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Comparative Effectiveness of Elementary School Achievement In English Speaking Countries

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COMPARATIVE EFFECTIVENESS OF ELEMENTARY SCHOOL ACHIEVEMENT
IN ENGLISH SPEAKING COUNTRIES

being

A thesis presented to the Graduate Faculty
of the Fort Hays Kansas State College in
partial fulfillment of the requirement for
the Degree of Master of Science

by

Arthur R. Self, B. S. in Education
Fort Hays Kansas State College

Date

July 21, 1950.

Approved:

Robert T. McGrath
Major Professor

Fred Robertson
Chairman Graduate Council

200

Dedicated to my wife

BERTHA MAY

for her help and devoted attention to the home
during the writing of this thesis

Author

10-9-50

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COMPARATIVE EFFECTIVENESS OF ELEMENTARY SCHOOL ACHIEVEMENT
IN ENGLISH SPEAKING COUNTRIES

CHAPTER I

INTRODUCTION

Statement of the Problem

"A realistic means of education long used in secondary schools and deserving wider appreciation is correspondence between youths of different nations. First seen as an aid to instruction in foreign language, its values are now seen to apply to many other areas, including written expression in English, geography, citizenship, economics, and international understanding. It has been found that many pupils carry on the correspondence throughout their lives. Some pupils have been known to start such correspondence in secondary school, continue it throughout college, and later, in cases where they become teachers, stimulate interest in it among their own pupils. The success of the plan is owing to the 'person-to-person' feature. The young people feel that their letters are unsupervised, and therefore the correspondence is far more interesting."¹

The above quotation is given because it was through promoting such a plan of correspondence that the writer became interested and concerned about educational progress of pupils in foreign countries as compared with the progress of pupils being made in certain schools of Kansas. It may be of interest to know that the writer made personal

1. Leonard V. Koos, "Education through Foreign Correspondence," School Review, 45: 489-491, September, 1937.

contact for over fifteen thousand (15,000) boys and girls in over fifty-three different countries of the world during the school year of 1947 alone. Practically every day brought enthusiastic letters² from headmasters, principals, and teachers from all parts of the world. It was through such correspondence that schools were contacted which made possible this comparative study of achievement in different countries. Unfortunately, due to language difficulties, such a study would necessarily have to be limited to English speaking countries, although, as evidenced in student letters³ to the writer, non-English speaking countries have reached a marked degree of success in teaching English.

The general problem of this thesis was to determine the relative effectiveness or general progress of instruction of school children in English speaking countries of the world as compared with the progress in certain Kansas schools. Teachers and headmasters in the foreign countries were careful to mention the fact that many processes of learning are different in their country than it is in the United States. Such spelling words as program (programme), center (centre), and labor (labour) could not be used, and problems dealing in dollars and cents were not used.

2. See Appendix, Exhibit A, p. 52.

3. See Appendix, Exhibit B, p. 53.

Fields Covered

The learning fields covered were arithmetic computation, arithmetic reasoning, language usage, and spelling. The varying geographic and regional differences from country to country precluded a wider choice of subject matter fields. Some of the headmasters, especially in Ireland and in Australia were hesitant about participating in the testing program due to different methods and processes of learning in spelling and arithmetic. The writer assured the participating schools that the tests would be of a general nature in order to make for equality of achievement.

Related Studies

After carefully examining all available lists of theses, reader's guide, and the educational index, the writer found no record of any previous research on the particular subject under consideration. Mr. E. T. Lloyd⁴ did write his master's thesis on one phase of international correspondence, however, his purpose was not to find the relative achievement of students in different countries. His purpose was to find the extent of help and motivation that foreign language students derived from writing letters to countries whose language they were studying. This research was carried out by sending suitable questionnaires to teachers of French in the American high schools whose students were corresponding with students in France or in other French speaking countries.

4. E. T. Lloyd, "The Place of International Correspondence in Modern Language Teaching," Master's Thesis, College of the City of New York, 1937.

Articles have appeared in periodicals from time to time emphasizing the importance of pupil to pupil contact through the plan of international correspondence. Mr. A. I. Roehm⁵ and Mr. Gaynor Staddon⁶ have encouraged learning through the pupil contact made via foreign correspondence. It seems to be the general thesis of all these writers that international correspondence is an activity that creates intense interest, as well as promoting friendship among the young people of the countries all over the world. A brief summary of the main line of thought found in the different articles follows. The primary purpose of world-wide pupil correspondence is mutual understanding, mutual respect, and mutual friendship between the youth of foreign countries and students in the schools of the United States. It is true that now there is only "one world" and boys and girls can be good neighbors best, when all communicate freely with each other. The strongest and greatest power in the world that human beings have is true FRIENDSHIP. Before prejudices have been developed young people everywhere are friendly, and students in all lands want to know their neighbors in other lands better. Students feel that they are really taking part in future world peace plans because they are creating friends in these foreign lands, and, by so doing, they are learning their ideas, customs, and habits and also are spreading our international goodwill.

5. A. I. Roehm, "Learning Foreign Language and Life by New Techniques, Including International Educational Pupil-Correspondence," Peabody Journal of Education, 19: 227-229, January, 1942.

6. Gaynor Staddon, "Correspondence with Foreign Students," Education for Victory. 2:16, September 16, 1943.

Teachers who encourage and promote such a plan of foreign correspondence will be scouting on the advance lines of post-war America. They will be fighting for and designing the kind of culture that will be the social heritage of posterity in the greater America of tomorrow.

The lives of thousands of young people in all parts of the world are animated and activated each year by establishing new pen friendships. How do these boys and girls in other lands compare scholastically with students in the State of Kansas? Basically are they better trained in the fundamental processes than are students in the Kansas schools? It will be the purpose of this thesis to answer these questions.

CHAPTER II

METHOD AND SCOPE

Since this study is a survey of the achievement or effectiveness of instruction of school children in different English speaking countries of the world, the writer constructed a test including the basic fundamentals of learning on the fourth, fifth, and sixth grade level. A test of general achievement was constructed and administered to the pupils concerned in order to secure the data for this study.

Headmasters and principals were contacted in cities of the following countries: England, Scotland, Ireland, Canada, Australia, and Kansas. In each of the above countries, excepting Kansas, approximately 200 children were tested. The exact number participating in the testing program varied from 165 in Australia to 250 in England. In the schools of Kansas 416 tests were administered to a corresponding number of pupils.

Selection of Pupils

The tests were administered to 416 pupils in certain selected schools in eastern Kansas, to 165 students in Canada, to 192 school children in Scotland, to 140 pupils in Australia, to 218 boys and girls in Ireland, and to 250 pupils in the schools of England. The problem of selecting the Kansas schools where the tests might be given was relatively a simple matter. By using the Kansas Educational Directory the necessary number of schools willing to cooperate was found.

Locating the schools in the five foreign countries presented a new and different problem. Previous to this survey, the writer had many personal "letter-writing" contacts with teachers in practically all parts of the world. These contacts were made with teachers whose students ranged from twelve (12) to twenty (20) years of age. Since the tests were being given to students of the nine, ten, and eleven year age groups, it was necessary to write and ask for names and addresses of teachers of the younger pupils. In a few cases the contacts were easily made, but, by and large, the foreign schools and their principals were contacted only after considerable writing back and forth. In a few cases it was necessary to write the Minister of Education or even to the American Consul¹ asking for names and addresses of suitable schools. Indeed, it is surprising to learn the details and "red tape" necessary before the final contacts were made. Mr. S. G. Barker² wrote as of March 12, 1948, "Thank you for your letter of 14th February. I have obtained the permission of the Director of Education for the Isle of Wight for the primary schools here to take part in the testing scheme. I have contacted the Head Teachers of two schools, one a boys school and one a girls school, who are very willing to help in testing children. I suggest that you get in touch with them direct." After writing directly to them, they were interested, but they also had questions to ask. Therefore, it took considerable time before the final arrangements were made.

1. See Appendix, Exhibit C, p. 54.

2. S. G. Barker, Head Master, County Secondary Grammar School, Nodehill, Newport, Isle of Wight, England.

The tests were administered to students nine, ten, and eleven years of age. There was a slight variation from the stipulated ages due to the fact that the tests were given to students in the fourth, fifth, and sixth grades and whose ages should normally be nine, ten, and eleven. Due to the fact of retardation some students were twelve. All pupils over eleven years of age were counted in the eleven year age group.

Selecting pupils of the younger age group was necessary due to the early age at which the average student leaves school in most foreign countries. In the foreign countries there seems to be general education for pupils in the public elementary schools, but they proceed to the secondary school beginning at the age of twelve. Contrary to popular belief all secondary schools are not composed mainly of fee paying students. This is particularly true in Scotland, especially in the Glasgow Corporation where 192 of the tests were given. Quoting from Mr. James Hastie³ of the Glasgow schools: "All education up to the age of 18 is entirely free. Books are also provided. This applies to schools under the Glasgow Corporation. Naturally there are other schools of a private nature where fees are paid but these are, I should say, rather uncommon. Education is now compulsory in this country up to the age of 15. Until 1947 the age was 14 but the present Government has increased this to 15. In Scotland 90% of the schools, I should think, cater for both boys and girls. This is not the case in England where they seem to prefer to keep the sexes apart."

3. See Appendix, Exhibit D, pp. 55-56.

Selecting the Test Material

All questions of the tests were selected from the Stanford Achievement Test.⁴ The writer thought of sending to the different countries involved a complete intermediate battery of tests, but this was neither practicable nor advisable. In the first place there would have been difficulty in securing the cooperation of schools in administering the entire test due to the time element. In fact, some principals asked, before agreeing to give the tests, how much time would be required to administer them. Another factor that dissuaded the writer from using the entire test was the element of postage to and from the different countries. Finally, and probably the most important, items in some of the tests had to be more or less general to be understood by all the students involved. Quoting from a teacher⁵ in Scotland, it is easy to understand why the entire test could not have been used: "I am not very sure what kinds of tests you propose to give, but I expect you will remember that in arithmetic many of our processes are quite different from yours. The same, of course, is true of both language usage and spelling."

Constructing the Tests

Careful consideration in formulating the tests was given to particular principles of test construction. The following principles were given special attention in this study: (1) The source (or sources)

4. Truman L. Kelley, Giles M. Ruch, and Lewis M. Terman, Stanford Achievement Test, Intermediate Battery, Form D. New York: World Book Company, 1940.

5. James Hastie, 269 Milngavie Road, Bearsden, Glasgow, Scotland.

of the questions for the various tests, (2) the method used for selecting questions, (3) the difficulty of the questions selected, including more difficult items, (4) the spelling words used in sentences, and (5) the directions for administering the tests.

To make for validity and reliability all tests were selected from the Stanford Achievement Test.⁶ In order to get a fair sampling of questions, items were selected from the test booklet on the basis of every third one, when such selection did not involve differences in testing processes found in the various countries. In the arithmetic computation test found in the original Stanford Achievement Test were pictures and graphs, which, of course, were omitted.

Inasmuch as these tests were given to the nine, ten, and eleven year age groups, the first questions selected were quite simple. From the beginning to the end of the tests, the questions became progressively more difficult. There were comparatively few perfect scores made on any of the tests.

The spelling words were also selected from a list prepared by the World Book Company, Form D, of the Stanford Achievement Test. Each word was listed on the left side of the page followed by a sentence with that particular word capitalized. The same word was again listed on the right.

Since sending the entire test overseas would not have been expedient due to first class postage, the time required to take the tests, etc. only a part of the test was used. Twenty of the sixty-five

6. Truman L. Kelley, loc. cit.

problems in arithmetic computation were used, ten of the forty problems in arithmetic reasoning were included, twenty of the one hundred items in the language usage test were used, and twenty-five of the seventy words in spelling were used in the test. Problems, items, and words were selected on the basis of every other one, or every fourth one, unless such a selection involved difficulties in the processes of learning as indicated by teachers in the foreign countries.

Procedure

Plans to test pupils in Kansas schools and in England, Canada, Ireland, Scotland, and Australia were formulated. An invitation⁷ to participate in this testing program was sent to the principals, or headmasters of the primary or intermediate schools which the writer secured through the cooperation of educational directories, ministers of education, exchange teachers, and American Consuls. Inasmuch as the writer had long promoted "penpalships" between American students and students in foreign countries, a special letter⁸ was sent to these previously made contacts of teachers, explaining the graduate study and asking them to help in making the needed contacts in their particular country and area. Another invitation⁹ to cooperate in this testing survey was sent to superintendents of schools in a scattering of towns and counties in the eastern part of Kansas. A total of 965

7. See Appendix, Exhibit E, p. 57.

8. See Appendix, Exhibit F, p. 58.

9. See Appendix, Exhibit G, p. 59.

tests were administered to students abroad, and 416 to Kansas students. Sincere appreciation was extended to all participating schools and school personnel in making this survey possible. A complete summary of the final results of this study was mailed to each participating school in both Kansas and in the foreign countries.

In order to make for the greatest degree of uniformity in all schools the teachers were asked to follow the same procedure. A list of instructions was sent with each group of tests. These directions and instructions are listed herewith:

1. The test includes two sheets or three pages. Ask each student to fill in all blanks at the top of pages one and three before the test begins.
2. Please give the spelling test first. The words are to be written at the bottom of page three. The word list is enclosed.
3. In case your students are not familiar with the answer column explain that all answers or the numbers preceding the correct answers are to be written in the column to the right of each page.
4. **TIME:** After the spelling test has been given, allow thirty (30) minutes for the remainder of the tests.

The following schools were selected and they royally cooperated in this graduate study:

Name of School	City	Country	Number
Brighton Grammar School	Brighton	Australia	60
The King's School	Parramatta	Australia	80
Hull Intermediate School	Hull	Canada	70
Eastwood School	Edmonton	Canada	95
C. E. Girls' School	Newport	England	67
C. E. Boys' School	Newport	England	73
Birdson Ave. Jr. School	Birkenhead	England	110
Hyndland Primary School	Glasgow	Scotland	192
Scoil Mhuire	Dublin	Ireland	45
Central Boys' Model	Dublin	Eire	38
Stranmillis School	Belfast	Northern Ireland	135
Augusta Intermediate	Augusta	Kansas	60
El Dorado Intermediate	El Dorado	Kansas	125
Douglas Grade School	Douglas	Kansas	35
Newton Intermediate	Newton	Kansas	196

The next step in the survey was the printing and distribution of the necessary number of tests. A total of some 1550 tests were printed, and 1533 of these tests were mailed to the above schools. Of this number 1381 were returned completed, excepting for the few

omissions that occurred.¹⁰ An ample supply of word lists¹¹ was printed, in addition to complete directions¹² for administering the tests with a few words of appreciation for the splendid cooperation of the schools.

Limitations of the Study

The writer is cognizant that this survey has certain limitations, and consequently, certain findings, to a limited degree, are inconclusive. Such factors as individual teacher differences, individual pupil differences, the number of cases tested, and other variability points naturally delimit the efficiency of the study. No doubt, the greatest limitation is found in the limited number of pupils involved. The writer preferred to have the tests given in towns of similar size, but contacts abroad were from both large and small communities. Schools were selected from Kansas towns ranging from 300 in population to 12,000. Schools in the foreign countries were selected from towns ranging from 400 in population to 1,034,000.

Probably the study does indicate trends and significant revelations in the field of scholastic achievement, but to be all inclusive thousands of tests would have to be given in each of the countries.

10. See p. 34.

11. See Appendix, Exhibit H, p. 60.

12. See Appendix, Exhibit I, p. 61.

CHAPTER III

COMPARATIVE ANALYSIS OF THE TEST RESULTS

This survey includes 1381 pupils and the scores from four tests for each pupil, totaling 5524 test scores. The first step in analyzing the test papers was to prepare a chronological age distribution of the pupils in the different countries. Fourth, fifth, and sixth grade pupils were tested, whose ages ordinarily are nine, ten, and eleven, respectively. It was the writer's original plan to have the tests administered to an older age group, but this would not have been advisable, inasmuch as young people leave school at an early age in most foreign countries. This, of course, would leave only a select group in school at the junior high and the senior high school level.

Table I below shows the number of pupils, nine years of age, participating in the research from each of the several countries. In all cases the fractional part of the current chronological year was disregarded. In other words, a student who is nine years and six months is listed as being nine years of age.

TABLE I. CHRONOLOGICAL AGE DISTRIBUTION BY COUNTRIES

Age 9

Country	Number
Kansas	143
England	56
Scotland	55
Canada	40
Australia	38
Ireland	28

TABLE II. CHRONOLOGICAL AGE DISTRIBUTION BY COUNTRIES

Age 10

Country	Number
England	176
Kansas	108
Scotland	81
Ireland	58
Canada	55
Australia	47

The teachers in the various schools were asked to administer the tests to pupils who were in the fourth, fifth, and sixth grades. Since some of the educational programs in foreign countries are not always based on grades, as we classify students, teachers were asked to administer the tests to pupils of the fourth, fifth, and sixth grades, whose ages ordinarily are nine, ten, and eleven. Some pupils who had been retarded were twelve years of age, but they were all counted with the sixth grade, or age eleven.

TABLE III. CHRONOLOGICAL AGE DISTRIBUTION BY COUNTRIES¹

Age 11

Country	Number
Kansas	165
Ireland	132
Canada	70
Scotland	56
Australia	55
England	18

1. See Appendix, Exhibit J, p. 62.

The writer has had a wide correspondence with teachers and principals of schools in many lands since 1945. A special letter² was written to these teachers soliciting their help in this testing program. The response and willingness to cooperate as expressed in the letters received was, indeed, heartening. These letters not only served their immediate purpose, but they disclosed the interesting and unique pattern of education in these foreign countries as compared with those of the United States. Letters have been included in the appendix from Ireland,³ Canada,⁴ Scotland,⁵ England,⁶ and Australia.⁷ A mimeographed copy⁸ of the four tests, as received from the various countries, is included for examination.

Although directions were specific, and the teachers were told that there were three pages to the tests, a few pupils omitted various tests. In the nine year age group one student from Australia did not take the language usage test, four failed to take the arithmetic reasoning from Ireland, eleven of the language usage tests were not taken from Kansas, and eight pupils from Kansas failed to take the spelling tests.

2. See Appendix, Exhibit F, p. 58, loc. cit.

3. See Appendix, Exhibit K & L, pp. 63-66.

4. See Appendix, Exhibit M, p. 67.

5. See Appendix, Exhibit N, p. 68.

6. See Appendix, Exhibit O, p. 69.

7. See Appendix, Exhibit P, p. 70.

8. See Appendix, Exhibit Q, pp. 71-73.

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Kansas Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	1	3	0
1	0	1	7	0
2	1	3	15	1
3	1	3	13	0
4	1	14	16	1
5	2	24	16	2
6	2	22	14	2
7	2	30	7	2
8	4	25	9	2
9	7	13	4	4
10	17	7	10	6
11	12		4	13
12	8		2	10
13	13		3	16
14	18		2	11
15	16		4	13
16	12		2	9
17	13		3	12
18	12		0	7
19	2		0	5
20	0		0	7
21	0		0	4
22	0		0	4
23	0		0	1
24	0		0	2
25	0		0	1

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country England Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	1	2
1	0	2	3	0
2	0	1	3	1
3	0	0	4	2
4	1	6	9	0
5	0	5	7	2
6	0	16	6	4
7	0	13	2	0
8	2	5	5	2
9	1	5	3	0
10	3	3	1	1
11	5		0	4
12	5		2	3
13	6		0	3
14	7		3	5
15	10		1	4
16	5		4	2
17	7		1	3
18	4		1	5
19	0		0	4
20	0		0	1
21	0		0	1
22	0		0	3
23	0		0	1
24	0		0	0
25	0		0	3

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Canada Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	1	0
1	0	0	3	0
2	1	2	5	0
3	0	2	6	1
4	0	8	2	0
5	2	6	5	2
6	3	6	4	3
7	3	4	2	2
8	7	7	0	4
9	4	3	1	3
10	2	2	1	7
11	3		2	4
12	9		0	5
13	2		2	3
14	1		0	1
15	2		1	1
16	1		2	0
17	0		0	0
18	0		1	0
19	0		0	1
20	0		2	3
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Scotland Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	9	2
1	0	0	9	4
2	5	1	11	5
3	5	5	4	9
4	6	2	6	3
5	5	6	3	6
6	3	7	2	5
7	5	10	3	6
8	4	17	2	4
9	8	4	0	3
10	5	3	0	4
11	4	0	0	2
12	1		0	2
13	2		3	0
14	0		1	1
15	2		1	0
16	0		0	0
17	0		0	0
18	0		0	0
19	0		0	0
20	0		1	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Australia Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	2	0
1	0	1	1	0
2	0	2	5	1
3	0	3	6	2
4	0	4	6	3
5	0	8	2	6
6	0	8	1	2
7	1	2	0	3
8	4	5	1	3
9	7	2	2	2
10	5	3	1	3
11	5		4	5
12	2		0	3
13	3		0	4
14	4		0	0
15	3		1	1
16	2		1	0
17	2		0	0
18	0		0	0
19	0		0	0
20	0		1	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Ireland Age 9

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	2	1	0
1	0	0	1	0
2	0	2	4	0
3	0	5	2	1
4	1	0	1	0
5	0	1	4	0
6	2	3	2	1
7	3	5	2	4
8	4	3	3	4
9	6	0	1	2
10	6	3	1	2
11	3		1	2
12	2		1	5
13	0		2	1
14	1		1	2
15	0		1	3
16	0		0	1
17				
18				
19				
20				
21				
22				
23				
24				
25				

Table X shows the average number of items incorrect on each of the four tests, age nine, for the various countries tested. Also shown on this table are the number of tests given in each country and the median score. In order to make for more accuracy the average score was carried to the nearest hundredth. Table X also includes the average number of incorrect items of all six countries in arithmetic computation, arithmetic reasoning, language usage, and spelling. The median scores are averaged and expressed in two decimal places. The total average of all subjects for each country is shown in ascending order, and, finally, the grand average of all countries in all subjects is given. A total of 360 pupils, age nine, took the tests.

A total of 525 pupils, age ten, participated in the testing program. A few tests were omitted from this age group: i.e., one in spelling from England, four from Kansas in arithmetic reasoning, fifteen from Kansas in language usage, one from Ireland in arithmetic computation, five in arithmetic reasoning from Ireland, and nineteen from Ireland in language usage. Only forty-five omissions occurred in 2100 tests, and twenty-five of these were omitted from Ireland. Nineteen of these twenty-five omissions from Ireland were in language usage, which was not unexpected since some of the schools in which the tests were given, study English as a foreign language only. They emphasized that the old Gaelic language was being revived in the Irish Free State, and, therefore was used in the schools and mostly in the homes.

Tables XI-XVI, inclusive, show the number of pupils, age ten, who missed one, two, three, etc. items of each test for schools in each of the six countries participating in the testing program.

RESULTS OF TESTS

Age 9

Country	No. Tests	Arithmetic Computation		Arithmetic Reasoning		Language Usage		Spelling		Averages by Countries
		*Ave.	*Med.	Ave.	Med.	Ave.	Med.	Ave.	Med.	
Canada	40	9.75	9.50	5.98	6	6.85	5	10.63	10	8.30
Scotland	55	7.15	7.00	6.71	7	3.98	2	5.45	5	5.83
Australia	38	11.50	11	5.79	6	5.49	4	8.24	8	7.76
Ireland	28	9.07	9	5.46	6	6.64	6	10.39	10	7.89
Kansas	143	13.05	14	6.26	7	6.36	5	14.45	14	10.04
England	56	13.77	14	6.34	6	7.13	6	13.77	14	10.34
Total No. Pupils	360							Total Ave. of all countries in all subjects →		8.31
Averages by Subjects	60		10.75		6.33		4.67		10.17 →	7.98
		10.72		6.09		6.08		10.49 →		8.35

*Ave.---Average number wrong

*Med.---Average median wrong

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Kansas Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	1	3	6	0
1	0	4	5	2
2	0	8	11	1
3	0	25	12	2
4	3	16	14	2
5	3	19	8	10
6	6	13	5	2
7	11	11	5	2
8	11	2	7	7
9	18	3	4	9
10	9	0	3	6
11	8		3	8
12	12		2	10
13	6		2	8
14	6		2	13
15	8		1	5
16	1		0	4
17	1		2	5
18	4		0	4
19	0		0	2
20	0		0	2
21	0		0	1
22	0		0	3
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country England Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	6	12	10
1	3	16	36	16
2	6	16	22	11
3	11	22	28	11
4	5	16	18	4
5	6	27	16	9
6	13	33	12	7
7	15	29	9	8
8	14	5	5	7
9	11	5	7	14
10	13	2	4	16
11	10		1	4
12	11		1	12
13	10		1	5
14	11		2	9
15	18		0	8
16	10		1	4
17	5		0	2
18	5		0	6
19	0		0	2
20	0		1	2
21	0		0	3
22	0		0	3
23	0		0	1
24	0		0	0
25	0		0	1

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Canada Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	1	9	5	2
1	2	12	9	2
2	8	8	8	5
3	7	9	12	5
4	6	4	8	7
5	3	5	1	6
6	3	3	4	6
7	7	3	0	2
8	6	1	1	6
9	3	1	0	1
10	5	0	1	2
11	1		0	1
12	1		2	2
13	1		0	3
14	0		1	3
15	1		0	0
16	0		0	0
17	0		1	1
18	0		0	0
19	0		0	0
20	0		1	0
21	0		0	0
22	0		0	0
23	0		0	1
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Scotland Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	5	5	18	8
1	3	11	18	3
2	9	8	17	5
3	6	5	13	13
4	13	8	3	8
5	4	10	3	13
6	9	8	0	4
7	7	4	1	8
8	9	8	0	3
9	2	2	1	5
10	4	12	1	2
11	3		0	1
12	4		1	3
13	0		1	1
14	1		2	1
15	0		0	1
16	0		0	0
17	0		0	1
18	0		0	1
19	1		0	0
20	1		1	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Australia Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	2	7	2
1	0	2	7	3
2	0	12	5	3
3	1	20	5	7
4	2	5	4	4
5	4	2	4	2
6	7	0	2	5
7	4	4	5	3
8	9	0	2	2
9	7	0	2	3
10	5	0	0	0
11	1		0	2
12	1		1	4
13	2		2	2
14	3		0	2
15	1		0	2
16	0		1	1
17				
18				
19				
20				
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Ireland Age 10

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	2	1
1	1	1	6	2
2	2	8	7	2
3	2	11	7	0
4	3	0	2	4
5	2	3	1	4
6	9	3	3	1
7	10	9	0	7
8	3	9	3	3
9	6	5	1	2
10	6	4	2	2
11	4		2	4
12	4		0	5
13	2		1	6
14	1		1	4
15	1		1	3
16	0		0	5
17	0		0	1
18	1		0	1
19				
20				
21				
22				
23				
24				
25				

The average number of items missed on each of the four tests, age 10, for schools in the several participating countries is found on Table XVII. The median score is found on this table, and also the number of tests given in each country. Table XVII also includes the average number of incorrect answers in arithmetic computation, arithmetic reasoning, language usage, and spelling in all six countries. The median scores are averaged and carried out to the nearest hundredth. The total average of all subjects for each country is shown, and, finally the grand average of all countries in all subjects is given.

A total of 496 pupils, age eleven, participated in the program of testing. Out of these 1984 tests 53 were omitted. Two were omitted from Australia in language usage, one from Ireland in arithmetic computation, two in arithmetic reasoning, 19 in language usage and one in spelling all were omitted from Ireland, and from Kansas 27 were omitted in language usage, and one in spelling. The language usage test was on the back of page one, and this may have been the reason for most of the omissions being this particular test. When these tests were given to the fifth and sixth grades in the Augusta school, one teacher mentioned that several students at first overlooked the back side of page one. At this time the word "over" was written at the bottom of page one and at the bottom of page two was written "Go right on to page 3". Only 122 were omitted out of 5524 tests given, or 2.2%. Practically all omissions were from countries that ranked low on the tests; there were only seven tests omitted from the three high ranking countries. As indicated on page 19, this would show that the slow student was not alert enough to realize when he had finished all the tests, or he may not have had time to finish.

RESULTS OF TESTS

Age 10

Country	No. Tests	Arithmetic Computation		Arithmetic Reasoning		Language Usage		Spelling		Averages by Countries
		*Ave.	*Med.	Ave.	Med.	Ave.	Med.	Ave.	Med.	
Canada	55	5.84	6	2.76	2	3.91	3	6.69	6	4.80
Scotland	81	5.90	6	4.96	5	2.68	2	5.46	5	4.75
Australia	47	8.34	8	3.06	3	4.32	3	6.81	6	5.63
Ireland	58	8.07	7	5.69	6.5	4.85	3	9.77	11	7.10
Kansas	108	10.18	10	5.35	5	5.58	4	11.54	12	8.16
England	176	9.95	10	4.65	5	3.94	3	8.66	9	6.80
Total No. Pupils	525							Total Ave. of all countries in all subjects →		6.21
Averages by Subjects	87.5		7.83		4.42		3		8.17	5.86
		8.05		4.41		4.21		8.15	→	6.21

*Ave.---Average number wrong

*Med.---Average median wrong

Tables XVIII-XXIII, inclusive, show the number of pupils, age eleven, who missed one, two, three, etc. items of each test for schools in each of the six participating countries in the testing program.

Table XXIV shows the average number of items incorrect on each of the tests: i.e., arithmetic computation, arithmetic reasoning, language usage, and spelling. This table is a compilation of the complete results of all the pupils, eleven years of age, in Canada, Scotland, Australia, Ireland, Kansas, and England. This table shows both the average number of items missed on each test, and also the median score. The total number of pupils taking the tests is given and the average number of incorrect items of all six countries in **each** of the four subject matter fields. The total average of all subjects for each country is shown, and, for the purpose of comparison, the grand average of all countries in all subjects is given.

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Kansas Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	2	9	8	5
1	4	17	18	9
2	9	26	17	7
3	14	25	20	8
4	19	22	16	7
5	14	16	7	11
6	18	17	4	11
7	17	12	6	8
8	14	9	0	6
9	12	4	4	11
10	10	8	8	8
11	4		3	9
12	8		12	13
13	5		1	16
14	3		5	6
15	3		1	3
16	2		2	6
17	3		1	4
18	0		1	3
19	3		0	2
20	1		4	6
21	0		0	0
22	0		0	1
23	0		0	2
24	0		0	0
25	0		0	2

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country England Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	0	0	1	0
1	0	1	0	1
2	1	3	5	2
3	0	4	4	1
4	2	1	1	0
5	1	5	0	2
6	0	1	3	2
7	1	1	2	0
8	0	2	0	0
9	3	0	1	2
10	2	0	0	2
11	2		0	0
12	2		1	1
13	1		0	1
14	2		0	1
15	0		0	1
16	0		0	1
17	1		0	0
18	0		0	0
19	0		0	0
20	0		0	0
21	0		0	1
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Canada Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	5	15	11	12
1	7	24	12	16
2	6	7	13	8
3	12	7	9	5
4	10	8	9	7
5	4	4	3	1
6	6	1	3	4
7	6	2	1	3
8	5	2	3	1
9	2	0	0	2
10	1	0	1	1
11	2		0	3
12	3		1	3
13	1		0	1
14	0		1	0
15	0		1	0
16	0		0	3
17	0		1	3
18	0		0	0
19	0		0	0
20	0		1	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Australia Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	1	4	7	10
1	2	6	14	2
2	1	9	9	9
3	2	16	6	6
4	6	8	5	7
5	5	5	2	5
6	9	3	1	3
7	7	1	1	5
8	6	3	2	2
9	6	0	0	1
10	4	0	0	1
11	5		3	1
12	0		1	1
13	1		0	1
14	0		1	0
15	0		0	1
16	0		0	0
17	0		0	0
18	0		0	0
19	0		0	0
20	0		1	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Scotland Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	1	7	7	5
1	2	16	10	7
2	4	9	16	11
3	11	8	9	6
4	13	7	4	9
5	3	3	0	7
6	9	4	2	2
7	7	0	0	4
8	2	2	1	0
9	2	0	0	0
10	1	1	1	1
11	1		0	3
12	0		2	1
13	0		0	0
14	0		2	0
15	0		0	0
16	0		0	0
17	0		0	0
18	0		0	0
19	0		0	0
20	0		3	0
21				
22				
23				
24				
25				

FREQUENCY CHART SHOWING DISTRIBUTION OF ERRORS ON TESTS

Country Ireland Age 11

No. Wrong	Arithmetic Computation	Arithmetic Reasoning	Language Usage	Spelling
0	4	14	12	9
1	6	24	15	12
2	11	26	15	9
3	14	19	12	12
4	12	1	11	12
5	12	14	11	11
6	15	8	7	7
7	11	4	6	7
8	16	9	3	6
9	5	4	4	6
10	8	7	1	6
11	3		5	5
12	3		2	2
13	3		3	6
14	1		0	2
15	2		1	7
16	3		2	3
17	2		1	1
18	0		1	2
19	0		0	2
20	0		1	4
21				
22				
23				
24				
25				

RESULTS OF TESTS

Age 11

Country	No. Tests	Arithmetic Computation		Arithmetic Reasoning		Language Usage		Spelling		Averages by Countries
		*Ave.	*Med.	Ave.	Med.	Ave.	Med.	Ave.	Med.	
Canada	70	4.74	4	2.10	1	3.61	2	4.16	2	3.65
Scotland	56	4.79	4	2.70	2	4.02	2	3.80	3	3.89
Australia	55	6.76	7	3.24	3	3.55	2	4.18	4	4.43
Ireland	132	6.35	6	3.55	3	4.90	4	7.11	6	5.48
Kansas	165	7.33	7	4.16	4	5.91	4	9.48	9	6.72
England	18	9.61	10	4.28	4.5	4.39	3	8.83	9	6.78
Total No. Pupils	496							Total Ave. of all countries in all subjects →		5.16
Averages by Subjects			6.33		2.92		2.83		5.50 →	4.47
	82.67	6.60		3.34		4.40		6.26	→	5.15

*Ave.---Average number wrong

*Med.---Average median wrong

CHAPTER IV

SUMMARY AND CONCLUSION

The purpose of this research was to make a comparative study of the classroom achievement of boys and girls in certain Kansas schools, and schools in Canada, Australia, Scotland, Ireland, and England.¹ After having 5524 tests administered in the above countries to 1381 intermediate school pupils, the achievement record of each country stands out plainly as shown on Tables X, XVII, and XXIV, pages 27, 35, and 43, respectively.

Schools were contacted in each country to ascertain the number of pupils who were nine, ten, and eleven years of age. In each case enough tests were sent to each school so that all pupils of a particular age could take the tests.

Participating in the tests were 360 students nine years of age, 525 pupils ten years of age were tested, and 496 were in the eleven year age group. Of the six countries tested, Scotland and Canada were in the high ranking three for ages ten and eleven in every case. Scotland ranked first in both nine and ten year age groups, and a close second to Canada for the eleven year old students. Canada, with 70 pupils in the sixth grade, made the remarkable score of 3.65 incorrect, which was the least number missed by any age group.

Teachers of the participating schools in Ireland were very

1. See Chapter II, p. 13 for a list of schools tested.

definite to emphasize that different processes were used in their schools. Some of the Irish teachers hesitated, others refused, to have their pupils tested. Notwithstanding the many excuses, the students from Ireland ranked fourth in the eleven year age group, the ten year old group was fifth, and the nine year old pupils ranked third. It will be recalled that 46 language usage tests were omitted by the Irish boys and girls. It is interesting to note that the nine year age group, that ranked third, never omitted any from the language usage test. The teachers had emphasized that language difficulties would arise in Ireland, which proved to be a problem for the ten and eleven year old pupils.

England ranked at the bottom of the list in both the nine and eleven year age groups, and the ten year old pupils from Kansas were at the bottom. Kansas was either fifth or sixth in each case. England, with 176 cases, was fourth in the ten year age pupils. The countries have been rated according to general average on all subjects, while Tables X, XVII, and XXIV on pages 27, 35, and 43, respectively, give the average scores for each country in the various subjects.

The frequency tables on pages 22, 23, and 24 show the good scores made by Canada, Scotland, and Australia, respectively, for age nine. As found on page 41, the eleven year old pupils from Scotland had twenty perfect papers on all four tests, which was a little less than 10% of their 55 students. A good perspective of the success of each group in the six different countries may be had by examining the various tables showing the distribution of errors, which are listed in the Table of Contents on pages iii and iv.

This research, though not conclusive in its findings, points to Scotland, Canada, and Australia as having schools well equipped to teach the fundamental processes, including spelling, language usage, arithmetic computation, and arithmetic reasoning. The excellent showing made by these three countries might well explain why American boys and girls find so many interesting pen pals in these particular countries. Perhaps the schools in Kansas and in England do not emphasize the fundamental processes as much as do other countries. On the other hand, there is a chance that the schools in Kansas and in England may derive more benefit from social activities than do the countries having a higher achievement record.

To the writer the above possible reasons for the wide variance of test results were to suppositional in character. An additional questionnaire² concerning school practice was mailed to each of the eleven schools in foreign countries that had previously participated in the testing program. Nine of these eleven questionnaires were filled out and returned. The questionnaires sent to Brighton, Australia and to the Central Boys Model School in Dublin, Ireland were the only two not returned. A summary of the results of this questionnaire by questions is very informative.

1. Does your school maintain a kindergarten?

England: G. E. Girls School at Newport, Isle of Wight-----Yes
 G. E. Boys School at Newport, Isle of Wight-----Yes
 Bidston Avenue School, Birkenhead-----No

2. See Appendix, Exhibit R, p. 74

Scotland: Hyndland Primary School, Glasgow-----No
 Ireland: Dungannon, Co. Tyrone-----Yes
 Brown St. Primary School, Belfast-----Yes
 Australia: The King's School, Parramatta, N. S. W.-----No
 Canada: Hull Intermediate School, Hull-----Yes
 Eastwood School, Edmonton-----No

2. Age at which pupils start to school.

England: C. E. Girls School, Newport, Isle of Wight-----5-7
 C. E. Boys School, Newport, Isle of Wight-----5-7
 Bidston Avenue School, Birkenhead-----5
 Scotland: Hyndland Primary School, Glasgow-----5
 Ireland: Dungannon, Co. Tyrone-----4-5
 Brown St. Primary School, Belfast-----5
 Australia: The King's School, Parramatta, N. S. W.-----8-9
 Canada: Hull Intermediate School, Hull-----6
 Eastwood School, Edmonton-----5 yrs. 9 mo.
 When measured with Detroit Intelligence Tests.

3. Number of hours your pupils are in the classroom each day,
 not including recesses and lunch period.

England: C. E. Girls School, Newport, Isle of Wight----4 hrs. 45 min.
 C. E. Boys School, Newport, Isle of Wight----4 hrs. 45 min.
 Bidston Avenue School, Birkenhead-----5 hrs. 10 min.
 Scotland: Hyndland Primary School, Glasgow-----6 hrs. 25 min.
 Ireland: Dungannon, Co. Tyrone-----5 hrs. 20 min.
 Brown St. Primary School, Belfast-----5 hrs. 10 min.
 Australia: The King's School, Parramatta, N.S.W.-----4 hrs. 40 min.
 Canada: (Average)-----5 hrs. 10 min.

4. List extra-curricular or recreational activities in which your pupils participate.

England: Scouts, netball, tennis, swimming, various Parochial Youth Organisations, church lads' brigade, cinema, school football matches, country dance club, and rounders.

Scotland: Scouts, brownies, cubs, girl guides, boys' brigade, and football for boys.

Ireland: Scouts, tennis, boys' brigade, girls in "Guides", and organised games.

Australia: Sports, including some indoor games.

Canada: Scouts, Brownies, church organizations, C. G. I. T. clubs, Hockey Clubs, and Jr. Y. M. C. A. and Y. W. C. A.

5. How much time is devoted to music each week at this age level?

England: (Average)-----68 minutes

Scotland: (Average)-----60 minutes

Ireland: (Average)-----70 minutes

Australia: (Average)-----Optional

Canada: Hull Intermediate-----No

Eastwood School, Edmonton-----Yes

6. What is the length in days of your school year?

England: (Average)-----208

Scotland: Hyndland Primary School, Glasgow--200

Ireland: (Average)-----199

Australia: The King's School-----190

Canada: (Average)-----195

7. Is school attendance compulsory in your school at this age level?

For all schools in the five foreign countries-----Yes

8. At this age level is yours a free public school open to all classes of people?

For all three schools tested in England-----Yes

Scotland-----Yes

Ireland: Dungannon, Co. Tyrone-----No
Fees are 10 pounds a year; accommodation is limited.

Brown St. Primary School, Belfast-----Yes

Australia-----Yes

Canada: Hull Intermediate School, Hull-----Yes
(To Protestant residents only)

Eastwood School, Edmonton-----Yes

After scrutinizing the results of this last questionnaire that was sent to the cooperating schools in January, 1950, one readily sees specific reasons for the excellent record of certain countries.

Scotland, with the best scholastic record, has the longest school term in days than any of the other countries with the exception of England. Also, pupils from Scotland are in the classroom one hour and fifteen minutes longer each day than any of the schools tested in England. According to the record the pupils from Scotland participated in six recreational activities at school, whereas England listed eleven such activities. Furthermore, the Hindland Primary School of Scotland spends less time on music daily than the schools in any other country tested excepting perhaps Canada. Of course, the results of this questionnaire have no effect, whatsoever, upon the records established by the various countries, but the probable reasons for the outstanding records of various countries have been established.

The unusual magnitude of this problem warrants a much more extensive study than any one individual can accomplish. In order to carry findings from mere trends to a reasonable degree of certitude, several thousands of students should be tested in each country.

It is hoped that this study may help others to appreciate the efficacy of the educational practices in other lands. The idea of establishing and maintaining the spirit of cooperation among the youths of different nations through international correspondence is gaining momentum, and this personal contact plan is being promoted and encouraged by UNESCO organizations in many schools. Boys and girls of the intermediate age group are encouraged to participate in this world wide correspondence plan by exchanging letters with English speaking countries. This research on pupil achievement, though only a beginning, should help both the teacher and her pupils to understand and to appreciate young pen friends in other English speaking countries of the world.

APPENDIX

ATHENS COLLEGE
Athens, Greece



ΚΟΛΛΕΓΙΟΝ ΑΘΗΝΩΝ
'Αθήναι, 'Ελλάς

The President
Foreign Corry. Bureau
Augusta, Kansas, U. S. A.

February 19, 1948

The Foreign Correspondence Bureau
Augusta, Kansas
U. S. A.

Dear Sirs,

Your letter of December 27, 1947 addressed to the Director of English of Athens College, was forwarded to me, as representative of the Student Council.

Many Athens College students were interested in your request of sending you their address for the purpose of corresponding with American students. They are sure that pen-friendship can enrich knowledge and in many ways train the abilities of those who take part in it. The students here wish to correspond particularly with their American comrades, as our two countries are being brought closer to each other lately.

Most of the boys here do not know excellent English, yet their knowledge of the language is sufficient to let them write their letters in English.

I enclose a list of names and addresses of some twenty-eight boys. As Athens College is a school for boys only, I regret that the names contained in the list belong wholly to such. Almost all the students would like their "pen-pal" to be a girl.

Please let me know whether I can send you even more addresses of boys whose age varies from 15 to 17.

Thanking you for your kind interest and your trouble, I remain,

Very truly yours,

Anthony T. Demetriades

Anthony T. Demetriades
For the Student Council
Athens College
Athens, Greece

Exhibit B

Iskenderun June 16th 1947

The President
Foreign Corrrp. Bureau
Augusta, Kansas, U. S. A.

Dear Sir,

I had read with great pleasure a little time ago an interesting information, published in local papers by the Turkish Board of Education, in the form of establishing friendly correspondence between Turkey's and U. S. A. students. The said information beared the "Foreign Correspondence Bureau" as a center to which we should apply to come into touch with American students.

Useless to say I always wanted to correspond with American penfriends, but I had always been unsuccessful in getting addresses over in the States to that effect. I've therefore been very happy from the time I understood this was, at last, possible to me by your help and under your guidance.

On my part, I know a good deal of English. I've been learning it for years in College and personally. I possess a sound vocabulary in the language, but I'm still rather weak in the field of building essential idiomatic sentences and conjugating the verbs in their right tenses when I use them in writing or speaking. That's why I hope of improving my English in my correspondence with American colleagues.

Nevertheless, people of here seem to take to foreign languages more than you foreigners do. At least I think so. Among the students army in Turkey, many are those who practice several languages at the same time. I myself know, apart from English; excellent Arabic, Turkish and French. I follow actually the courses of the French Saint-Joseph College at Istanbul. By the way I should tell you that there is in that city a big well-known American school for boys known as the "American Robert College".

I presume American boys and girls are nearly unaware of Turkish things and life in general. I shall make a point of giving them a thorough knowledge in that concern and hope that my worthless contribution to the mutual understanding between our nations would be of some use in a moment where the United States of America seems to be much interested in the economical life of Turkey.

Very truly yours,

Elie Ayla
% B. Ykub Cemal
Kucuk, Carsi, No. 1
Iskenderun
Turkey



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

AMERICAN CONSULATE,

Cardiff, Wales, April 9, 1948.

Mr. A. R. Self,
443 Broadway,
Augusta,
Kansas.

4-9-48

Sir:

In reply to your letter of April 5, 1948, concerning your testing program for your students, I would suggest that you give full particulars of the information you desire to Sir Frederick Rees, Principal, University College of Wales, Cardiff, Wales.

Very truly yours,

Henry O. Ramsey
American Consul

[Faint, mostly illegible text, likely bleed-through from the reverse side of the page]

Exhibit D

269 Milngavie Road,
Bearsden,
Glasgow.

2nd January 1948

Dear Mr. Self,

I thank you for your two letters dated November 28th and December 24th. I am at the moment preparing a further list of names of pupils which I will forward to you as soon as I have it completed. With regard to your second Query may I describe very briefly the system of education in this country with special reference to Glasgow.

1. All education up to the age of 18 is entirely free. Books are also provided. This applies to all the schools under the Glasgow Corporation. Naturally there are other schools of a private nature where fees are paid but these are, I should say, rather uncommon.
2. Education is now compulsory in this country up to the age of 15. Until 1947 the age was 14 but the present Government increased this to 15.
3. In Scotland 90% of the schools, I should think, cater for both boys and girls. This is not the case in England where they seem to prefer to keep the sexes apart.
4. Schools in Scotland are of three main types:
 - (a) The Primary School. This is for pupils from 5 to 12 years of age.
 - (b) The Junior Secondary School. This is for pupils from 12 to 15 years of age who intend to leave school at the age of 15.
 - (c) The Senior Secondary School. This is for pupils from 12 to 18 years of age who have reached a certain standard in the Primary School and who intend to enter a University or one of the professions.

I am in charge of teaching of Geography in a Senior Secondary School and have therefore no pupils of the age 9 to 11. But if you apply to the Director of Education, who previously put you in touch with me, I am sure he could help you. His address is,

The Director of Education,
129 Bath Street
Glasgow.

If you explain to him what you require and ask him if he would oblige you by putting you in touch with the headmaster of a primary school he would, I am sure, be only too pleased to help you. I am not very sure what kinds of tests you propose to give but I expect you will remember that in arithmetic many of our processes are quite different from yours. The same, of course, is true of both language usage and spelling.

If there is any other point I can help you with do not hesitate to ask me. I will be only too pleased to do all I can to assist you.

Yours faithfully,

James Hastie

P. S. I am interested in a stamp club in our School. If you have any American stamps no matter how common I am sure our pupils would be very pleased to have them.

JH

Exhibit E

443 Broadway
Augusta, Kansas, U.S.A.

I am very much interested in working with your school in a testing program for my graduate study. I am doing work on my Master's Degree and I have chosen for my Thesis: "The Relative Effectiveness of Instruction of School Children as Indicated through International Correspondence." I expect to have about 200 tests given to students whose ages range from 9 to 11 years, inclusive. The tests will cover arithmetic computation, arithmetic reasoning, language usage and spelling. I am assuming that you have in your school nine, ten, and eleven year old pupils. In case you do not have students of this age in your school I would appreciate so much your sending me the name and address of such a school in your city.

Of course, I will send the participating schools money for return postage on the tests. I can send the schools their choice of United States Money Order, International Reply Coupons, United States Currency or an International Bank Draft.

It is sincerely hoped that you will be able to give these tests in your school. You can let me know the approximate number of tests that you can use.

I might add that subject matter in all these tests will be very general in order to allow for geographical differences.

Hoping that I may have the pleasure of hearing from you soon, and thanking you in advance for your help, I am,

Yours very sincerely,

A. R. Self

P. S. I shall be more than glad to send the participating schools the results and findings of my study.

Exhibit F

FOREIGN CORRESPONDENCE BUREAU
Augusta, Kansas, U. S. A.

I want to thank you very kindly for the list of names that you sent some time ago. No doubt most of your young people have received letters from their American pen pals. I shall be very happy to have you send additional names any time.

Permit me to ask you to help me regarding a graduate study in the field of foreign correspondence. I would like very much to contact the Principal or teacher of a school in your city or vicinity whose pupils' ages range from 9 to 11 years, inclusive. The title of my Thesis is: "The Relative Effectiveness of Instruction of School Children as Indicated through International Correspondence." I expect to have about 200 tests given to students of the above ages in various English speaking countries. The tests will cover arithmetic computation, arithmetic reasoning, language usage, and spelling. In order to allow for regional differences all tests will be very general. Do boys and girls go to school together at this age in your country? Approximately how many students of this age in your locality would be available for testing?

Of course, I shall send the cooperating schools money for return postage on the tests. I can send the schools their choice of United States Money Order, International Reply Coupons, United States Currency, or an International Bank Draft. I shall be more than glad to send you and the participating schools a copy of the results of my study.

Hoping that I may have the pleasure of hearing from you soon, and thanking you in advance for your help, I am,

Yours very sincerely,

A. R. Self

(Enclosure)

Exhibit G

443 Broadway
Augusta, Kansas

I am very much interested in working with your school in a testing program for my graduate study. My thesis title is: "The Relative Effectiveness of Instruction of School Children as Indicated through International Correspondence." Pupils of the 4th, 5th, and 6th grade age level are being tested in Australia, Canada, England, Scotland, Ireland, and Kansas.

The time required for the entire test is from thirty to forty minutes. Complete directions are mailed with the tests.

It is sincerely hoped that you will be able to give these tests in your school. I shall be glad to send the participating schools a complete summary of the results of my study.

Yours very truly,

A. R. Self

We will participate in your testing program-----Yes _____, No _____.

Number of students in the 4th, 5th, and 6th grades _____.

Mail tests to _____

Exhibit H

SPELLING WORDS TO BE PRONOUNCED BY THE TEACHER

1. song	We are learning a SONG about Christmas.	song
2. seen	My kitten is lost. Have you SEEN it?	seen
3. sold	Joe SOLD his sled to Frank.	sold
4. think	Our teacher often makes us THINK hard.	think
5. win	You need to work hard to WIN this game.	win
6. around	We drove AROUND the block five times.	around
7. gate	Close the GATE when you go out of the yard.	gate
8. life	Eighty years is a long LIFE.	life
9. said	She SAID that she was going home.	said
10. used	We stopped because we had USED up our thread.	used
11. counting	Try COUNTING by tens up to five hundred.	counting
12. afraid	Don't be AFRAID. This dog doesn't bite.	afraid
13. queer	Foreigners often seem QUEER to us.	queer
14. notion	She has the NOTION that she wants biscuits.	notion
15. corrected	He CORRECTED his mistake at once.	corrected
16. special	The railroad will run a SPECIAL train.	special
17. stomach	Food is partly digested in the STOMACH.	stomach
18. business	It is a fireman's BUSINESS to put out fires.	business
19. generally	January is GENERALLY a cold month.	generally
20. excitement	In the EXCITEMENT everyone ran to and fro.	excitement
21. strawberries	Do you like STRAWBERRIES and cream?	strawberries
22. cherries	We are making pies out of our CHERRIES.	cherries
23. largely	Steel is LARGELY iron.	largely
24. hauled	John HAULED the firewood in his wagon.	hauled
25. rainy	This RAINY weather makes everything damp.	rainy

Exhibit I

DIRECTIONS FOR GIVING TESTS

I want to thank you very kindly for granting me the privilege of having the enclosed tests administered to your students. (Approximate ages: 9, 10, and 11.) I want to thank each individual teacher for his or her part in this graduate study. Some 1500 tests are being given to the above age groups of students in the United States, Canada, Australia, Scotland, England, and Ireland.

In order that the greatest amount of uniformity may be realized in the testing procedure, please observe the following directions:

1. The test includes two sheets or three pages. Ask each student to fill in all blanks at the top of pages 1 and 3 before the test begins.
2. Please give the spelling test first. The words are to be written at the bottom of page 3. The word list is enclosed.
3. In case that your students are not familiar with the answer column, explain that all answers or the numbers preceding the correct answers are to be written in the column to the right of each page.
4. TIME: After the spelling test has been given, allow 30 minutes for the remainder of the test.

I shall plan to mail the results of my study to your Principal or Headmaster just as soon as possible. Thanking you again for your kindness and cooperation, I remain,

Yours very sincerely,

A. R. Self

Hull Intermediate School

63 Wright Street

Hull, Que.

Phone 2-3314

February 18, 1948.

Mr. A. R. Self,
445 Broadway,
Augusta, Kansas.

Dear Mr. Self:

Your request with regard to doing some testing work for your Master's Degree has come to my attention.

I have consulted with my staff and we can see no reason for not giving you what help we can. You therefore have permission to send us the tests you wish to give. We on our part will follow the instructions given with the tests and forward you the completed papers for your own marking. Needless to say, we would be interested in having a summary of the results.

We have 26 pupils aged 9; 26 aged 10; and 23 aged 11.

As a courtesy to you, there will be no charge for return postage.

Wishing you every success, I am,

Yours truly,

Norman Todd



Exhibit K

HIGH SCHOOL FOR GIRLS,
DUNGANNON,
CO. TYRONE.
N. IRELAND.

3rd Jan. 1948.

Dear Monsigneur Self,

I thank you for your letter of 24th December. This school has been closed for the Christmas Vacation since the 15th Dec. I do not know if the girls have yet received letters from those with whom you were kind enough to put them in contact.

You have set yourself an interesting, but I should think a difficult, subject for your Thesis. I shall be pleased to help you in any way I can.

If you are confining yourself to pupils of the ages of 9-11 for your survey then I suggest that you write to the Secretary, Ministry of Education, Netherleigh, Massey Avenue, Belfast for a list of schools where boys and girls are educated together at this age.

In general boys and girls are educated together in N. Ireland in the public elementary schools, separately - if money permits - in the secondary schools, and together again in the universities. Pupils proceed from the public elementary schools to the secondary schools between the ages of 11-13. Under our new Education Act the age this year has the upward limit of 13, but the limit is being reduced each year by three months until the limit is 11. The Act also is insisting - when accommodation in the secondary schools permit - that pupils stay in the secondary schools until 18, and in this type of secondary school - known under the Act as the Grammar School type, until 18 years of age.

Some secondary schools have Kindergarten and Preparatory Departments - 4-9, and 9-12 - for the children of those parents who pay to have their children in a more select group. In this school we have such departments. In our Kindergarten Department we have little boys and girls together.

In our school it is the girls in the Intermediate Department (12-16) and the Post Intermediate Department (16-18) who correspond with girls in other countries. The under twelves are not such fluent letter writers. We have correspondents in languages - to help with language rather than to get information; with those in America, Canada, Australia, South Africa etc.; and we have an adopted ship in connection with our Geography lessons. Our ship is a tanker of the Anglo-Iranian Oil Company and journeys to many places - not just between two ports, and the crew give the girls a good deal of information about the countries they visit.

In Dungannon the schools which have pupils between

THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

2
RER

April 14, 1948.

American Legation,
Dublin, Ireland.

Dear Mr. Self:

Replying to your letter of April 5, 1948 in which you request the names of the principals of several schools in Dublin, I wish to inform you that your letter has been forwarded to the Department of Education here and I am sure you will hear from them within a reasonable period.

Sincerely yours,

Robert M. Beaudry
Robert M. Beaudry
Third Secretary of Legation

A. R. Self, Esq.,
443 Broadway,
Augusta,
Kansas.

Edmonton Public School Board

518 CIVIC BLOCK
EDMONTON, ALBERTA

April 13, 1948

Mr. A.R. Self,
443 Broadway,
AUGUSTA, Kansas, U.S.A.

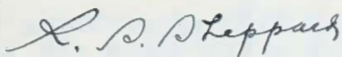
Dear Mr. Self: -

In reply to your letter of April 5
I wish to make the following comment.

I would suggest that you communicate
with Mr. E.M. Beckwith, Principal, Spruce
Avenue School, Edmonton and Mr. A.J. Skitch,
Principal, Eastwood Intermediate School,
Edmonton.

In your letter to them you should note
what you desire to do and give any other informa-
tion that you consider necessary.

Yours sincerely,



R. S. Sheppard

R. S. SHEPPARD,
Superintendent of Schools.

RSS/cmh

Written

4-17-48

The Corporation of Glasgow.

Education Offices.

129 Bath Street,

Glasgow, C.2. 10th February, 1948.



WART MACKINTOSH,
DIRECTOR OF EDUCATION

In your reply refer to

T, & T,

Dear Sir,

I have to refer to your letter of 22nd January regarding your scheme to set intelligence tests to scholars in various English-speaking countries. I have been in communication with Head Masters of two of the Corporation's primary schools who state they will be pleased to assist you in the operation of the scheme. The schools, with Head Masters, are:-

Hyndland Primary School,
Airlie Street,
Hyndland,
Glasgow, W.2.

Head Master - Mr. Howard Garvan, M.A.
Children from 5 - 12 years of age - Roll 893.

Carntyne Public School,
Liberton Street,
Carntyne,
Glasgow, E.1.

Head Master - Mr. Edward T. Williamson,
Children from 5 - 12 years of age - Roll 906,

I take it that you will now communicate with the Head Masters direct giving them particulars of the tests to be set.

Yours faithfully,

Depute Director of Education,

Mrs A.R. Self,
443 Broadway,
Augusta,
Kansas,
U.S.A.

C.P.

ISLE OF WIGHT EDUCATION COMMITTEE.

S. G. BARKER.

M.A. (Cantab.), LL.B. (London),
HEAD MASTER.

COUNTY SECONDARY GRAMMAR SCHOOL,

NODEHILL,

NEWPORT,

ISLE OF WIGHT.

Telephone : Newport 2505.

SGB/BN.

12th March, 1948.

Dear Mr. Self,

Thank you for your letter of the 14th February. I have contacted the Head Teachers of two schools, one a boys school and one a girls school, who are very willing to help in testing children. I suggest that you get in touch with them direct. They are:-

Miss Liddell,
C.E. Girls' School,
The Mall,
Newport, I.W.

Mr. Lewis,
C.E. Boys' School,
The Mall,
Newport, I.W.

I have obtained the permission of the Director of Education for the Isle of Wight for these schools to take part in the scheme. You will doubtless send both these schools, the Director of Education and myself a copy of the results of your study.

There is no rigid principle in this country as to whether boys and girls of the age range 9 to 11 are educated together or apart. In this particular case, the two schools are separate entities under separate heads but in the same building. There are approximately 70 boys and 75 girls in these schools.

Yours sincerely,

S. G. Barker

Mr. A.R. Self,
Foreign Correspondence Bureau,
Augusta,
Kansas, U.S.A.

How many dolls do they have all together?

2. 21

OVER



The King's School,

Parramatta.

18th August, 1948.

M.R. Self, Esq.,
443 Broadway,
AUGUSTA.
Kansas. U.S.A.

Dear Sir,

The instructions concerning the working of Test 1. (Arithmetic Computation) are not quite clear.

It is not indicated whether all the sums are to be worked mentally or not.

The practice in Australia is to give only such sums as can be worked mentally, so I have assumed that such is the case with this Test, and instructed that all working must be done in the head.

Most boys here would have had no difficulty at all working out on paper Nos. 13, 19, and 20 (long multiplication and long division), but to work them mentally is rather beyond their ability.

Yours faithfully,

W. H. V. V. V. V.

2. Betty has 7 dolls, Florence has 8 dolls, and Alice has 6 dolls.

How many dolls do they have all together?

2. 21

OVER

TEST I: Arithmetic Computation. Directions: Work the problems below and write the correct answers in the answer column. The answer to example 1 has been written in the space numbered 1 in the column marked ANSWER at the right. Look at each example to see what it tells you to do.

1. Add $\begin{array}{r} 3 \\ 2 \end{array}$ 2. Subtract $\begin{array}{r} 4 \\ 1 \end{array}$ 3. Add $\begin{array}{r} 2 \\ 7 \end{array}$ 4. 3×9 equals _____ 5. $\frac{3}{216}$

1. 5
 2. 3
 3. 9
 4. 27

6. Multiply $\begin{array}{r} 306 \\ 2 \end{array}$ 7. Subtract $\begin{array}{r} 154 \\ 63 \end{array}$ 8. Subtract $\begin{array}{r} 8 \frac{2}{3} \\ 3 \frac{3}{5} \end{array}$ 9. 18 divided by 2 is _____

5. 153
 6. 612
 7. 11
 8. 5 $\frac{1}{5}$

10. Add $\begin{array}{r} 28 \\ 77 \\ 9 \\ 86 \end{array}$ 11. Subtract $\begin{array}{r} 5283.3862 \\ 741.6165 \end{array}$ 12. Add $\begin{array}{r} 1689 \\ 5314 \\ 3777 \\ 4288 \end{array}$ 13. Multiply $\begin{array}{r} 679 \\ 206 \end{array}$

9. 9
 10. 202
 11. 4566.7307
 12. 17068
 13. 13878

14. Multiply $\begin{array}{r} 398 \\ 400 \end{array}$ 15. Subtract $\begin{array}{r} 937146 \\ 419087 \end{array}$ 16. $7/4921$ 17. $4/38.16$

14. 159200
 15. 518059
 16. 7923
 17. 11.52
 18. 1751

18. Add $\begin{array}{r} 289 \\ 288 \\ 396 \\ 78 \end{array}$ 19. $28/2576$ 20. $62/40796$ 21. $\begin{array}{r} 4 \frac{1}{4} \\ 27 \frac{3}{4} \\ 8 \frac{5}{6} \end{array}$

19. 922
 20. 1252
 21. 40 $\frac{5}{6}$

TEST II: Arithmetic Reasoning. Find the Answers to these problems and write them in the answer column to the right.

1. Mother paid 9 cents for milk and 7 cents for bread. How many cents did she pay for these two things? 1. 16
2. Betty has 7 dolls, Florence has 8 dolls, and Alice has 6 dolls. How many dolls do they have all together? 2. 21

- 10. Nothing (1-ever, 2-never) disturbs me when I am really working. 10. 1
- 11. Yes, I (1-did, 2-done) that problem yesterday. 11. 1
- 12. The river has (1-frozen, 2-froze) over and we shall be able to skate. 12. 1
- 13. I didn't know that (1-either, 2-neither). 13. 1
- 14. The trio (1-sang, 2-sung) the first number for the play. 14. 1
- 15. You must have felt (1-uncomfortable, 2-uncomfortably). 15. 1
- 16. I (1-can hardly, 2-can't hardly) hear you. 16. 1
- 17. This is for (1-whomever, 2-whomsoever) gets here first. 17. 1
- 18. The vase had (1-broke, 2-broken) when it fell on the pavement. 18. 2
- 19. The horse (1-busted, 2-burst) a blood vessel. 19. 2
- 20. James is the (1-carefulest, 2-most careful) boy in our class. 20. 2
- 21. The cat is (1-lying, 2-laying) on the rug. 21. 1

TEST IV: Spelling. Your teacher will pronounce a list of words to you. Write these words just as plainly and carefully as you can.

- | | |
|---------------------|----------------------------|
| 1. <u>bug</u> | 14. <u>rotation</u> |
| 2. <u>young</u> | 15. <u>consequence</u> |
| 3. <u>sold</u> | 16. <u>special</u> |
| 4. <u>think</u> | 17. <u>tomorrow</u> |
| 5. <u>win</u> | 18. <u>business</u> |
| 6. <u>around</u> | 19. <u>unintentionally</u> |
| 7. <u>gate</u> | 20. <u>retirement</u> |
| 8. <u>lip</u> | 21. <u>strawberry</u> ✓ |
| 9. <u>said</u> | 22. <u>chemistry</u> ✓ |
| 10. <u>old</u> | 23. <u>parade</u> |
| 11. <u>quitting</u> | 24. <u>handed</u> |
| 12. <u>afraid</u> | 25. <u>rainy</u> |
| 13. <u>glue</u> | |

Exhibit R

QUESTIONNAIRE CONCERNING SCHOOLS IN FOREIGN COUNTRIES

(All questions should be answered according to the program that was in use in your school when the tests were given in 1948, students in the 9-11 year age group.)

1. Does your school maintain a kindergarten _____ Ages _____?
 2. Age at which pupils start to school _____.
 3. Hours during the day that your pupils are in the classroom:

Time school begins in the morning _____.

Time school is dismissed in the afternoon _____.

How much time is taken for the lunch period _____?

Do you have recess or intermission morning and afternoon _____?

If so, how much time is devoted to this activity each day _____?
 4. Do boys and girls of this age participate in scout organizations _____?

Any other organizations for recreational activity in or outside of school _____

_____.
 5. Is music taught in your school at this age level _____?

If so, how much time is devoted to this activity per school day _____?
 6. What is the length in days of your school year _____?
 7. Is school attendance compulsory in your school at this age level _____?
 8. At this age level is yours a free public school open to all classes of people _____?
 9. Additional information that may help in making a comparable study and in evaluating schools in the various countries where tests were given: _____
- _____
- _____

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