where would your present school be?

(3) Give the reasons why your present school is at that point.[1]

The subjects were tested in a group.

Both forms of test were given to pupils separately with one week interval.

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1 The instruction and the answer sheet are shown in the Appendix E, pp. 101-102

CHAPTER III

THE RESULTS OF THE STUDY

3.1 Comparison of Average Responses

The analysis in this step is to calculate the average responses of children in each class. Firstly, the numerical values that express the children's attitudes toward several aspects of school-life listed in Form I are tabulated. The outcomes indicate the attitudes of children to each aspect concerning the school. The results are shown in Table 3.

The term "items" used in the following analysis mean the statements mentioned under the sub-heading "Procedure of Gathering Data" in Chapter II.

By the method of analysis of variance, the means of children's responses in each class are significantly different at .05 level of confidence. This means that there is significant difference among the average responses of children in each class. The differences of means that give significance are also indicated in Table 3. For example, in mathyom 1 (boys), any pair of means among the eleven means that is over .39 of difference is a true difference. In case of item 2 and 7, the difference of .60 is significant, but in item 10 and 11, the difference of .31 is not.

The values of "t" shown in Table 3 are all greater than $t \propto .05$. This suggests the trend that children in each grade have attitudes toward the school-building (item 1) than they did toward the other aspects, however in some grades, they show negative attitudes, e.g. in item 2

which is concerned with the school-compound. The science-learning (item 11) is one which children show high degree of favorableness.

Table 3

Average Responses of Children per Item and per Class

Grade & Sex / No. of items	m. 1		m. 3		m. 6		
	Boys (32)	Girls (39)	Boys (36)	Girls (40)	Boys (27)	Girls (40)	
1	4.34	4.54	4.28	4.55	3.70	4.45	9
2	3.15	3.56	2.83	3.10	2.52	2.22	7
3	4.03	4.44	3.64	4.45	3.52	3.90	7
4	4.03	4.31	3.53	4.30	3.52	3.89	14
5	3.47	3.72	4.05	3.80	3.63	4.32	5
6	3.94	4.15	3.83	3.92	3.19	3.32	6
7	3.75	4.41	3.64	4.32	3.70	3.85	4
8	4.03	4.36	3.69	4.30	3.81	3.55	2
9	4.12	4.56	4.14	4.30	3.85	4.25	1
10	3.94	4.38	3.75	4.12	3.55	3.78	3
11	4.25	4.79	4.42	4.32	3.96	4.00	12
$\bar{x}$	3.91	4.29	3.80	4.13	3.54	3.78	
t	2.36	3.31	2.93	3.21	2.45	4.55	
Diff. that is significant	.39	.30	.40	.34	.44	.37	

3.1.1 Comparison between Average Responses of Boys and Girls

3.1.1.1 Comparison between Responses of Boys and of Girls in mathyom 1

As illustrated in Table 4, the average responses of girls to each item are higher than those of boys. The results are also shown in Figure 1. It is seen that the curve showing the responses of girls is superior to that of boys. This indicates that the intensity of boys' attitudes consistently differ from girls' in each item. The differences of means of responses in items 2, 3, 7, 9, 10 and 11 are significant at .05 level of confidence.

Boys show less favorableness to the method of teaching of their teacher than girls. This may be because they do not like teaching performed by female teachers. In the school selected for this investigation, most female teachers are arranged to teach in mathyom 1 - 2 and 3. Children are bound to have contact with them every day. Boys sometimes want to be taught by man-teachers.

Items 9, 10 and 11 are concerned with learning Thai language, English language and science, respectively. Girls are more favorable to these activities than boys. Valentine reports that "for children the special interest taken in some specific subjects naturally affects their relations to the teachers concerned."[1] As girls expressed their high degree of favorableness to teachers' method of teaching (item 3), they have tendency to like subjects which are taught by those teachers. And homework (item 7) which is equivalent to subject-learning is more favorable to girls than to boys.

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[1] Valentine, C.W., The Normal Child, Whitefriars Press Ltd., London, 1956, p. 180.

Table 4

Comparison of Average Responses Between Boys and Girls in Mathyom 1

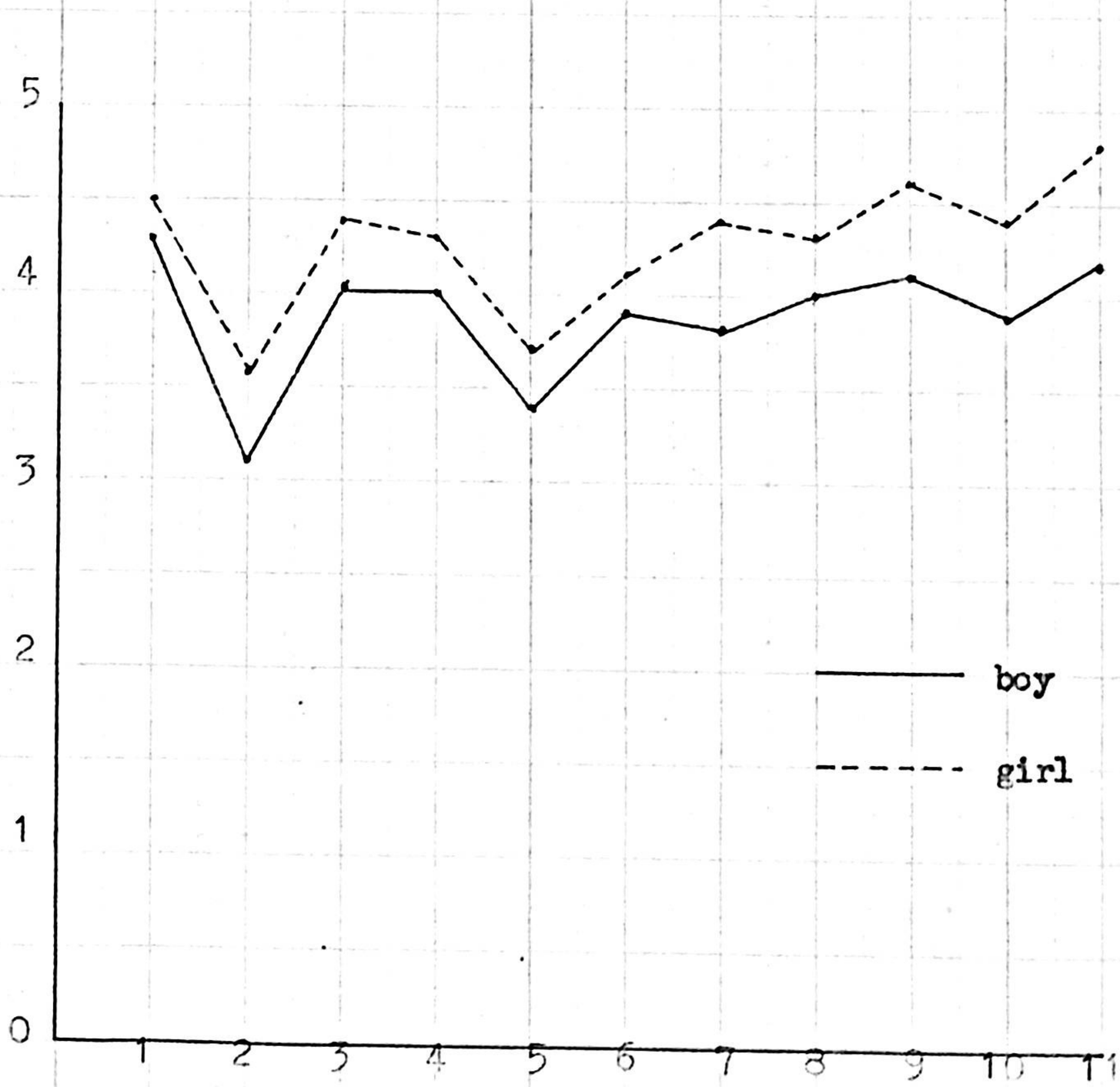
No. of items	$\bar{x}$ of Boys N = 32	$\bar{x}$ of Girls N = 39	Diff. G - B	t	P
1	4.34	4.54	.20	1.31	< .05
2	3.15	3.56	.41	2.44	> .05
3	4.03	4.44	.41	2.19	> .05
4	4.03	4.31	.28	1.87	< .05
5	3.47	3.72	.25	1.25	< .05
6	3.97	4.15	.21	1.05	< .05
7	3.75	4.41	.66	3.77	> .05
8	4.03	4.36	.33	1.71	< .05
9	4.12	4.56	.44	2.50	> .05
10	3.94	4.38	.44	2.10	> .05
11	4.25	4.79	.54	2.71	> .05

3.1.1.2 Comparison between Responses of Boys and of Girls in Mathyom 3

For mathyom 3 the data are presented in Table 5 and Figure 2. The average responses of children in this class slightly differ from those of children in mathyom 1. However, the girls' average responses are greater than boys', except in items 5, 8 and 11. Although the boys' means of responses in items 5 and 11 are higher than girls', the differences are not significant. This means that there is no real difference between them. In item 8, boys' means are bigger than girls', and the difference

Figure 1

Comparison of Average Responses Between Boys and Girls in mathyom 1



is significant ($t = 2.34 > t \propto .05$). This item is concerned with mathematics learning. Boys in this age generally are more successful in mathematics than girls. The school achievement give the evidence for this fact. The successful task often creates favorable attitudes to the task in individuals. This may be the reason why boys like to learn mathematics more than girls do.

In items 3, 4, 7 and 10, girls' means of responses are greater than boys'. The differences between boys' means of responses and girls in these 4 items are significant ($t = 5.42, 4.53, 3.69, 2.40 > t \propto .05$). Items3 and 4 are concerned with method of teaching and relationship with teachers respectively. The female teachers may get along quite well with girls and sometimes they ignore boys. The children's like or dislike of teachers may result in favorableness and unfavorableness toward their teacher's work.

Concerning the homework (item 7) and learning Thai and English language (items 9 and 10) girls are more favorable than boys. Only the difference in liking of learning Thai language between boys and girls in this class is not statistically significant. ($t = 1.36 < t \propto .05$)

Table 5

Comparison of Average Responses Between Boys and Girls in mathyom 3

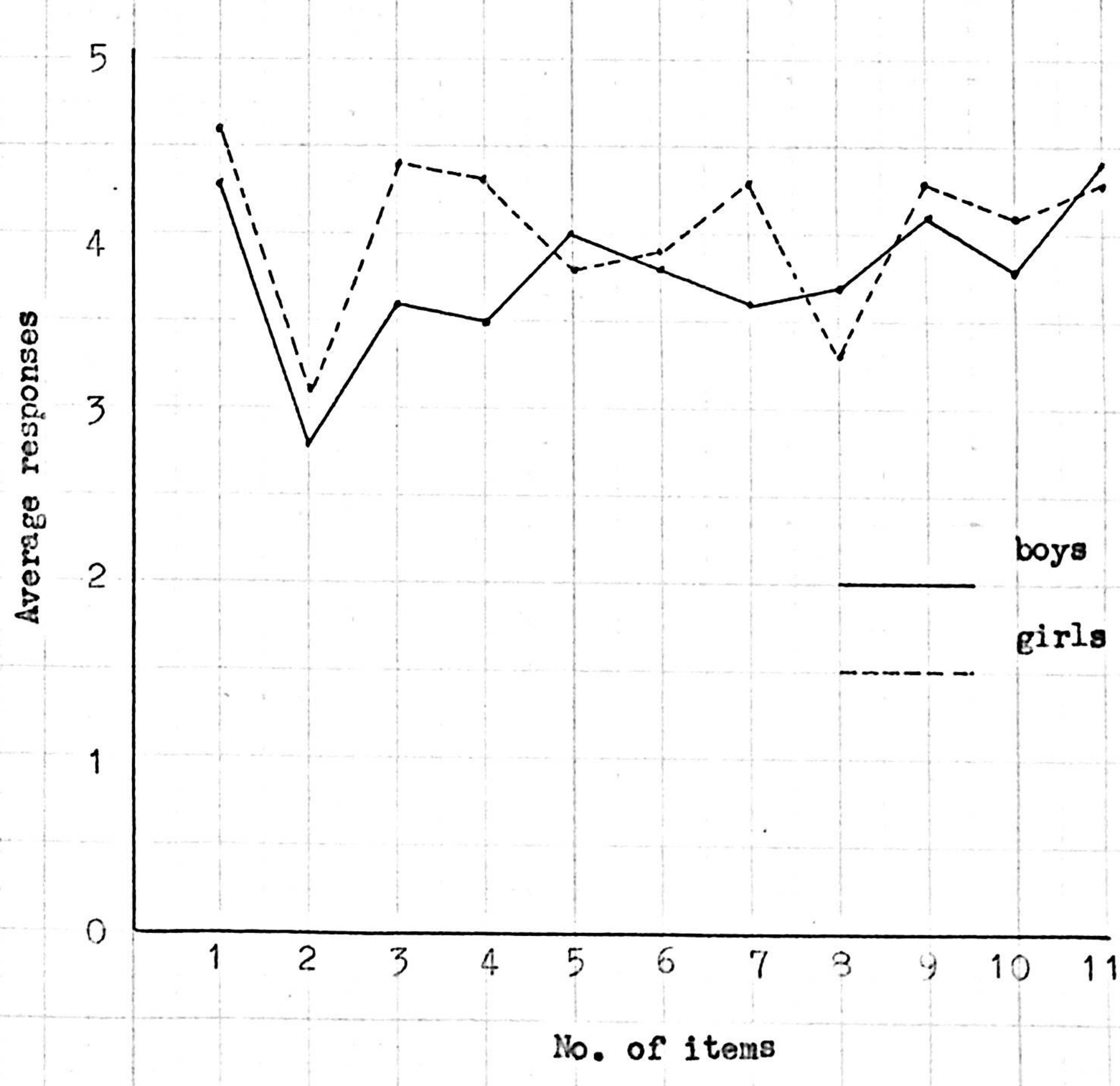
No. of items	$\bar{X}$ of Boys N = 36	$\bar{X}$ of Girls N = 40	Diff. G - B	t	P
1	4.28	4.55	.27	1.95	< .05
2	2.83	3.10	.27	..97	< .05
3	3.64	4.45	.81	5.42	> .05
4	3.53	4.30	.77	4.53	> .05
5	4.05	3.80	- .25	1.29	< .05
6	3.83	3.92	.09	.48	< .05
7	3.64	4.32	.68	3.69	> .05
8	3.69	3.30	- .39	2.34	> .05
9	4.14	4.30	.16	1.36	< .05
10	3.75	4.12	.37	2.40	> .05
11	4.42	4.32	- .10	.59	< .05

3.1.1.3 Comperison Between Responses of Boys and of Girls in mathyom 6

Table 6 and Figure 3 show the average responses of boys and of girls in mathyom 6. In this class, girls' average responses are still superior to boys', except in items 2 and 8. But the differences of boys' means of responses and girls' in these two mentioned items are not significant ($t = 1.46$ and $1.02 < t < .05$). Girls' means of responses are bigger than boys' significantly in items 1, 3, 4, 5 and 9 ($t = 3.96$, 2.12, 2.05, 3.14 and 2.24 $> t < .05$).

Figure 2

Comparison of Average Responses Between Boys and Girls in mathyom 3



Item 1 is concerned with the school-building of which the attractiveness is more meaningful to girls than it is to boys. It is interesting that both boys and girls show negative responses to the school-compound (item 2). Older children may have more critical thinking than the younger ones.

In mathyom 6, the teachers of both sexes may have better interaction with girls than boys. Girls respond that they are more favorable toward the relationship with teachers than boys do. (item 4). The good interaction between pupils and teachers causes the pupils to favor the method of teaching of their teachers as well (item 3).

Item 5 is concerned with the relationship among friends. Girls show more favorable attitudes toward this aspect than boys. When boys and girls are arranged to sit in separate class-room, they have much opportunity to interact with friends of the same sex. And culture perhaps does not permit female adolescents to have close contact with male adolescents. If so, the socialization among girls is going on quite well, while the interaction among boys sometimes is poorer.

Girls still show higher degree of favorableness of learning Thai language (item 9) than boys.

Table 6

Comparison of Average Responses Between Boys and Girls in mathyom 6

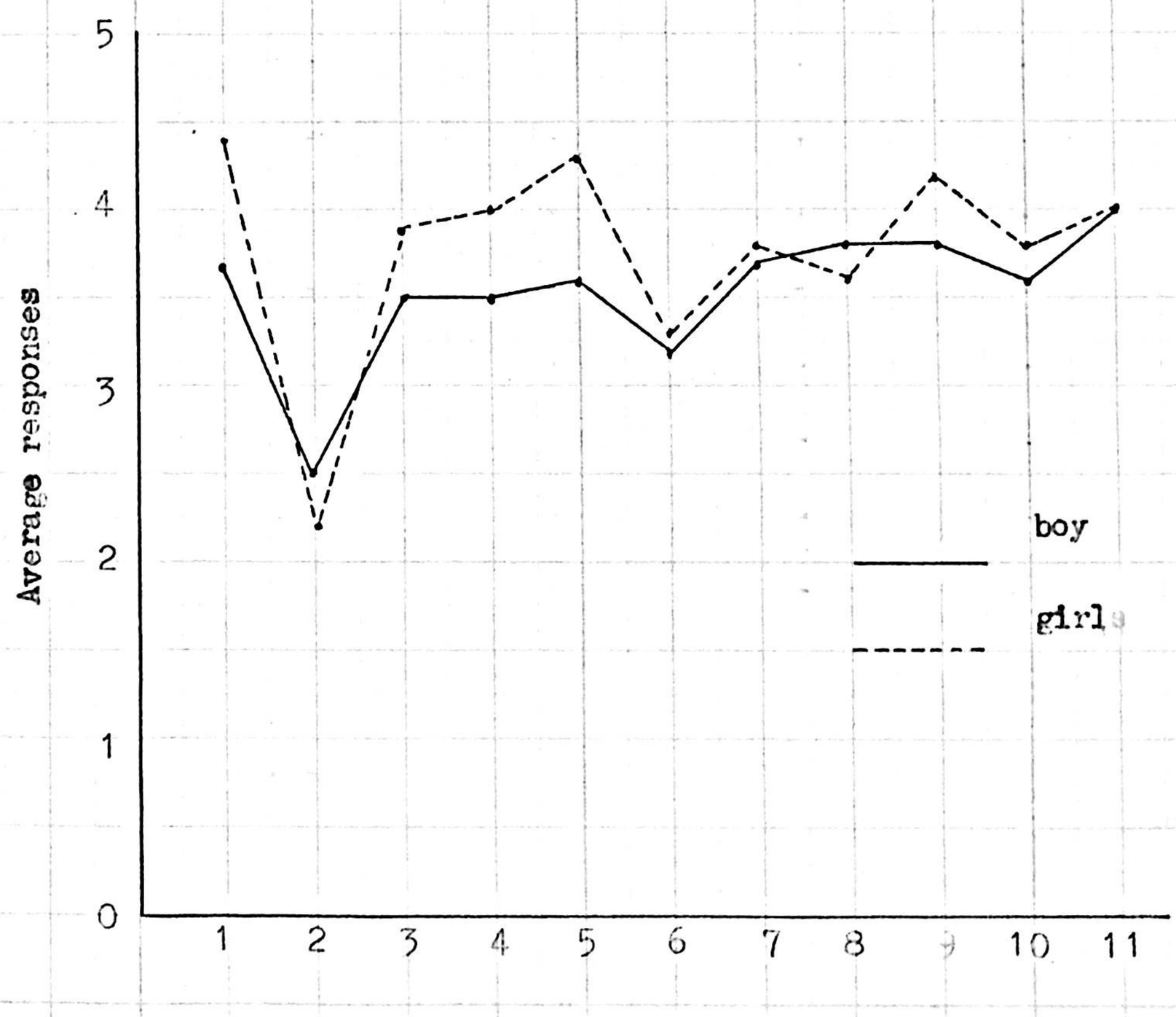
No. of items	$\bar{X}$ of Boys N = 27	$\bar{X}$ of Girls N = 40	Diff. G - B	t	P
1	3.70	4.45	.75	3.96	> .05
2	2.52	2.22	- .30	1.46	< .05
3	3.52	3.90	.38	2.12	> .05
4	3.52	3.98	.46	2.05	> .05
5	3.63	4.32	.69	3.14	> .05
6	3.19	3.32	.13	.12	< .05
7	3.70	3.85	.15	.11	< .05
8	3.81	3.55	- .26	1.02	< .05
9	3.85	4.25	.40	2.24	> .05
10	3.55	3.78	.23	.90	< .05
11	3.96	4.00	.04	.22	< .05

3.1.1.4 Comparison of Responses of Boys and of Girls in Three Classes Combined

The comparison between the means of the responses of boys and of girls is also provided in Table 7 and Figure 4. The average responses of boys in three classes are compared with those of girls in three classes. When the responses of children of the same sex are combined together, it appears that the girls' means are greater than boys' in every item. From Figure 4, it is seen that both curves tend to run horizontally, with slight

Figure 3

Comparison of Average Responses Between Boys and Girls in mathyom 6



irregularities. The curves drop at item 2, i.e. the children's responses to the school-compound are very low. In the real situation, the school-compound is too narrow and does not facilitate the children's playing around resting.

According to the statistical procedures, it is found that the differences between means of boys' and girls' responses to items 1, 3, 4, 7, 9 and 10 are significant at .05 level of confidence ($t = 4.02$, 4.97, 3.49, 4.31, 2.99 and 2.56 respectively $> t \propto .05$). This means that girls' attitudes toward those six aspects differ significantly from boys'.

Girls in three classes have most favorable attitudes toward the attractiveness of the school-building, and their means are significantly higher than boys'. In a case like this, girls may appreciate the attractiveness of the school-building more than boys.

From Tables 5 and 6, the results are in agreement with that in Table 7 for items 3 and 4. This means that the favorable feelings of children toward their teachers reflect their attitudes to the teachers' methods of teaching. And these feelings come from good relationship between teachers and pupils. Ordinarily, girls tend to pay more attention and to be more respectful to teachers than boys. This may be the reason why the relationship between girls and teachers is more desirable than the relationship between boys and teachers.

Girls show more favorable attitudes toward homework than boys (item 7). One factor may be that boys have a lot of opportunities for outdoors activities and they want to have time to enjoy them. But homework assigned by teachers keeps them away from enjoyable activities.

For girls, homework, may be considered as activity in the house and therefore attractive. Another factor may be that girls conform to school-regulations. Doing homework is a mean of conforming to the regulations.

Girls are more favorable to learning Thai and English languages than boys (items 9 and 10). In many studies concerning the language usage of children it has been found that girls' verbal skills are significantly superior to boys'. Stroud and Lindquist[1] (1942) reveal the results of their study that girls' scores are higher on reading comprehension, work study skills, and basic language skills. And in Jordan's[2] (1937) comparison of high school senior boys and girls in North Carolina on two reading tests, girls were superior to boys. The success in learning language may be one factor that creates favorable attitude toward learning language in girls.

In the present situation, it appears that boys are fonder of learning science than are girls. But in this study the results show that boys' means of responses in item 11 is lower than girls'. However, the difference of means of responses is not significant.

In the study conducted by Poffenberger and Norton[3] in the summer of 1955 at University of California, it is revealed that there is a tendency for men to like mathematics more than do women. The group which indicated strong dislike for mathematics consisted of 36% males and 64% females. In the present study boys in mathyom 3 and 6 indicate

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1 Carmichael, Leonard, editor, Manual of Child Psychology, John Wiley & Sons, Inc., New York, 1954, p. 1070.

2 Ibid, p. 1071.

3 Poffenberger, Thomas and Norton Donald, "Factors in the Formation of Attitudes Toward Mathematics" Journal of Educational Research, 52:172, January, 1959.

that they like mathematics more than girls do. In mathyom 3 only, is the difference between boys' means of responses and girls' significant ($t = 2.34 > t \propto .05$).

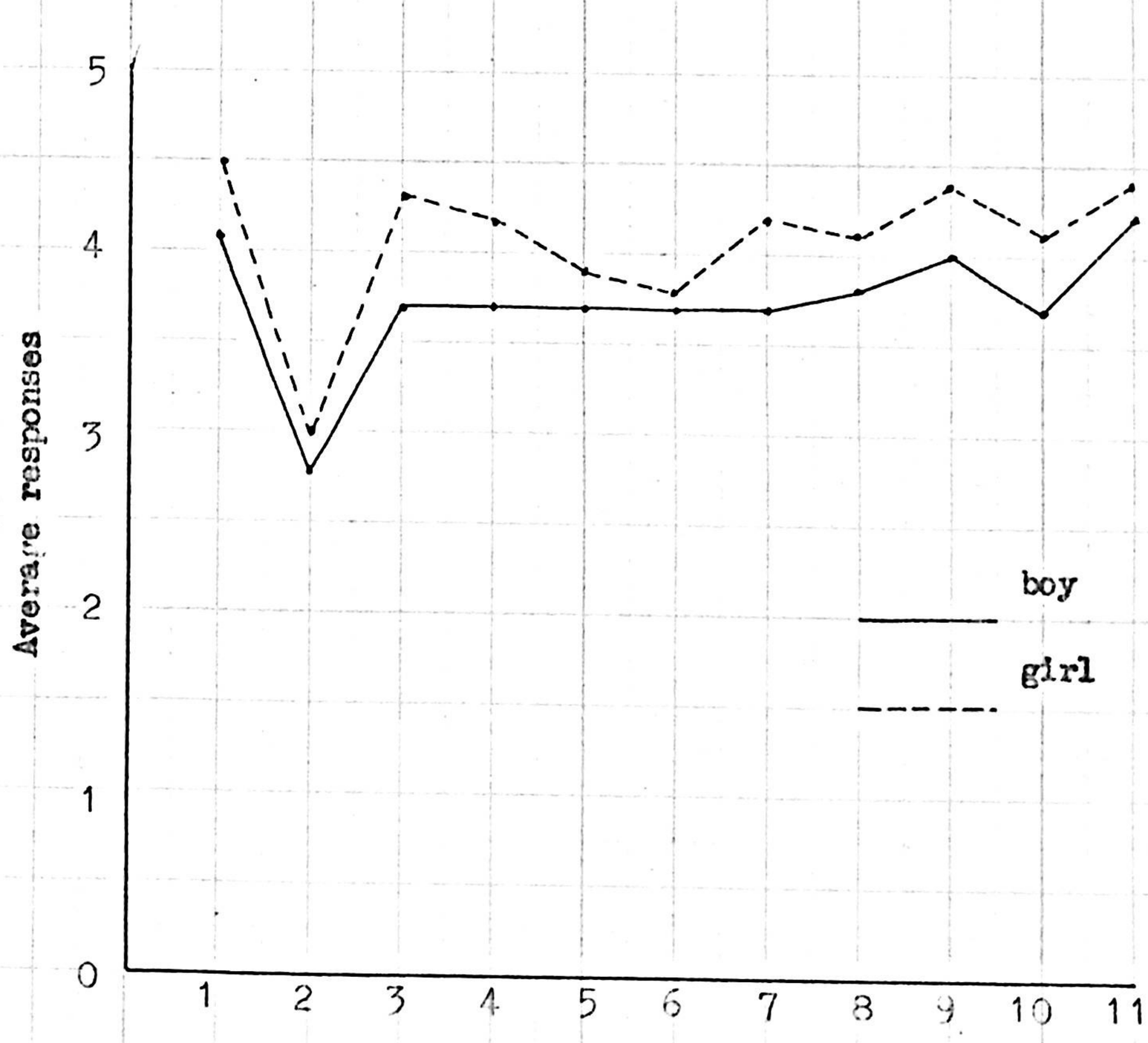
Table 7

Comparison Between Average Responses of Boys and of Girls in Three Classes Combined

No. of items	$\bar{x}$ of Boys in 3 classes	$\bar{x}$ of Girls in 3 classes	Diff.	t	P
1	4.14	4.51	.37	4.02	> .05
2	2.84	2.95	.11	.78	< .05
3	3.73	4.26	.53	4.97	> .05
4	3.69	4.16	.47	3.49	> .05
5	3.73	3.94	.21	1.83	< .05
6	3.68	3.79	.11	.83	< .05
7	3.69	4.19	.50	4.31	> .05
8	3.83	4.07	.24	1.76	< .05
9	4.05	4.36	.31	2.99	> .05
10	3.75	4.09	.34	2.56	> .05
11	4.23	4.36	.13	1.31	< .05
$\bar{x}$	3.76	4.06	.30	2.30	> .05

Figure 4

Average Responses of Children in Three Classes Combined to show Comparison Between Sexes.



3.1.2 Comparison of Average Responses of Boys and Girls in Successive Grades

3.1.2.1 Boys' Responses to 11 items

Table 8 and Figure 5 demonstrate how boys' attitude vary in successive grades. It is obvious that the mean scores drop according to increasing grades. Mostly, the curve of mathyom 1 lies above, the curve of mathyom 3 at the middle and the curve of mathyom 6 undermost, except in items 5 and 11 for mathyom 1 and in items 7 and 8 for mathyom 3. Among the differences of means in these four items, only the difference of means in item 5 is significant. This item is concerned with relationship with friends. Boys in mathyom 1 had attended this school for five months only up to the day the writer gave the test. They had not had enough time to interact with one another. Another reason may be that, this school has a two-shift arrangement. The classes selected for this study were morning-shift classes. Children have to leave school immediately after the class finishes. They have no opportunity to play with one another at school. They are not as closely related as they should be. Consequently, they give low responses to this item.

Table 8

Comparison of Average Responses of Boys in Successive Grades to 11 items

No. of items	m. 1 (32)	m. 3 (36)	m. 6 (27)	Diff. m. 1 & 3	Diff. m. 3 & 6	Diff. m. 1 & 6
1	4.34	4.28	3.70	.60 (3.22)	.58 (3.16)	.64 (3.53)
2	3.15	2.83	2.52	.33	.31	.63 (3.01)
3	4.03	3.64	3.52	.39 (2.15)	.12	.51 (2.41)
4	4.03	3.53	3.52	.50 (2.67)	.01	.51 (2.24)
5	3.47	4.05	3.63	- .58 (3.02)	.42 (2.01)	- .16
6	3.94	3.83	3.19	.11	.64 (2.81)	.75 (3.01)
7	3.75	3.64	3.70	.11	- .06	.05
8	4.03	3.69	3.81	.34	- .12	.22
9	4.12	4.14	3.85	.02	.29	.27
10	3.94	3.75	3.55	.19	.20	.39
11	4.25	4.42	3.96	- .17	.46 (2.46)	.29

* The figures in round brackets show the value of 't' which are greater than p. 05

3.1.2.2 Girls' Responses to the 11 items

The data presented in Table 9 and Figure 6 show the girls' average responses to each item. The mean scores and the curve showing the girls' responses are in the same pattern of boys' as previously stated. That is to say, the means of responses of pupils decrease with the increasing grades. In item 5 only, the mean scores of pupils in mathyom 6 are significantly higher than those of pupils in mathyom 1 and 3 ($t = 3.21, 2.51 > t \propto .05$). As mentioned in 3.1.2.1, girls in mathyom 1 as well as boys had attended this school for a few months only, and because of the two-shift system of the school, they did not have enough opportunity to get acquainted with one another, especially in playing together which is important for children of this age. For girls in mathyom 6, who are in the adolescent period, are arranged to sit separately from boys in the class-room. These girls may get along quite well among themselves. By this reason, they respond that, they have more favorable attitudes toward the relationship among pupils.

Table 9

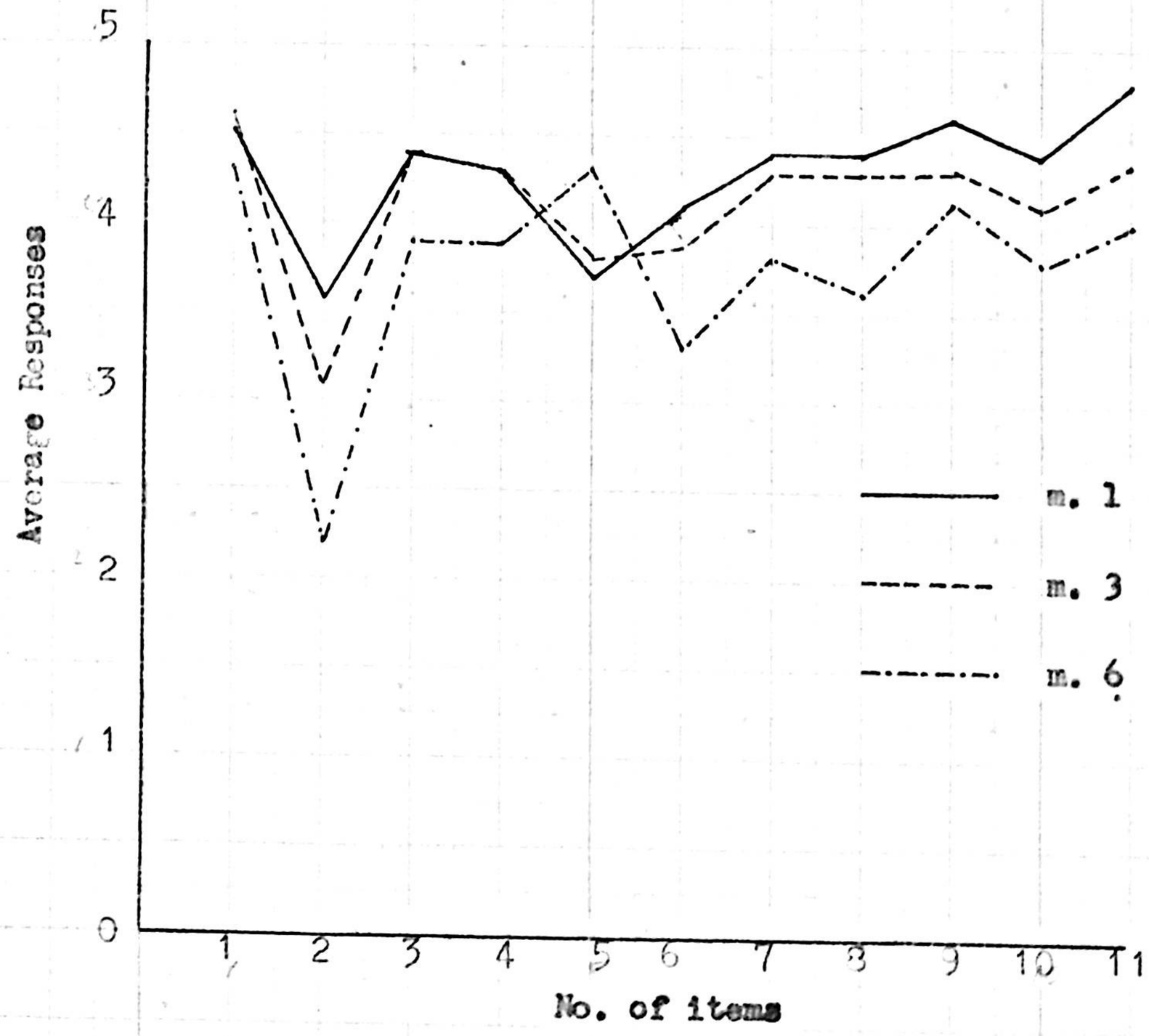
Comparison of Average Responses of Girls in Successive Grades to 11 items

No. of items	m. 1 N = 39	m. 3 N = 40	m. 6 N = 40	Diff. m. 1 & 3	Diff. m. 3 & 6	Diff. m. 1 & 6
1	4.54	4.55	4.45	- .01	.10	.09
2	3.56	3.10	2.22	.46 (2.86)	.88 (4.46)	1.34 (6.12)
3	4.44	4.45	3.90	- .01	.55 (3.39)	.54 (3.35)
4	4.31	4.30	3.89	.01	.41 (2.08)	.42 (2.24)
5	3.72	3.80	4.32	- .08	- .52 (2.51)	- .60 (3.21)
6	4.15	3.92	3.32	.23	.60 (3.04)	.83 (3.43)
7	4.41	4.32	3.85	.09	.47 (2.92)	.56 (3.41)
8	4.36	4.30	3.55	.06	.75 (3.07)	.81 (3.38)
9	4.56	4.30	4.25	.26	.05	.31
10	4.38	4.12	3.78	.26	.34	.60 (3.04)
11	4.79	4.32	4.00	.47 (2.91)	.32	.79 (5.13)

* The figures in round brackets show the value of 't' which are greater than p. 05

Figure 6

Average Responses of Girls in Successive Grades



3.1.2.3 Responses of Boys and Girls in the Same Grade Combined over 11 items

The results shown in Table 10 and Figure 7 are the means scores obtained from the combination of the responses of boys and girls within the same grade. Comparing the responses of children in successive grades, it appears that children in higher grade give lower responses to school than those in the lower grades. This is obviously seen in comparing between the means of responses of mathyom 1 and mathyom 6. Except in item 9 only, the means of responses in every item of the two grades differ significantly. Older children have many other social activities. And these activities more or less attract them. They have a tendency to take more interest in activities and situations outside the school than they do in school situations. More over, school situations, such as punishment, sarcasm, scolding, lack of teachers' understanding etc., sometimes frustrate them. The longer they stay in school, the more frustrating situations they receive. Frustrating situations are considered as one factor that causes the change in childrens' attitudes.

From the two preceding and present tables and figures, it evidently indicates that the intensity of children's attitudes toward several aspects concerning school change conversely with grades. From this study, the change in boys' attitudes is not as much as that of girls' attitudes. Attitudes of boys in mathyom 6 differ significantly from those of boys in mathyom 1 in five items, while attitudes of girls in these same grades differ significantly in nine items (see Tables 8 and 9).

Figure 5

Average Responses of Boys in Successive Grades

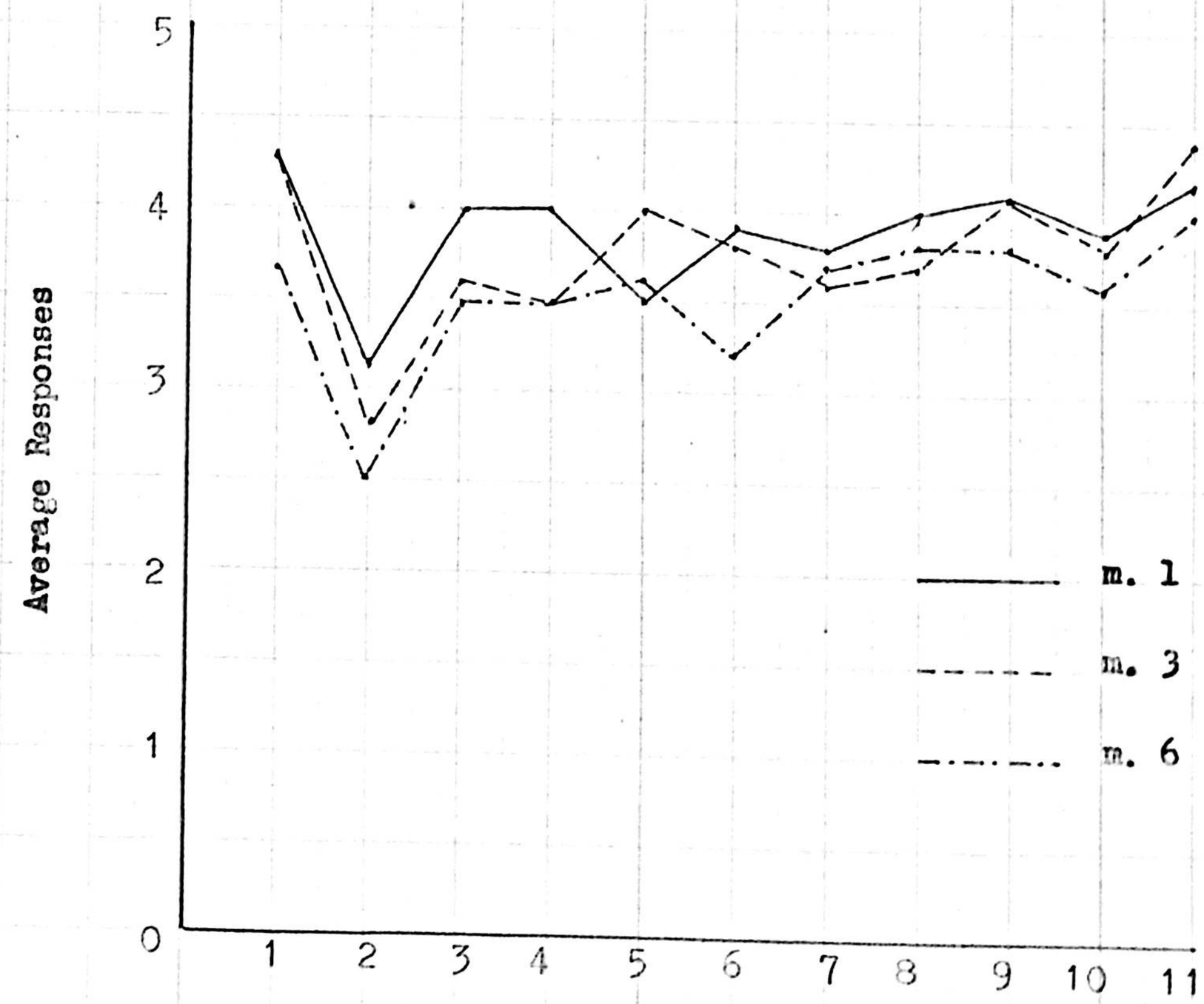


Table 10

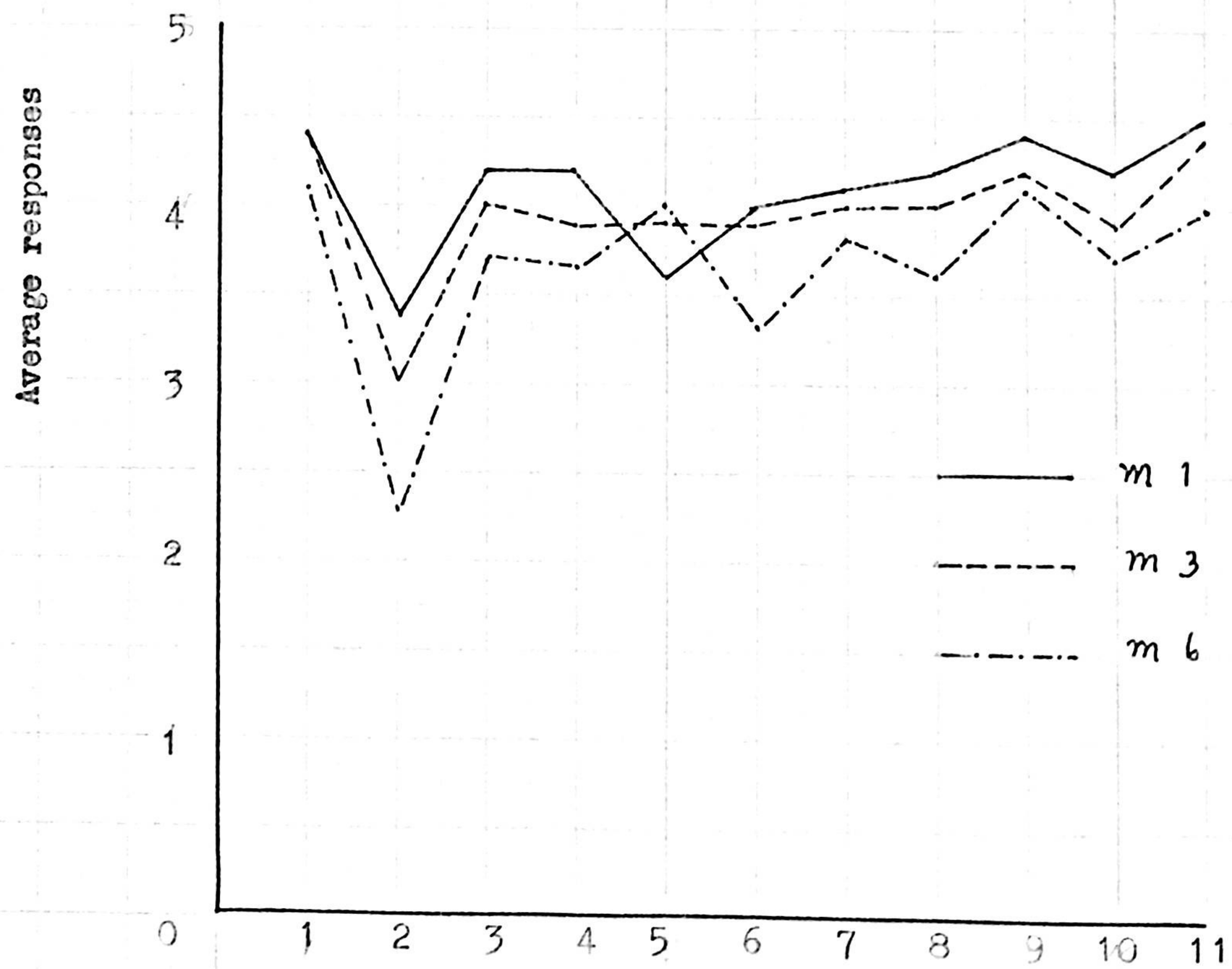
Average Responses of Boys Combined with those of Girls in the Same Grade, as Compared in Successive Grades.

No. of items	m. 1 (B+G)	m. 3 (B+G)	m. 6 (B+G)	Diff. m.1 & 3	Diff. m. 3 & 6	Diff. m. 1 & 6
1	4.44	4.42	4.14	.02	.28 (2.46)	.30 (4.32)
2	3.37	2.97	2.34	.40	.63 (4.14)	1.03 (6.52)
3	4.25	4.05	3.74	.20	.31 (2.38)	.70 (5.38)
4	4.18	3.93	3.74	.25 (2.50)	.19	.79 (6.92)
5	3.60	3.91	4.04	.31 (2.19)	.13	.44 (3.19)
6	4.05	3.87	3.26	.18	.61 (3.72)	.79 (4.57)
7	4.13	3.99	3.78	.14	.21	.35 (2.48)
8	4.21	3.99	3.65	.22	.34 (1.96)	.56 (3.41)
9	4.36	4.22	4.08	.06	.14	.24
10	4.18	3.94	3.68	.24	.26	.74 (5.75)
11	4.54	4.36	3.98	.18	.38 (3.11)	.56 (4.60)

* The figure in round brackets show the value of 't' which are greater than p. 05

Figure 7

Average Responses of Boys Combined with those of Girls in the Same Grade.



3.1.3 Comparison of Children's Attitudes with School Achievement

The comparison of children's attitudes toward school with their school achievement is made in order to see how attitudes and learning are related. In other words, this comparison reveals any differences in attitude toward school among good and poor learners. Most teachers, generally believe that children who have positive attitudes toward school get better school achievement than those who have negative attitudes.

In this study, children in each class were classified into three levels according to the school achievement, A: above 75 percentile, B: 25 - 75 percentile and C: below 25 percentile level. But only the two groups at both ends were studied. The average scores of the first and the third groups were computed and compared. The results are shown in Tables 11, 12, 13, 14, 15 and 16. It is found that in many items for each class the mean scores of the poor learners (below 25% ile level) are higher than those of the good learners (above 75% ile level). The values of differences with (minus) symbol in the six following tables show that the mean scores of the third group is higher than those of the first group. And in some items the mean scores of the good learners are higher. However, the differences are not significant, except in items 1, 4 and 10 for girls in mathyom 3 (Table 14). In items 1 and 10, the mean scores of the good learners are superior to those of the poor learners and in item 4, their scores conversely change. However, these are not statistically sufficient to support the hypothesis that real differences in attitudes between good and poor learners exist.

Table 11

Average Responses of Boys in methvom 1 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 8)	below 25% ile $\bar{x}2$ (N = 8)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.12	4.75	- 0.63	1.94
2	3.12	3.38	- 0.26	.70
3	3.62	4.25	- 0.63	1.43
4	3.62	4.12	- 0.50	1.35
5	3.50	3.12	0.38	1.21
6	3.75	3.88	- 0.13	.14
7	3.25	3.88	- 0.63	1.26
8	4.12	4.12	0	0
9	4.00	3.88	.0.12	.52
10	3.88	3.75	.0.13	.20
11	4.12	4.62	- 0.50	1.57

Table 12

Average Responses of Girls in mathvcm 1 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 7)	below 25% ile $\bar{x}2$ (N = 9)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.71	4.33	0.38	1.00
2	4.43	4.67	- 0.24	.73
3	4.57	4.22	0.35	1.09
4	3.71	4.44	- 0.73	1.58
5	3.43	3.56	- 0.13	.30
6	4.00	4.44	- 0.44	1.09
7	4.29	4.33	- 0.04	.15
8	4.14	4.44	- 0.30	.96
9	3.86	4.56	- 0.70	1.57
10	4.29	4.11	0.18	.45
11	4.71	4.56	0.15	.46

Table 13

Average Responses of Boys in mathyom 3 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 11)	below 25% ile $\bar{x}2$ (N = 9)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.18	4.22	- 0.04	.17
2	2.91	2.56	0.35	1.06
3	3.64	3.56	0.08	.25
4	3.54	3.67	- 0.13	.37
5	3.91	4.11	- 0.20	.21
6	3.54	3.89	- 0.35	.88
7	3.91	3.56	0.35	.97
8	3.73	3.89	- 0.16	.33
9	3.91	4.56	- 0.65	2.02
10	4.09	3.89	0.20	.55
11	4.00	4.56	- 0.56	1.90

Table 14

Average Responses of Girls in methrom 3 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 18)	below 25% ile $\bar{x}2$ (N = 6)	Diff. $\bar{x}1 - \bar{x}2$	t	
1	4.72	4.12	0.60	2.39	P.05
2	3.28	3.00	0.28	1.00	
3	4.00	4.50	- 0.50	1.32	
4	4.33	4.75	- 0.42	3.13	P.05
5	4.00	3.75	0.25	.61	
6	4.17	3.75	0.42	1.35	
7	4.33	4.50	- 0.17	.53	
8	4.50	4.25	0.25	.72	
9	4.17	4.12	0.05	.13	
10	4.90	4.25	0.65	2.14	P.05
11	4.33	4.62	- 0.29	.96	

Table 15

Average Responses of Boys in mathyom 6 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 8)	below 25% ile $\bar{x}2$ (N = 3)	Diff. $\bar{x}1 - \bar{x}2$	t
1	3.50	3.33	0.17	.25
2	2.50	2.00	0.50	.87
3	3.38	3.33	0.05	.13
4	3.75	4.00	- 0.25	.35
5	3.75	3.00	0.75	1.51
6	3.12	3.33	- 0.21	.47
7	4.00	3.33	0.67	1.08
8	4.12	3.33	0.79	1.33
9	3.62	4.00	- 0.38	1.20
10	3.75	3.67	0.08	.09
11	4.12	3.67	0.45	1.00

Table 16

Average Responses of Girls in mathcom 6 Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 16)	below 25% ile $\bar{x}2$ (N = 3)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.62	4.67	- 0.05	.16
2	2.19	2.67	- 0.48	.85
3	4.06	4.00	0.06	.18
4	3.68	4.33	- 0.65	.59
5	4.25	4.67	- 0.42	.73
6	3.25	3.00	0.25	.38
7	4.06	4.33	- 0.27	.74
8	4.19	3.67	0.52	.78
9	3.88	4.33	- 0.45	.83
10	4.19	3.00	1.19	1.61
11	4.25	4.33	- 0.08	.18

Tables 17 and 18 show the average scores of boys and those of girls in three grades combined. Comparing the means, it appears that in items 1 and 10 for girls (Table 18), the differences are statistically significant ($t = 2.31, 3.53 > t \propto .05$). Table 19 presents the average scores of both boys and girls in three classes combined. The differences between two means in items 4, 9 and 10 are not sufficiently significant to give a definite indication that children at any level have more desirable attitudes toward school than those at other levels. Both high-marked and low-marked children may have either favorable or unfavorable attitudes toward school. High or low intensity of favorableness in school may equally function in children of both levels. The findings of this section do not reveal differences in attitudes between good and poor learners.

However, one point gives rise to interest that in item 10 (learning English language), the average responses of good learners are higher than those of the poor learners in each comparison. Some show statistically significance (Tables 14, 18 and 19). This may indicate that children who are successful in this subject, tend to have more favorable attitudes toward it than ones who get lower marks.

Table 17

Average Responses of Boys in Three Classes Combined Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 27)	below 25% ile $\bar{x}2$ (N = 20)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.07	4.30	- 0.23	1.28
2	2.78	2.80	- 0.02	.08
3	3.56	3.80	- 0.24	1.43
4	3.57	3.90	- 0.33	1.48
5	3.74	3.55	0.19	.91
6	3.48	3.80	- 0.32	.90
7	3.74	3.65	0.09	.37
8	3.96	3.90	0.06	.16
9	3.85	4.20	- 0.35	1.62
10	3.93	3.80	0.13	.42
11	4.75	4.45	0.30	1.59

Table 18

Average Responses of Girls in Three Classes Combined Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 41)	below 25% ile $\bar{x}2$ (N = 20)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.63	4.30	0.38	2.31 >P.05
2	2.88	3.25	- 0.37	1.54
3	4.22	4.30	- 0.08	.45
4	3.98	4.55	- 0.57	1.92
5	4.10	3.80	0.30	1.14
6	3.78	3.95	- 0.17	.66
7	4.22	4.40	- 0.18	.98
8	4.32	4.25	0.07	.30
9	4.00	4.35	- 0.35	1.27
10	4.34	3.50	0.84	3.53 >P.05
11	4.36	4.55	- 0.19	1.03

Table 19

Average Responses of Boys and Girls in Three Classes Combined Classified According to School Achievement

No. of items	above 75% ile $\bar{x}1$ (N = 68)	below 25% ile $\bar{x}2$ (N = 40)	Diff. $\bar{x}1 - \bar{x}2$	t
1	4.38	4.30	0.08	.79.79
2	2.83	3.03	- 0.20	1.23
3	3.89	4.05	- 0.16	1.07
4	3.78	4.23	- 0.45	2.29 > P.05
5	3.92	3.68	0.24	1.38
6	3.81	3.88	- 0.07	.33
7	3.98	4.03	- 0.05	.31
8	4.14	4.08	0.06	.29
9	3.91	4.26	- 0.35	2.18 > P.05
10	4.14	3.65	0.49	2.56 > P.05
11	4.56	4.50	0.06	.45

3.2 Agreement of Children's Average Responses to Distributed Aspects of the School with their Responses to the School as a Whole

In this step of analysis, the average responses to distributed aspects of the school of each child in each class were computed. The responses of children to the school as a whole, i.e. the responses to question 2 from Test Form II are tabulated. The data are given in Appendix A. The means of these data are calculated in Table 20.

Comparing the means of the responses obtained from Test Form I with those from Test Form II, it indicates that the differences of means of each class are not significant ($t = 1.59, 0.19, 0.17, 1.18, 0.90, 1.64 < t \propto .05$). From this it is found that there is no real difference between the results from Test Form I and those from Test Form II.

However, the differences between means of both forms of test are not significant, but it is interesting to see that the means of Form II are superior to those of Form I in five classes. Mathyom 3 (girls) only is exceptional.

Statistically, the differences of means of both forms are not significant.

Table 20

Comparison of Average Responses of Children to Distributed Aspects of School with the Responses to School as a Whole

Statistic	mathyom 1		mathyom 3		mathyom 6	
	Boys	Girls	Boys	Girls	Boys	Girls
$\bar{x}_1$	3.91	4.29	3.80	4.13	3.54	3.78
$\bar{x}_{R2}$	4.12	4.32	3.83	4.01	3.63	3.89
Diff. ($\bar{x}_{R2} - \bar{x}_1$)	0.21	0.03	0.03	-0.12	0.09	0.11
t	1.59	0.19	0.17	1.18	0.90	1.64

$\bar{x}_1$ = The average responses of children to distributed aspects of the school (Test Form I)

$\bar{x}_{R2}$ = The average responses of children to the school as a whole (Question 2 Test Form II)

3.3 Rank Order of Desirable Aspects of Children's "Best" School

To determine some of the most important factors that contribute to children's favorable feelings toward school, the second form of test was applied. The data obtained from children's open-ended responses to

question 1 were classified into categories as follows [1] :-

1. Human factors
   - 1.1 Teachers
     - 1.1.1 Qualification
     - 1.1.2 Teaching
     - 1.1.3 Relationship with pupils
     - 1.1.4 Relationship with others
     - 1.1.5 Other characters and/or personality traits
   - 1.2 Students
     - 1.2.1 Qualities of class leaders
     - 1.2.2 Qualities of other students
   - 1.3 Qualities of janitors
2. Physical environments and services
   - 2.1 Facilities
   - 2.2 Services
   - 2.3 Accessibility
   - 2.4 Building and ground
   - 2.5 Privacy
3. Control and regulation

The next step of analysis was to count the frequencies of children's responses distributed according to those categories. Then, the means and percentages of these frequencies were computed. The results were shown in Appendix D. Now the percentages of responses of

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[1] For the example of children's answers which are under these categories and sub-categories see Appendix B and C.

the following characteristics were ranked:-

1.1 Teachers

1.2 Students

1.3 Qualities of janitors

2.1 Facilities

2.2 Services

2.3 Accessibility

2.4 Building and ground

2.5 Privacy

3.0 Control and regulation

When the percentages of frequencies of children's responses to the nine above characteristics were ranked, the first two characteristics that received highest percentages of responses were studied. If the percentages of the characteristic in the third order were nearly equal to those in the second, the characteristic in the third order was included.

Both boys and girls in mathyom 1 gave the highest frequencies of responses to the qualities of students (Tables 21 and 22). They answered that students should have good conduct, have good discipline, have good knowledge, etc. They feel that good qualities of pupils is the most important factor that determines the 'best' school. Next to the qualities of the students, boys mentioned the various services that the school should give to them, and girls mentioned the qualities of teachers. In Table 22, it is seen that there is a wide gap (36.03 - 18.91) between the percentages of responses to qualities of students and those of teachers. This means that girls concentrate on qualities of students

much more than they do on those of teachers. And boys rated the qualities of teachers in the fourth order (Table 21).

Young children, ordinarily, have a narrow range of interest and thinking. They have a centre at themselves more than the other social characteristics. Another point may be that the influence of morality teaching of the teachers at school makes the children become aware of the teaching.

Boys gave rather high frequencies of responses to school services (Table 21). They took interest in the cleanliness of the school-building, in health examination, in rooms for the sicks and sufficient clean water for drinking.

Table 21

Rank Order of Desirable Aspects of the "Best" School of Boys in Mathyom 1

No. of Categories	Categories	$\bar{x}$	%
1.2	Students	.96	31.31
2.2	Services	.68	22.22
2.1	Facilities	.46	15.15
1.1	Teachers	.43	14.14
2.4	Building and ground	.31	10.10
3.0	Control and regulation	.18	6.06
2.3	Accessibility	.03	1.01

Table 22

Rank Order of Desirable Aspects of the "Best" School of Girls in Mathyom 1

No. of Categories	Categories	$\bar{x}$	%
1.2	Students	1.02	36.03
1.1	Teachers	.53	18.91
2.2	Services	.38	13.51
2.1	Facilities	.38	13.51
3.0	Control and regulation	.25	9.00
2.4	Building and ground	.15	5.40
2.3	Accessibility	.07	2.70

For mathyom 3 and 6, both boys and girls gave highest frequencies of responses to the various facilities the school should manage for them (Tables 23, 24, 25 and 26). When the frequencies of responses of boys in three classes and of girls in three classes were combined (Tables 27 and 28) and when the frequencies of responses of all boys and girls in three classes were combined (Table 29), it appears that the frequencies of responses to the facilities come first. Concerning these facilities, children were apt to mention rooms for special subjects, a large play-ground, rich teaching apparatus, spacious school compound, school library, a big school house, big class-room with electric fan, a fence around the school compound etc.

Older children have enough opportunity to interact things or social situations that facilitate them. As they interact, they develop attitudes toward those facilitating things or situations. They wish that every society in which they participate should have facilitaties. Another reason is that older children are more aware of prestige. They may regard the facilities in school as prestige for both the school and themselves.

Next to the facilities, boys in mathyom 3 and 6 and girls in mathyom 6 mentioned the qualities of teachers (Tables 23, 25 and 26). And the combined results from mathyom 1, 3 and 6 for boys (Table 27), mathyom 1, 3 and 6 for girls (Table 28), and mathyom 1, 3 and 6 for boys and girls combined (Table 29), also point out the same thing. They responded that teachers must have high qualification, good knowledges. They frequently emphasized the teachers' teaching, such as serious teaching, making lessons clearly understood. The other desirable qualities in a teacher are good relationship with pupils and a good personality. They reported that teachers must understand pupils, speak nicely with pupils and have a cool and calm disposition.

Possibly, children understand that school is a place which offers everything students want, and teachers are one of the main parts of the school. Students are only products that are shaped by teachers. Therefore, teachers must posses high qualities. Another interesting point may be the children's own projection. They look at the other people's qualities as the measurement of the qualities of the group they associate. They gave rather low frequencies of responses to qualities of students, such as boys in mathyom 3 and girls in mathyom 6 (Tables 23

and 26). For mathyom 6 (boys), the difference between percentages of frequencies of responses to teachers' qualities and those to students' qualities is rather big (8.43), though the latter comes in the third order (Table 25).

For girls in mathyom 3, the frequencies of responses to the school services are ranked in the second order (Table 24), but the percentages of the frequencies of responses are nearly equal to those of the qualities of teachers.

In summary, it is apparent that, from children's point of view, the most important factors that determine the "best" school may be grouped as follows:-

- facilities provided in school for children;
- qualities of teachers who take much responsibility;
- qualities of students and
- school services.

Table 23

Rank Order of Desirable Aspects of the "Best" School of Boys in Mathyom 3

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.86	34.53
1.1	Teachers	1.30	24.22
2.4	Building and ground	.66	12.37
2.2	Services	.61	11.34
1.2	Students	.52	9.79
2.3	Accessibility	.13	2.57
1.3	Qualities of janitors	.02	.51

Table 24

Rank Order of Desirable Aspects of the "Best" School of Girls in Mathyom 3

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.47	23.88
2.2	Services	1.32	21.45
1.1	Teachers	1.25	20.24
1.2	Students	1.05	17.00
2.4	Building and ground	.60	9.71
1.3	Qualities of janitors	.17	2.83
3.0	Control and regulation	.15	2.42
2.5	Privacy	.12	2.02
2.3	Accessibility	.02	.40

Table 25

Rank Order of Desirable Aspects of the "Best" School of Boys in Mathyom 6

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.59	25.90
1.1	Teachers	1.51	24.69
1.2	Students	1.00	16.26
2.2	Services	.77	12.65
3.0	Control and regulation	.42	7.22
2.3	Accessibility	.33	5.42
2.5	Privacy	.28	4.81
2.4	Building and ground	.14	2.40
1.3	Qualities of janitors	.03	.60

Table 26

Rank Order of Desirable Aspects of the "Best" School of Girls in Mathyom 6

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	2.90	42.33
1.1	Teachers	1.07	15.69
2.2	Services	.97	14.23
2.4	Building and ground	.57	8.39
2.3	Accessibility	.45	6.56
1.2	Students	.42	6.20
3.0	Control and regulation	.20	2.91
2.5	Privacy	.15	2.18
1.3	Qualities of janitors	.10	1.45

Table 27

Rank Order of Desirable Aspects of the "Best" School of Boys in Three Grades

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.31	27.23
1.1	Teachers	1.07	22.22
1.2	Students	.81	16.77
2.2	Services	.68	14.16
2.4	Building and ground	.40	8.27
3.0	Control and regulation	.28	5.88
2.3	Accessibility	.15	3.26
2.5	Privacy	.08	1.74
1.3	Qualities of janitors	.02	.42

Table 28

Rank Order of Desirable Aspects of the "Best" School of Girls in Three Grades

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.59	30.06
1.1	Teachers	.95	18.03
2.2	Services	.89	16.93
1.2	Students	.83	15.66
2.4	Building and ground	.44	8.38
3.0	Control and regulation	.20	3.79
2.3	Accessibility	.18	3.48
1.3	Qualities of janitor	.10	1.89
2.5	Privacy	.09	1.74

Table 29

Rank Order of Desirable Aspects of the "Best" School of Boys and Girls in Three Grades

No. of Categories	Categories	$\bar{x}$	%
2.1	Facilities	1.47	28.87
1.1	Teachers	1.00	19.79
1.2	Students	.82	16.57
2.2	Services	.80	15.76
2.4	Building and ground	.42	8.34
3.0	Control and regulation	.24	4.67
2.3	Accessibility	.17	3.39
2.5	Privacy	.09	1.74
1.3	Qualities of janitor	.06	1.28

3.4 Children's Attitudes toward School in Each Grade

Question 3 from Test Form II was given to students to give their opinions toward their school in terms of lack. Their responses to this question were classified into categories in the same pattern of those to question 1 (see pages 81-91).* The frequencies of responses to these characteristics were counted and the means and percentages of the frequencies of responses were computed. The data are presented in Appendix D.

The percentages of frequencies of responses of children in each class are presented in Table 30 to demonstrate what characteristics concerning the school the children mention most and what characteristics they mention least. For some characteristics, such as qualities of janitors and privacy, boys and girls in mathyom 6 and girls in mathyom 3 only, gave the answers. The characteristics thatwere mentioned most frequently by children in each class were studied and are shown in Table 31.

From Table 31, it is seen that boys and girls in mathyom 1 give high frequencies of responses to the lack of qualities of pupils. Girls emphasize this characteristic more than boys do. They state that some pupils have bad habits, some are disobedient to the teachers, some do not talk politely etc. For boys in this class, the lack of facilities is frequently mentioned and they also take more interest in the lack of school services, but they never state the qualities of teachers at all. It is girls that express their opinions about the teachers.

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* For the example of children's answers which are under these categories and sub-categories see Appendix B and C.

In stating the desirable aspects of the best school, boys and girls in mathyom 1 mentioned the qualities of students as the most important factors and in stating the undesirable aspects, they again mentioned the lack of qualities of pupils.

For boys and girls in mathyom 3, their opinions slightly change. They mentioned much more the lack of the facilities the school provided for them. Boys gave more frequencies of responses to this characteristic than girls did. They often mentioned the lack of a play ground, of a meeting hall, of a permanent dining room, of a school library etc. Girls are more interested in the qualities of pupils than are boys, but boys are more interested in the qualities of teachers than girls.

For mathyom 6, both boys and girls gave the highest frequencies of responses to the characteristics concerning the lack of facilities the school offers them. Their pattern of responses were different from those of children in the lower classes. They complained of the lack of room for special subjects, of teaching aids, of sports-equipment, of co-curricular activities, of opportunity for field trips etc.

It is interesting that boys in this class show more frequencies of responses to characteristic concerning the teachers than children in other classes do. They mostly mentioned the lack of relationship with pupils, such as, teachers are unfriendly with pupils, they do not understand pupils, there are many teachers with whom the pupils are not quite satisfied. Some pupils state that some teachers have good knowledge but bad moral standard.

Considering the aspect of the lack of students' qualities, boys in mathyom 6 as well as girls rarely mentioned it.

Table 30

Percentages of Frequencies of Children's Responses in Each Class to Question 3 from Test Form 2 Distributed According to Various Characteristics.

(Summarized from Appendix D6)

No. of Categories	Categories	m. 1		m. 3		m. 6	
		B	G	B	G	B	G
1.1	Teachers	-	8.56	9.08	4.64	13.23	7.14
1.2	Students	47.50	62.85	16.36	27.32	2.40	3.06
1.3	Qualities of janitors	-	-	-	1.16	2.40	2.55
2.1	Facilities	30.00	17.14	61.81	41.86	60.24	60.71
2.2	Services	20.00	8.57	3.63	19.76	7.22	7.65
2.3	Accessibility	-	-	1.81	-	2.40	2.55
2.4	Building & Ground	2.50	2.85	5.45	2.32	-	0.51
2.5	Privacy	-	-	-	2.32	6.02	14.79
3.0	Control & Regulation	-	-	1.81	0.58	6.02	1.02
	Total	100	100	100	100	100	100

Table 31

Percentages of Frequencies of Children's Responses in Each Class to Question 3 from Test Form II Distributed According to Four Characteristics.

(Summarized from Appendix D6)

No. of Categories	Categories	m. 1		m. 3		m. 6	
		B	G	B	G	B	G
1.1	Teachers	-	8.56	9.08	4.64	13.23	7.14
1.2	Students	47.50	62.85	16.36	27.32	2.40	3.06
2.1	Facilities	30.00	17.14	61.81	41.86	60.24	60.71
2.2	Services	20.00	8.57	3.63	19.76	7.22	7.65
Total		97.50	97.12	90.88	93.58	83.09	78.56

CHAPTER IV

CONCLUSION AND RECOMMENDATION

4.1 Abstract of the Background of the Study

As attitude is generally known as a consistent expression of feelings of individual toward persons or situations. This experimental study was conducted to reveal how attitudes operate in school children's behavior patterns. This idea leads to the study of their attitudes toward their school. The school situation may produce either positive or negative attitudes in children. If children develop favorable attitudes, they will react to their school positively. On the other hand, if they develop unfavorable feelings toward their school they may react negatively. Therefore, one of the most important duties for the teachers is to try his best to develop favorable attitudes in children.

4.2 Abstract of the Methods and Techniques

A sample of 214, 95 boys and 119 girls were drawn from mathyom 1, 3 and 6 of one co-educational secondary school of average socio-economic status in Bangkok. The children's age-range was 11/5 - 17/0 and their average age was 14/3.

In gathering data, Likert's five point scales and open-ended questions were applied. Eleven statements were given to subjects to judge by means of Likert scales. One who scored below 3, shows negative attitude and above 3, a positive. The average responses of subjects were studied. In the open-ended questions, the responses of subjects

were categorized and the percentages of the responses to those characteristics were studied.

4.3 Summary of the Findings

The results of the present study can be summarized as follows:-

1. Children in each grade show favorable attitudes toward each aspect concerning the school mentioned in the test, except boys in mathyom 3 and 6 and girls in mathyom 6 show unfavorable attitudes toward the school-compound.

2. Comparing boys' attitudes with girls', in each comparison it is seen that girls have a higher degree of favorable attitude toward school than boys have. In some items, the differences of means of their responses are significant, in some they are not. In the comparison between the attitudes of boys and of girls in mathyom 3 toward learning mathematics (item 8), boys show a higher degree of favorable attitude than girls do.

3. A comparison of children's attitudes toward school in successive grades reveals that children in the lower grade are more favorable toward aspects concerning the school than children in the higher grade. The children's means of responses to school decrease with advancing grade. Children in mathyom 6 like school significantly less than those in mathyom 1.

4. The findings of this study reveal no correlation between attitudes toward school and achievement. There is no statistically significant difference in attitude toward school between the high-marked and low-marked children. Both good and poor learners may have either favorable or unfavorable attitudes toward school as well.

But it is interesting to see that in learning English language, the good learners show higher degree of favorable attitude to this aspect than the poor learners.

5. Children's average responses to distributed aspects of the school (as measured by Test Form I) do not differ significantly from those to the school as a whole (as measured by question 2 from Test Form II)

6. The investigation of the rank order of the desirable aspects of children's best school, shows that the qualities of students are ranked as the most important factor by boys and girls in mathyom 1, and the facilities the school provides are ranked in the first order by boys in mathyom 3 and 6 and girls in mathyom 6. In short, children mention facilities managed in school, qualities of teachers, qualities of students and school services as important factors contributing to the best school.

7. For aspects lacking in the school, boys and girls in mathyom 1 list qualities of pupils and boys also mention the lack of facilities more frequently. Boys and girls in mathyom 3 and 6 concentrate on the inadequacy of facilities the school provides for them.

4.4 Recommendation

As this study is performed in a certain school, the results are confined to a specific situation and cannot be generalized for any other school.

The statements in the test-items of this study were constructed, intending that they should be aspects for measuring attitudes. For further investigation it should be improved by using item analysis.

One point should be mentioned is that the investigator has had to be cautions in applying this kind of tests to children in school. If the teachers of the school do not understand what it means in research working, it will lead to the misunderstanding that the researchers are going to find faults in them. The researchers' human relationship and positive attitudes toward the teachers are important to solve this problem.

The most appropriate occasion for the contact with school to give tests to pupils is the beginning of the second term, i.e. in September or October. In this investigation the writer contacted the school in November, when the time for the term-examination was drawing near. Testing, sometimes wastes their lesson-hours, especially the time they prepare for the examination.

APPENDIX

Appendix A1

Average Responses of Children in Mathyom 1 to Distributed Aspects of School and their Responses to the School as a whole

No. of Ss	Boys		Girls	
	X1	R2	X1	R2
1	-	-	4.54	5.0
2	4.00	5.0	3.81	4.0
3	-	-	4.18	4.5
4	-	-	4.09	5.0
5	3.81	4.0	-	-
6	3.90	4.0	4.63	4.5
7	-	-	4.00	4.5
8	-	-	4.27	4.5
9	-	-	4.72	4.5
10	4.09	4.5	3.63	4.5
11	3.72	4.5	3.63	4.0
12	3.81	4.0	-	-
13	-	-	4.63	5.0
14	4.09	4.5	4.00	5.0
15	4.27	4.0	3.90	4.0
16	3.90	4.0	4.09	4.0
17	4.45	4.5	-	-
18	3.81	4.0	-	-
19	4.18	4.5	-	-

To be continued on page 76.

No. of Ss	Boys		Girls	
	$\bar{x}1$	R2	$\bar{x}1$	R2
20	-	-	4.54	4.0
21	3.63	3.0	3.72	4.5
22	3.81	3.5	4.36	5.0
23	3.72	4.0	4.72	4.5
24	4.09	4.5	4.54	5.0
25	-	-	-	-
26	3.72	4.0	4.09	4.0
27	3.90	4.0	4.81	5.0
28	3.27	3.0	4.18	4.0
29	3.63	4.5	4.27	4.0
30	4.00	4.5	4.36	5.0
31	3.54	4.5	-	-
32	3.72	4.5	4.36	4.0
33	3.54	4.0	4.81	4.0
34	4.09	4.5	4.27	5.0
35	-	-	4.36	4.5
36	3.63	3.5	4.18	4.0
37	4.27	4.5	4.27	4.5
38	3.81	3.0	4.45	4.5
39	-	-	4.00	3.0
40	-	-	4.18	4.0
41	4.18	4.5	4.09	4.5
42	3.36	4.0	4.36	4.5
43	3.72	4.5	4.36	4.0
44	4.45	4.0	4.18	4.0
45	-	-	4.45	5.0
46	-	-	4.45	5.0
$\bar{X}$	3.91	4.12	4.29	4.32

$\bar{x}1$ = The average responses of each child to distributed aspects of the school (Test Form I).

R2 = The responses of each child to the school as a whole (Question 2 Test Form II).

Appendix A2

Average Responses of Children in Mathyom 3 to Distributed Aspects of School and the Responses to the School as a whole

No. of Ss	Boys		Girls	
	$\bar{X}1$	R2	$\bar{X}1$	R2
1	3.81	4.0	-	-
2	3.90	4.0	4.45	4.0
3	3.90	4.0	3.72	4.5
4	3.45	5.0	4.45	4.0
5	3.72	4.0	4.09	4.0
6	3.81	4.0	4.36	4.5
7	4.00	3.0	4.09	4.0
8	-	-	4.36	4.5
9	4.09	4.0	4.00	3.5
10	-	-	3.54	4.0
11	4.09	4.0	4.45	4.0
12	4.18	4.0	-	-
13	3.90	3.0	3.27	4.0
14	4.27	4.0	4.09	4.5
15	4.09	3.0	4.09	4.5
16	4.09	4.0	3.36	4.0
17	3.27	3.0	4.54	4.5
18	-	-	4.27	4.5
19	3.36	4.0	4.45	3.0
20	3.54	4.0	4.36	4.0
21	3.45	4.0	3.90	4.5

To be continued on page 78.

No. of Ss	Boys		Girls	
	$\bar{x}1$	R2	$\bar{x}1$	R2
22	3.45	4.5	4.63	3.5
23	4.09	4.0	3.90	4.5
24	3.54	4.5	-	-
25	3.36	3.0	4.45	4.0
26	-	-	3.36	4.0
27	3.09	4.0	4.18	3.5
28	3.72	4.0	3.90	3.5
29	4.18	4.0	4.36	4.0
30	3.81	4.0	4.45	4.0
31	3.90	4.0	4.09	4.5
32	3.45	3.5	4.45	3.5
33	4.00	4.0	4.45	4.5
34	4.27	4.5	4.54	4.5
35	3.45	4.0	3.90	4.0
36	3.36	3.5	4.00	4.0
37	3.54	2.0	4.00	4.0
38	3.72	4.0	4.36	4.0
39	-	-	3.81	4.0
40	-	-	4.00	4.0
41	3.90	3.5	4.45	3.5
42	-	-	4.09	3.0
43	-	-	3.36	3.5
$\bar{x}$	3.80	3.83	4.13	4.01

$\bar{x}1$ = The average responses of each child to distributed aspects of the school (Test Form I).

R2 = The responses of each child to the school as a whole (Question 2 Test Form II).

Appendix A3

Average Responses of Children in Mathyom 6 to Distributed Aspects of School and the Responses to the School as a whole

No. of Ss	Boys		Girls	
	$\bar{X}$1	R2	$\bar{X}$1	R2
1	3.90	4.0	3.45	3.5
2	-	-	4.18	4.0
3	-	-	3.81	3.5
4	3.72	4.0	-	-
5	3.72	3.5	-	-
6	-	-	4.27	4.0
7	-	-	4.09	4.0
8	3.81	3.0	3.63	3.5
9	3.54	4.0	-	-
10	-	-	3.90	3.5
11	3.63	4.0	3.54	3.5
12	-	-	-	-
13	3.72	4.0	3.81	4.0
14	-	-	3.90	3.5
15	-	-	3.45	3.5
16	3.72	4.0	3.81	3.5
17	3.18	4.0	3.81	3.5
18	-	-	3.81	4.0
19	-	-	3.45	3.5
20	-	-	4.36	3.5
21	3.90	3.0	3.72	4.0

To be continued on page 80.

No. of Ss	Boys		Girls	
	$\bar{x}1$	R2	$\bar{x}1$	R2
22	-	-	3.90	3.5
23	3.36	3.0	-	-
24	3.45	3.5	4.27	4.5
25	3.09	2.5	4.18	4.0
26	3.45	2.5	4.00	3.5
27	3.45	3.0	3.36	3.0
28	-	-	4.27	4.5
29	3.18	3.0	3.81	3.5
30	3.45	3.0	4.09	4.0
31	3.09	4.5	3.54	4.0
32	3.18	3.5	4.36	4.0
33	3.63	4.0	4.18	4.0
34	3.81	4.5	3.36	3.5
35	3.36	3.0	3.54	3.5
36	-	-	3.81	3.5
37	3.45	4.0	3.54	3.5
38	3.45	4.0	3.36	3.0
39	-	-	4.00	4.0
40	-	-	3.00	3.5
41	3.45	4.0	3.54	4.0
42	3.36	4.0	3.27	3.5
43	4.45	4.5	3.90	4.0
44	-	-	4.36	4.5
$\bar{x}$	3.54	3.63	3.78	3.89

$\bar{x}1$ = The average responses of each child to distributed aspects of the school (Test Form I).

R2 = The responses of each child to the school as a whole (Question 2 Test Form II).

Appendix B

ตัวอย่างคำตอบของนักเรียน

คำตอบคำถาม ๒ ข้อ จากข้อทดสอบแบบที่ ๒ คือ :-

(๑) จงบอกลักษณะของโรงเรียนที่ดีที่สุดตามความรู้สึกของเธอ

(๓) จงให้เหตุผลว่า ทำไมโรงเรียนของเธอขณะนี้จึงอยู่ตรงจุดนั้น

แบ่งออกเป็น categories ดังนี้

1. Human factors

1.1 Teachers

1.1.1 Qualification

(๑) ครูมีวุฒิสูง, ความรู้ดี, ครูใหม่มีวุฒิสูง หรือเคยไปดูงานต่างประเทศมาแล้ว

(๓) ครูที่มีวุฒิสูงมีน้อย

1.1.2 Teaching

(๑) ครูสอนอย่างจริงจัง, ไม่เบื่อหน่ายในการสอน, ครูชำนาญการสอน, รับปรึกษาข้อสงสัยของนักเรียน, สอนให้นักเรียนเข้าใจแจ่มแจ้ง, สอนให้นักเรียนมีความรู้จริง ๆ เมื่อนักเรียนซักถามข้อสงสัย ครูต้องอธิบายให้เข้าใจ, ให้นักเรียนได้มีโอกาสแสดงความคิดเห็น, ต้องทำการสอบนักเรียนทุกเดือน, จัดให้มีกิจกรรมร่วมหลักสูตรบ้าง

(๓) ครูบางคนไม่รู้หลักการสอนให้นักเรียนเข้าใจ

1.1.3 Relationship with pupils

(๑) ครูต้องรักนักเรียน, เข้าใจนักเรียน, ให้กำลังใจแก่นักเรียน, พูดจาไพเราะกับนักเรียน, ไม่ใช้อำนาจบาตรใหญ่, ไม่ตอบแก้จับผิดนักเรียนพร่ำเพรื่อ, เสียสละเพื่อนักเรียน, เอาใจใส่ต่อนักเรียน

(๓) มีครูบางคนที่ไม่เป็นมิตรกับนักเรียน, ครูไม่เข้าใจเด็ก, มีครูที่ไม่ถูกใจอยู่หลายคน, ครูไม่เห็นใจนักเรียน

1.1.4 Relationship with others

(๑) ครูได้สัมพันธ์กับผู้ปกครองของนักเรียน, ครูจะต้องคิดต่อกับคนภายนอกได้ดี, เป็นคนกว้างขวาง

(๓) _____

1.1.5 Other characters and/or personality traits

(๑) ครูต้องเป็นคนใจคอเยือกเย็น, ไม่โกรธง่าย, สุขุม, รอบคอบ, ใจดี, มารยาทดี, สุภาพ, มีลักษณะเป็นผู้นำ

(๓) ครูใช้อารมณ์มากเกินไป, ความรู้ดีแต่บางคนยังมีจิตใจไม่สูงพอ

1.2 Students

1.2.1 Qualities of class leaders

(๑) หัวหน้าชั้นต้องเป็นผู้นำ, สามารถดูแลชั้นแทนครูได้, ใจดี, มีความรู้ดี

(๓) _____

1.2.2 Qualities of other students

(๑) นักเรียนต้องมีมารยาทดี, มีความประพฤติเรียบร้อย, ปฏิบัติตามคำสั่งสอนของครู, มีระเบียบวินัยดี, มีความรู้ดี, มีนิสัยดี, เอาใจใส่ต่อการเรียนดี, แต่งกายเรียบร้อย, สามัคคีรักใคร่กัน, พูดจาสุภาพ, รักษาชื่อเสียงของโรงเรียน, ขยันมาโรงเรียน

(๓) นักเรียนบางคนมีนิสัยไม่ดี, แต่งกายไม่สะอาดและไม่เรียบร้อย, ไม่เชื่อฟังครู, ประพฤติไม่เรียบร้อย, ขาดความสามัคคี, พูดจาไม่สุภาพ, ไม่ตั้งใจเรียน, ไม่มีสัมมาคารวะ

1.3 Qualities of janitors

(๑) ภารโรงมีความประพฤติเรียบร้อย, ขยันขันแข็ง, เอาใจใส่ต่อหน้าที่

(๓) ภารโรงขี้เกียจ, มารยาทไม่ดี, เฉื่อยเอื่อย, ไม่เอาใจใส่ต่อการงาน

2. Physical environment and services

2.1 Facilities

(๑) บริเวณโรงเรียนกว้างขวาง, อาคารเรียนกว้างใหญ่, มีห้องประชุม, ห้องเรียนกว้างขวาง, มีห้องเรียนเฉพาะวิชา (เช่นห้องวิทยาศาสตร์, ห้องภูมิศาสตร์ ฯลฯ) มีเครื่องใช้ทันสมัย,

มีอุปกรณ์การสอนครบถ้วน, บริเวณมีร้วรอบขอบชิด, มีสนามเล่นกีฬา, มีอุปกรณ์การเล่นกีฬา, มีห้องอาหารกว้าง

(๓) บริเวณแคบ, ไม่มีพื้นไม้สำหรับกิจกรรมกลางวัน, ไม่มีสนามกีฬา, ไม่มีห้องประชุม, ไม่มีโรงอาหารกว้าง, อาคารไม่ติดกับนักเรียน, ไม่มีห้องสมุดใช้, ขาดห้องเรียนเฉพาะวิชา, ขาดอุปกรณ์การสอน, ขาดอุปกรณ์กีฬา, ไม่มีกิจกรรมร่วมหลักสูตร, มีการสอนเพียง ม. ๖ ต้องการให้มีถึง ม. ๘, มีการสอน ๒ ผลัดทำให้มีเวลาเรียนน้อย, ไม่มีโอกาสไปศึกษานอกสถานที่

2.2 Services

(๑) บริเวณโรงเรียน, อาคารเรียนสะอาดเรียบร้อย, ห้องส้วมสะอาด, มีน้ำสะอาดให้ดื่มเพียงพอ, มีอาหารที่สะอาดขาย, โรงเรียนควรจัดอาหารขายเอง, มีห้องพยาบาล, มีการตรวจสุขภาพของนักเรียน, มีห้องรับแขก

(๓) ห้องพยาบาลไม่เป็นระเบียบ, ไม่มีการดูแลสุขภาพอนามัยของนักเรียน, น้ำรับประทานไม่พอ, อาหารยังไม่สะอาดและน่าไว้วางใจเพียงพอ, ส้วมสกปรกและอยู่ใกล้อาหารเรียน ส่งกลิ่นเหม็น, ไม่มีห้องรับแขก

2.3 Accessibility

(๑) โรงเรียนตั้งอยู่ใกล้ถนน ไปมาสะดวก, ตั้งอยู่ในที่ที่ไม่มีเสียงรบกวน, อยู่ในที่ที่มีอากาศบริสุทธิ์, ไม่ควรอยู่ในหมู่อันธพาล

(๓) ทางเดินเข้าโรงเรียนแคบ, ไม่สะดวก, ตั้งอยู่ใกล้แม่น้ำ, เด็กไปเล่นอาจเป็นอันตราย

2.4 Building and ground

(๑) อาคารเรียนสวยงาม, บริเวณมีต้นไม้ประดับ, มีไม้ดอกปลูกไว้สวยงาม

(๓) บริเวณโรงเรียนมีสิ่งรกรุงรัง, การจัดห้องเรียนไม่สวยงามพอ

2.5 Privacy

(๑) ไม่ควรให้คนภายนอกเข้ามาพลุกพล่าน, ไม่ให้คนภายนอกย่านไปมา, ไม่มีเสียงรบกวน, ไม่มีกลิ่นเหม็นผ่านเข้ามา

(๓) มีคนภายนอกเข้ามาพลุกพล่าน, มีเสียงของโรงงาน, มีเสียงรบกวนจากบ้านคน เช่นเปิดวิทยุดัง

3. Control and regulation

(๑) กฎข้อบังคับรัดกุม, ระเบียบวินัยดีทั้งในและนอกโรงเรียน, ไม่ควรใช้ไม้เรียว, เมื่อนักเรียนทำผิดคนเดียวไม่ควรลงโทษทั้งห้อง, นักเรียนชายหญิงไม่ควรเรียนรวมกัน, ให้มีการอบรมสั่งสอนเกี่ยวกับความประพฤติทุกวัน

(๓) นักเรียนถูกจำกัดเสรีภาพ, ยังมีการลงโทษนักเรียนด้วยการเฆี่ยนตี, ระเบียบวินัยยังไม่รัดกุมเพียงพอ.

หมายเหตุ ตัวเลขในวงเล็บคือเลขอ้างอิงคำถาม.

Appendix C

Categories

The children's responses to question 1 and 3 from Test Form II, i.e. (1) give the description of a "best" school;

(3) give the reasons why your present school is at that point; are categorized as follows:-

1. Human factors

1.1 Teachers

1.1.1 Qualification

(1) 1. High qualification;

2. Good knowledge;

3. Highly qualified head teacher - having been on observation tour abroad;

(3) 1. Very few qualified teachers;

1.1.2 Teaching

(1) 1. Takes teaching seriously;

2. Does not feel fed up with teaching;

3. Gives advice to students when problems arise;

4. Well-experienced teachers;

5. Makes lessons clearly understood;

6. Help students know exactly what he teaches;

7. Gives clear answers to the students' questions;

8. Gives an opportunity for the students to express their view points;

9. Gives a test to students every month;

10. Organizes co-curricular activities some of the time;

(3) 1. No good method of teaching;

1.1.3 Relationship with pupils

(1) 1. Loves students;

2. Understands students;

3. Encourages students;

4. Talks nicely with students;

5. Does not control with absolute power;

6. Does not find fault with the students too often;

7. Devotes time for the students;

8. Takes interest in the students;

(3) 1. Is unfriendly with pupils;

2. Does not understand pupils;

3. There are many teachers with whom the pupils are not quite satisfied;

4. The teacher does not sympathize with the pupils;

1.1.4 Relationship with others

(1) 1. Has relationship with the students' parents;

2. Is able to contact successfully with (people other than parents of students) the outsiders;

3. Is a widely known person (popular);

(3) ———————

1.1.5 Other characters and/or personality traits

(1) 1. Is cool and calm in disposition;

2. Is not an easily irritated person;

3. Is shrewd or profound in thought;

4. Is careful, kind, well-behaved and polite;

5. Has traits characteristic of a leader;

(3) 1. Some teachers act mostly out of their emotion;

2. Good knowledge but bad moral standard;

1.2 Students

1.2.1 Qualities of class leaders

(1) 1. Is a guide;

2. Can take care of the class in place of the teacher;

3. Is kind;

4. Has good knowledge;

(3) ———————

1.2.2 Qualities of other students

(1) 1. Are well-behaved, and have good conducts;

2. Follow the teacher's instruction;

3. Have good discipline;

4. Have good knowledge, good habit;

5. Are interested in school lesson;

6. Dress themselves properly;

7. Cooperative with each other;

8. Speak politely;

9. Keep reputation of the school;

10. Attend school diligently;

(3) 1. Some students are in bad habit, don't dress cleanly and properly;

2. Some students are disobedient to the teacher;

3. Some students are not well-behaved, and don't cooperate with each other;

4. Some students don't talk politely and are not very respectful;

5. Some students don't take interest in their lessons;

1.3 Qualities of janitors

(1) 1. Has a good conduct;

2. Is industrious;

3. Is interested in his job;

(3) 1. Is idle;

2. Is not well-behaved;

3. Is careless;

4. Is not interested in his job;

2. Physical environment and services

2.1 Facilities

(1) 1. A spacious school compound;

2. A big school house with a meeting hall;

3. Big class-rooms;

4. Rooms for special subjects such as, science and geography;

5. Modern apparatus;

6. All sorts of equipments that are needed;

7. A fence around the school compound;

8. A play ground;

9. Sports equipments;

10. A permanents dining room;

(3) 1. School compound is small;

2. There are no trees under which the students can rest during the day;

3. There is no pley ground;

4. There is no meeting hall;

5. There is no permanent dining room;

6. School building are not adequate for the demand of students;

7. There is no library;

8. There is no room for special subjects;

9. Lack of teaching aids;

10. Lack of sports equipment;

11. Lack of co-curricular activities;

12. There is only a six-year course of secondary education of which the final grade, M. 6, should be extended to M. 8;

13. Two-shift operation results in less learning opportunity for the students;

14. There is no opportunity for students to take a field trip;

2.2 Services

(1) 1. A clean and well-arranged school compound;

2. A clean water-closet;

3. Clean water sufficient for drinking;

4. Clean food for sale;

5. Food service managed by the school;

6. Sick-rooms and health examination;

7. A reception room;

(3) 1. Sick-room is untidy;

2. There is no examination of children's health;

3. Drinking water is not sufficiently available;

4. Food is not quite hygienic; it cannot be relied upon as a clean meal;

5. Water-closet is filthy and is very close to the school building, it gives out bad smell;

6. There is no reception room.

2.3 Accessibility

(1) 1. The school located near the road, and easily accessible;

2. The school not located in the place where there are disturbances;

3. The school located in the place where there is fresh air;

4. The school not located in the place where there are hooligans;

(3) 1. Pathway to school is narrow and is found to be inconvenient;

2. The school is located near the river which may be a danger to the children who play around it;

2.4 Building and ground

(1) 1. Attractive school building;

2. School compound beautified with trees and flowers;

(3) 1. The school compound is full of things scattered about without order;

2. Classroom arrangement is not so attractive;

2.5 Privacy

(1) 1. No interference or trespassing into school by the outsiders;

2. No disturbing noise;

3. No bad smell;

(3) 1. The outsiders trespass on the school ground;

2. There are noise from the factory and noise from the houses such as a loud noise from radio;

3. Control and regulation

(1) 1. Rigid rule and regulation;

2. Good discipline both inside and outside school;

3. No corporal punishment;

4. The one who does wrong, not the entire group, should be punished;

5. Boys and girls not be placed in the same classroom;

6. Moral instruction should be given everyday;

(3) 1. Students' freedom is limited;

2. Corporal punishment of students is employed;

3. Rules and regulations are loose;

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* The numbers in brackets show the number of questions.

Appendix D1

Frequencies of Children's Responses to Question 1 from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B	G	B	G	B	G	B	G	B + G
1. Human Factors	(45)	(62)	(67)	(99)	(69)	(64)	(181)	(225)	(406)
1.1 Teachers	(14)	(21)	(47)	(50)	(41)	(43)	(102)	(114)	(216)
1.1.1 Qualification	3	8	7	10	17	16	27	34	61
1.1.2 Teaching	7	7	27	17	12	16	46	40	86
1.1.3 Relationship with pupils	3	5	6	13	10	7	19	25	44
1.1.4 Relationship with others	-	-	-	-	1	1	1	1	2
1.1.5 Others characters	1	1	7	10	1	3	9	14	23
1.2 Students	(31)	(40)	(19)	(42)	(27)	(17)	(77)	(99)	(176)
1.2.1 Qualities of class leader	2	-	-	-	-	2	2	2	4
1.2.2 Qualities of other students	29	40	19	42	27	15	75	97	172
1.3 Qualities of janitors	-	1	1	7	1	4	2	12	14
2. Physical environ't and service	(48)	(39)	(118)	(142)	(85)	(202)	(251)	(383)	(634)
2.1 Facilities	15	15	67	59	43	116	125	190	315
2.2 Services	22	15	22	53	21	39	65	107	172
2.3 Accessibility	1	3	5	1	9	18	15	22	37
2.4 Building & ground	10	6	24	24	4	23	38	53	91
2.5 Privacy	-	-	-	5	8	6	8	11	19
3. Control & Regulation	6	10	9	6	12	8	27	24	51
Total	99	111	194	247	166	274	459	632	1091

Appendix D2

Average of Frequencies of Children's Responses to Question 1 from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B (32)	G (39)	B (36)	G (40)	B (27)	G (40)	B (95)	G (119)	B + G (214)
1. Human Factors	(1.40)	1.58)	(1.86)	(2.47)	(2.55)	1.60)	(1.90)	(1.89)	(1.89)
1.1 Teachers	(.43)	0.53)	(1.30)	(1.25)	(1.51)	1.07)	(1.07)	(.95)	(1.00)
1.1.1 Qualification	.09	0.25	.19	.25	.62	.40	.28	.28	.28
1.1.2 Teaching	.21	.17	.75	.42	.44	.40	.48	.35	.40
1.1.3 Relationship with pupils	.09	.12	.16	.32	.37	.17	.20	.21	.20
1.1.4 Relationship with others	-	-	-	-	.03	.02	.01	.008	.009
1.1.5 Other character	.03	.02	.19	.25	.03	.06	.09	.11	.10
1.2 Students	(.96)	1.02)	(.52)	(1.05)	(1.0)	(.42)	(.81)	(.83)	(.82)
1.2.1 Qualities of class leader	.06	-	-	-	-	.05	.02	.017	.019
1.2.2 Qualities of other students	.90	1.02	.52	1.05	1.0	.37	.78	.81	.80
1.3 Qualities of janitor	-	.02	.02	.17	.03	.10	.02	.10	.06
2. Physical environ't and services	(1.50)	1.0)	(3.27)	(3.55)	(3.14)	5.05)	(2.64)	(3.21)	(2.96)
2.1 Facilities	.46	.38	1.86	1.47	1.59	2.90	1.31	1.59	1.47
2.2 Services	.68	.38	.61	1.32	.77	.97	.68	.89	.80
2.3 Accessibility	.03	.07	.13	.02	.33	.45	.15	.18	.17
2.4 Building & ground	.31	.15	.66	.60	.14	.57	.40	.44	.42
2.5 Privacy	-	-	-	.12	.28	.15	.08	.09	.09
3. Control & Regulation	.18	.25	.25	.15	.42	.20	.28	.20	.24
Total	3.09	2.84	5.36	6.17	6.14	6.85	4.83	5.31	5.09

Appendix D3

Percentages of Frequencies of Children's Responses to Question 1

from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B	G	B	G	B	G	B	G	B + G
1. Human Factors	(45.45)	(55.85)	(34.53)	(40.08)	(41.56)	(23.35)	(39.43)	(35.60)	(37.21)
1.1 Teachers	(14.14)	(18.91)	(24.22)	(20.24)	(24.69)	(15.69)	(22.22)	(18.03)	(19.79)
1.1.1 Qualification	3.03	7.20	3.60	4.04	10.24	5.83	5.88	5.38	5.59
1.1.2 Teaching	7.07	6.30	13.91	6.88	7.22	5.83	10.02	6.32	7.89
1.1.3 Relationship with pupils	3.03	4.50	3.09	5.26	6.02	2.55	4.13	3.95	4.03
1.1.4 Relationship with others	-	-	-	-	0.60	0.36	0.21	0.15	0.19
1.1.5 Other characters	1.01	0.90	3.60	4.04	0.60	1.09	1.96	2.21	2.09
1.2 Students	(31.31)	(36.03)	(9.79)	(17.00)	(16.26)	(6.20)	(16.77)	(15.66)	(16.57)
1.2.1 Qualities of class leader	2.02	-	-	-	-	0.72	0.42	0.30	0.37
1.2.2 Qualities of other students	29.29	36.03	9.79	17.00	16.26	5.47	16.33	15.34	15.76
1.3 Qualities of janitors	-	0.90	0.51	2.83	0.60	1.45	0.42	1.89	1.28
2. Physical envi-ron't and service	(48.48)	(35.13)	(60.82)	(57.48)	(51.20)	(73.72)	(54.68)	(60.60)	(58.11)
2.1 Facilities	15.15	13.51	34.53	23.88	25.90	42.33	27.23	30.06	28.87
2.2 Services	22.22	13.51	11.34	21.45	12.65	14.23	14.16	16.93	15.76
2.3 Accessibility	1.01	2.70	2.57	0.40	5.42	6.56	3.26	3.48	3.39
2.4 Building & ground	10.10	5.40	12.37	9.71	2.40	8.39	8.27	8.38	8.34
2.5 Privacy	-	-	-	2.02	4.81	2.18	1.74	1.74	1.74
3. Control & Regulation	6.06	9.00	4.63	2.42	7.22	2.91	5.88	3.79	4.67
Total	100	100	100	100	100	100	100	100	100

Appendix D4

Frequencies of Children's Responses to Question 3 from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B	G	B	G	B	G	B	G	B + G
1. Human Factors	(19)	(25)	(14)	(57)	(15)	(25)	(48)	(107)	(155)
1.1 Teachers	-	(3)	(5)	(8)	(11)	(14)	(16)	(25)	(41)
1.1.1 Qualification	-	1	-	1	1	4	1	6	7
1.1.2 Teaching	-	2	4	4	5	2	9	8	17
1.1.3 Relationship with pupils	-	-	-	3	3	4	3	7	10
1.1.4 Relationship with others	-	-	-	-	-	-	-	-	-
1.1.5 Other characters	-	-	1	-	2	4	3	4	7
1.2 Students	(19)	(22)	(9)	(47)	(2)	(6)	(30)	(75)	(105)
1.2.1 Qualities of class leader	-	-	-	-	-	-	-	-	-
1.2.2 Qualities of other students	19	22	9	47	2	6	30	75	105
1.3 Qualities of janitors	-	-	-	2	2	5	2	7	9
2. Physical environ't and services	(21)	(10)	(40)	(114)	(63)	(169)	(124)	(293)	(417)
2.1 Facilities	12	6	34	72	50	119	96	197	293
2.2 Services	8	3	2	34	6	15	16	52	68
2.3 Accessibility	-	-	1	-	2	5	3	5	8
2.4 Building & ground	1	1	3	4	-	1	4	6	10
2.5 Privacy	-	-	-	4	5	29	5	33	38
3. Control & Regulation	-	-	1	1	5	2	6	3	9
Total	40	35	55	172	83	196	178	403	581

Appendix D5

Average of Frequencies of Children's Responses to Question 3 from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B (32)	G (39)	B (36)	G (40)	B (27)	G (40)	B (95)	G (119)	B + G (214)
1. Human Factors	(.59)	(.64)	(.38)	(1.42)	(.55)	(.62)	(.50)	(.89)	(.72)
1.1 Teachers	-	(.07)	(.13)	(.20)	(.40)	(.35)	(.16)	(.21)	(.19)
1.1.1 Qualification	-	.02	-	.02	.03	.10	.01	.05	.03
1.1.2 Teaching	-	.05	.11	.10	.18	.05	.09	.06	.07
1.1.3 Relationship with pupils	-	-	-	.07	.11	.10	.03	.05	.14
1.1.4 Relationship with others	-	-	-	-	-	-	-	-	-
1.1.5 Other characters	-	-	.02	-	.07	.10	.03	.03	.03
1.2 Students	(.59)	(.56)	(.25)	(1.17)	(.07)	(.15)	(.31)	(.63)	(.47)
1.2.1 Qualities of class leader	-	-	-	-	-	-	-	-	-
1.2.2 Qualities of other students	.59	.56	.25	1.17	.07	.15	.31	.63	.47
1.3 Qualities of janitors	-	-	-	.05	.07	.12	.02	.05	.03
2. Physical environ't and services	(.65)	(.25)	(1.11)	(2.85)	(2.33)	(4.22)	(1.30)	(2.46)	(1.94)
2.1 Facilities	.37	.15	.94	1.80	1.85	2.97	1.01	1.65	1.13
2.2 Services	.25	.07	.05	.85	.22	.37	.16	.43	.31
2.3 Accessibility	-	-	.02	-	.07	.12	.03	.04	.03
2.4 Building & ground	.03	.02	.08	.10	-	.02	.04	.05	.04
2.5 Privacy	-	-	-	.10	.18	.72	.05	.27	.16
3. Control & Regulation	-	-	.02	.02	.18	.05	.06	.02	.04
Total	1.25	.89	1.52	4.30	3.07	4.90	1.87	3.38	2.71

Appendix D6

Percentages of Frequencies of Children's Responses to Question 3

from Test Form II

Categories	m. 1		m. 3		m. 6		Σ	Σ	Σ
	B	G	B	G	B	G	B	G	B + G
1. Human Factors	(47.50)	(71.42)	(25.45)	(33.13)	(18.07)	(12.75)	(26.96)	(26.55)	(26.67)
1.1 Teachers	-	(8.56)	(9.08)	(4.64)	(13.23)	(7.14)	(8.98)	(6.20)	(7.05)
1.1.1 Qualification	-	2.85	-	0.58	1.20	2.04	0.56	1.48	1.20
1.1.2 Teaching	-	5.71	7.27	2.32	6.02	1.02	5.05	1.98	2.92
1.1.3 Relationship with pupils	-	-	-	1.74	3.61	2.04	1.68	1.73	1.72
1.1.4 Relationship with others	-	-	-	-	-	-	-	-	-
1.1.5 Other characters	-	-	1.81	-	2.40	2.04	1.68	0.99	1.20
1.2 Students	(47.50)	(62.85)	(16.36)	(27.32)	(2.40)	(3.06)	(16.85)	(18.61)	(18.07)
1.2.1 Qualities of class leader	-	-	-	-	-	-	-	-	-
1.2.2 Qualities of other students	47.50	62.85	16.36	27.32	2.40	3.06	16.85	18.61	18.07
1.3 Qualities of janitors	-	-	-	1.16	2.40	2.55	1.12	1.73	1.54
2. Physical environ't and services	(52.50)	(28.57)	(72.72)	(66.27)	(75.90)	(86.22)	(69.66)	(72.70)	(71.77)
2.1 Facilities	30.00	17.14	61.81	41.86	60.24	60.71	53.93	48.88	50.43
2.2 Services	20.00	8.57	3.63	19.76	7.22	7.65	8.98	12.90	11.70
2.3 Accessibility	-	-	1.81	-	2.40	2.55	1.68	1.24	1.37
2.4 Building & ground	2.50	2.85	5.45	2.32	-	0.51	2.24	1.48	1.72
2.5 Privacy	-	-	-	2.32	6.02	14.79	2.80	8.18	6.54
3. Control & Regulation	-	-	1.81	0.58	6.02	1.02	3.37	0.74	1.54
Total	100	100	100	100	100	100	100	100	100

Appendix E

Instruction Sheet (1)

เครื่องใช้ : แบบฝึกหัดการสอนและมาตราส่วน
ดินสอ
ยางลบ
นาฬิกาจับเวลา

ขั้นตอน : (ถ้าใช้แบบ • ก่อน)

ครูมาจากฉากบันระหว่างราพิศาหรับการฝึกสร้างเรื่องเด็ก สถาบันแห่งนี้มีงานเกี่ยวกับการฝึกสร้างเรื่องความเจริญเติบโตของเด็กในทางจิตใจเป็นส่วนใหญ่

วันนี้ครูจะให้นักเรียนทำอะไรง่าย ๆ สักอย่าง ครูจะแจกกระดาษให้เรียน (แจกกระดาษก่อน) ให้นักเรียนเขียนชื่อโรงเรียน ชั้น เลขที่ของนักเรียนก่อน เพศ หญิง หรือชาย อายุ และวันเดือนปี คือวันนี้เสียให้เรียนร้อย แล้วยังไม่ต้องเขียนอะไรต่อไป

พร้อมแล้วก็อย่างนี้

ในกระดาษที่แจกให้ไปนี้มีข้อความ •• ข้อความ แต่ละข้อความมีมาตราส่วน (ครูโยนในกระดานดำ) มีเครื่องหมายกำกับไว้ตั้งแต่ • – ๕ ทางด้านนี้ (ที่เลข •) มีคำว่า "ขอบน้อยที่สุด" ทางด้านนี้ (ที่เลข ๕) มีคำว่า "ขอบมากที่สุด" (ครูเขียนวลีทั้งสองนี้ด้วย) กำลังดู

ความรู้สึกของคนเราขอบสิ่งของ, การเช่น, การเรียนเรื่องอะไรก็ตามย่อมมีมากบ้างน้อยบ้างต่าง ๆ กัน แต่เราไม่มีเครื่องมือใด ๆ มาใช้ ชั่ง ตวง วัด ความรู้สึกของคนเราที่มีต่อสิ่งหนึ่งสิ่งใดได้เหมือนกับการชั่ง ตวง วัด สิ่งของอื่น ๆ แต่ในที่นี้เราจะใช้มาตราส่วนวัดความมากน้อยของความรู้สึกของคู่ ครูจะถามความรู้สึกของนักเรียนที่มีต่อสิ่งต่างๆ แล้วให้นักเรียนตอบครูว่าขอบมากน้อยแค่ไหนโดยการกาเครื่องหมายกากะบาท (×) ลงที่เส้นบนมาตราส่วน แสดงความมากน้อยให้ตรงกับความรู้สึกของนักเรียน

ตัวอย่างเช่น ครูจะถามนักเรียนว่านักเรียนมีความรู้สึกอย่างไรต่อภาพยนตร์ไทย คือขอบมากน้อยแค่ไหน ไม่ใช่เกี่ยวกับดีหรือไม่ดี นักเรียนจะขอบมากน้อยแค่ไหน อาจจะขอบน้อยที่สุด หรือขอบมากที่สุด หรือขอบค่อนไปทางข้างน้อย หรือค่อนไปทางข้างมาก แต่ไม่ถึงกับน้อยที่สุดหรือมากที่สุด หรือขอบกลาง ๆ ก็ได้ แล้วให้กาเครื่องหมายลงไป (กาให้ดูเป็นตัวอย่าง) เข้าใจไหม ใครยังไม่เข้าใจบ้าง (ถ้ายังมีคนไม่เข้าใจก็อธิบายและยกตัวอย่างซ้ำ จนทุกคนรับว่าเข้าใจ)

ครูจะให้นักเรียนคิดวิเคราะห์ทีละข้อ ข้อ ๑ (อ่านข้อกะทัดรัด ๑ และอธิบายความหมายว่าหมายถึงอะไร) นักเรียนมีความรู้สึกอย่างไร ถ้าอยากน้อยแค่ไหน ก็ให้กาเครื่องหมายกากะบาทลงที่ตัวเลขแสดงความมากน้อยของความรู้สึกของนักเรียนได้ ทั้งนี้ไม่มีการถือเอาถูกผิดเลย นักเรียนมีสิทธิ์ที่จะตัดสินใจตามความรู้สึกของนักเรียนได้ ทำตอนนี้จะไม่เป็นเกมเลย ถ้านักเรียนคิดไป ต้องการจะเปลี่ยนไปกาที่ตรงอื่น ก็ให้ลบรอยกาออกแล้วไปกาในตรงที่ต้องการได้ นักเรียนจะต้องทำทุกข้ออย่าเว้นว่างไว้ นักเรียนยังไม่ต้องเขียนต่อไป ถอยหลังรู ก่อน ลงมือทำข้อ ๑ ได้ (ให้เวลา)

เสร็จแล้วทุกคนแล้ว ดูข้อ ๒ (อ่านข้อกะทัดรัด ๒ และอธิบายว่าหมายถึงอะไร ให้นักเรียนเข้าใจ) ลงมือทำได้ (ให้เวลา)

ต่อไปดูข้อ ๓ (อ่าน และอธิบาย).....ฯลฯ

Answer Sheet (1)

โรงเรียน.....ชั้น.....เลขที่.....

เพศ.....อายุ.....ปี วันที่.....เดือน.....พ.ศ.....

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๑. เธอมีความรู้สึกอย่างไรต่อลักษณะของการเรียนโดยทั่ว ๆ ไปของโรงเรียนนี้

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๒. เธอมีความรู้สึกอย่างไรต่อลักษณะของครูโดยทั่ว ๆ ไปของโรงเรียนนี้

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๓. เธอมีความรู้สึกอย่างไรต่อวิธีการสอนของครูที่โรงเรียนนี้โดยทั่ว ๆ ไป

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๔. เธอมีความรู้สึกอย่างไรเกี่ยวกับความเป็นกันเองโดยทั่ว ๆ ไประหว่างครูกับนัก

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๕. เธอมีความรู้สึกอย่างไรเกี่ยวกับความเป็นกันเองโดยทั่ว ๆ ไประหว่างนักเรียนด้วยกันในโรงเรียน

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๖. เธอมีความรู้สึกอย่างไรต่อกิจกรรมต่าง ๆ ที่โรงเรียนนี้จัดไปแล้ว นอกจากการเรียนในห้องเรียน เช่น การรื่นเริงต่าง ๆ การไปศึกษานอกสถานที่, การกีฬา ฯลฯ

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๗. เธอชอบทำการบ้านที่ครูให้ไปไหม

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๘. เธอชอบเรียนวิชาคณิตศาสตร์ไหม

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๙. เธอชอบเรียนวิชาภาษาไทยไหม

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๑๐. เธอชอบเรียนวิชาภาษาอังกฤษไหม

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

๑๑. เธอชอบเรียนวิชาวิทยาศาสตร์ไหม

ไม่น้อยที่สุด ๑ ๒ ๓ ๔ ๕ ชอบมากที่สุด

Instruction Sheet (2)

เครื่องใช้ – แบบฝึกหัดคำถาม ๒ ข้อ และมาตราส่วน
ดินสอ
ยางลบ
นาฬิกาจับเวลา

คำชี้แจง – (ถ้าไม่ได้แบบฝึกหัดมาแล้ว) วันนี้ครูจะให้นักเรียนเขียนอะไรเพิ่มเติมอีกหรือไม่ ครูจะแจกกระดาษ ดินสอ ให้เขียน (แจกกระดาษ ดินสอ) ให้นักเรียนเขียนชื่อโรงเรียน ชั้น เลขที่ของนักเรียน เพศ หญิงหรือชาย อายุ และวันที่ หรือวันนี้เสร็จให้เรียบร้อยแล้วยังไม่ต้องเขียนอะไรต่อไป (รอจนกว่านักเรียนจะเขียนเรียบร้อยทุกคน)

ในกระดาษที่แจกให้ไปนั้นมีคำถาม ๒ ข้อ และมาตราส่วน ๑ ข้อ คำถามข้อ ๑ (อ่านคำถาม) ขอให้นักเรียนลองคิดไปพิจารณาดูว่าเราจะต้องมีลักษณะอย่างไรบ้าง ถึงจะครูหมอได้ไหม (ถ้าหัวนักเรียนเรียนจะตอบ แล้วครูก็ถามถึงคำตอบของนักเรียน และเขียนลงบนกระดานดำด้วย ถ้านักเรียนไม่ตอบมาบ้างในเวลาอันควร ครูก็ต้องยกตัวอย่าง เช่น รางกายแข็งแรง หน้าตาดี, โอบอ้อมอารี ฯลฯ แล้วให้นักเรียนตอบมาอีกสัก ๒ – ๓ อย่าง) นักเรียนลองพิจารณาดูว่าอย่างไหนมีความสำคัญกว่ากัน คือ รางกายแข็งแรง, หน้าตาดี หรือความโอบอ้อมอารี คนเรามีความเห็นไม่เหมือนกัน คนหนึ่งเห็นว่าควรจะมีรางกายแข็งแรงเป็นลักษณะที่สำคัญกว่า แต่อีกคนหนึ่งเห็นว่าความมีใจโอบอ้อมอารีสำคัญกว่าก็ได้

ครูให้นักเรียนลองพิจารณากันถึงเรื่องโรงเรียน ตามคำถามข้อ ๑ ให้นักเรียนบอกลักษณะของโรงเรียนที่ดีที่สุด ตามความเห็นของนักเรียน แต่เรื่องลักษณะของความสำคัญตามลำดับก็คือลักษณะอย่างไหนที่สำคัญมากที่สุดก็เรียนไว้ก่อนเป็นต้น ลักษณะที่สำคัญรองลงมาก็เรียนไว้ถัด ๆ ไป ตามลำดับ ๑ – ๒ – ๓ (เรียนเสร็จให้ดูด้วย) ใครยังไม่เข้าใจบ้าง (ถ้านักเรียนยังไม่เข้าใจก็อธิบายจนกว่าจะเข้าใจ) เข้าใจแล้วดูข้อ ๒ (อ่านและเขียนมาตราส่วนให้ดูบนกระดานดำ)

ถ้าหากโรงเรียนที่นักเรียนเห็นว่าดีดังกล่าวในข้อ ๑ อยู่ที่ตรงนี้ (ชี้) แล้วโรงเรียนของเธอนี่จะอยู่ที่ตรงไหนบนมาตราส่วนนี้ หมายความว่าโรงเรียนนี้มีลักษณะใกล้เคียงหรือห่างไกลจากลักษณะของโรงเรียนที่กล่าวแล้วนั้นเพียงไร ให้ทำเครื่องหมายกากะบาท (×) ไว้ที่จุดหนึ่งบนมาตราส่วนนี้ ใครยังไม่เข้าใจบ้าง (ถ้านักเรียนยังไม่เข้าใจก็อธิบายซ้ำจนกว่าจะเข้าใจ)

ส่วนข้อ ๓ ให้นักเรียนบอกเหตุผลว่าโรงเรียนของเธอในขณะนี้เมื่อเทียบกับลักษณะของโรงเรียนในข้อ ๑ แล้วทำไมจึงอยู่บนจุดนั้นบนมาตราส่วนนี้ ใครยังไม่เข้าใจบ้าง (ถ้านักเรียนยังไม่เข้าใจก็อธิบายซ้ำจนกว่าจะเข้าใจ) เข้าใจหมดทุกคนแล้วลงมือทำได้.

Answer Sheet (2)

โรงเรียน.....ตัน.....เขต.....

เพศ.....อายุ.....ปี วันที่.....เดือน.....พ.ศ.....

๑. จงบอกลักษณะของโรงเรียนที่ดีที่สุดตามความรู้สึกของเธอมา โดยเรียงลำดับของความสำคัญว่าลักษณะอันไหนสำคัญที่สุดและรองลงมา

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๒. ถ้าเมื่อเทียบส่วนกันแล้วโรงเรียนที่เธอกล่าวว่ามีลักษณะดีที่สุดตามข้อ ๑ นั้น อยู่ที่ตรงกันข้ามกับโรงเรียนที่ดีที่สุดตามข้อ ๑ แล้วโรงเรียนของเธอขณะนี้จะอยู่ตรงจุดไหน ใกล้ไกลกับโรงเรียนที่กล่าวมาแล้วอย่างไร

๓. จงให้เหตุผลว่า ทำไมโรงเรียนของเธอขณะนี้จึงอยู่ตรงจุดนั้น โดยเรียงลำดับของความสำคัญมีก่อน

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