

**Quality before Quantity and Age
In Foreign Language Introduction
An Investigation into the Effects of an Early Start of
EFL Learning on Students' Achievement**

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Abstract

This study is aimed primarily at investigating the effects of the early start of English instruction in Grade 1 in some Jordanian private schools on students' achievement in English in higher grades after they transfer to state schools. The effects of the sex factor as well as the effects of the interaction between private schooling and sex were also investigated.

Three samples representing Grades 6, 9, and 12 were chosen. The study groups for the sixth, ninth, and twelfth grades were matched with a similar sample (control group) from state school students. The first same study group--Grade 6--had an advantage of four years of English instruction in private schools over the control group before joining the state schools in the fifth grade. In the ninth grade, two study groups were chosen; the first stayed in private school for four years and the second for six years. The third study group, that of Grade 12, included three different groups; those who stayed for four, six, or nine years in private schools.

The major findings of the study showed that there were no significant differences ($\alpha \leq 05$) in achievement in English between the students who started English in Grade 1 in private schools and those who started

English four years later in Grade 5 in state schools. This finding applied to all study groups. There were also no significant differences ($\alpha \leq 05$) in achievement in English among the students of the private school background who stayed at private schools for four, six, and nine years. However, the girls of the ninth grade sample scored significantly higher on the achievement test than the boys, whereas in the other two samples no such significant differences in achievement in English between the males and the females were found.

Introduction

English has been acquiring increasing importance as the language of international communication, higher education, science and technology, business and industry. In Jordan, English is taught almost as a second language and a reasonable command of the language remains a pre-requisite for applying for the better jobs especially in the private sector.

For the significance of the role of English in the areas mentioned above, it is the only foreign language taught in the public school system in Jordan. It is introduced to the Jordanian learner in the fifth elementary class (fifth grade) at the age of 10-11 and it is taught throughout the secondary school for eight continuous years on the average of 5-6 contact class periods a week 40 minutes each. Parallel to the public school system in Jordan, there are two types of private schools in which some Jordanian children start learning English in the first grade at the age of six. The first type includes few national and foreign schools restricted to the capital city, Amman, which charge high tuition fees and offer quality education to the elite. They tend to be selective in recruiting both teachers and students. The other type includes those private schools run mostly by religious bodies, but they charge lower fees and apply loose criteria for teacher recruitment. The administrative bodies of these schools depend more on commonsense than on rigorous training. Normally, students from these private schools transfer to government public schools after the completion of the elementary cycle - 6th Grade. When they move, they have an advantage of four years of English study over students in public schools. The study is concerned with the second type of private schools in comparison with the students of public schools (or state schools).

Background:

Inferences drawn from the fields of physiology, psychology and linguistics support the major hypothesis that an early start of language learning is desirable if not a prerequisite for better mastery of the language. Asher and Gracia (1969) suggest that the young child's brain has a cellular receptivity to language acquisition and as the child matures, the organization of his brain becomes more specialized and consequently his capacity to learn language tends to decrease. Penfield's research (1959) showed that children, but not adults can regain speech functions following injury to the speech area in the left or dominant cerebral hemisphere. Lenneberg (1967) argues that language development is a genetically determined maturational process, and there appears to be a critical period for language development which he sets between infancy and adolescence. Piaget (1970) argues that a major breakthrough in the use of language emerges during the second stage of the child's cognitive development. (Intuitive, age 2-7). Chomsky (1968) argued for "innateness", some internal mechanism or capacity for language learning. This mechanism is said to be triggered after the child's birth when he is exposed to language. Those inferences which rather concern first language learning have always led to the firm belief that the earlier the better in second language learning.

Experimental research findings on the issue seem to be contradictory. Tucker et al (1970) in their study of the situation in the Phillipines conclude that introduction to the language at an early age leads to better proficiency at a later stage. Fathman (1975) found differences in the rate of learning English morphology, syntax and phonology based upon differences in age. Older children scored higher on morphology and syntax subtests whereas younger children received higher ratings in phonology. Zughoul (1978) suggests, based on the findings of a case study of English as a second language in a natural setting, that second language learning in the early stages of life seems to facilitate proficiency in language especially in the area of pronunciation.

However, Olson and Samuels (1973) found, based on an experiment involving three age groups (elementary school, junior high school pupils and college students) that junior high and college students did significantly better on the post pronunciation test than the elementary school groups.

Justman and Nass (1956) conclude that those out of the 100 matched pairs of high school students who had studied a foreign language in the elementary school had no long term advantage over those who had begun their studies later. Stern (1963), based on an experiment involving 40 classes of Swedish elementary school learners of English concludes that pupils 11 years of age learned more accurately and quickly than 7 year olds.

Burstall et al (1974) reporting the findings of their 10 year experiment on the introduction of French in 125 schools in England and Wales found that students who were taught French from the age of eight showed no substantial gains when compared with students who started three years later. Asher and Price (1967) found that the performance of adults on the listening comprehension of Russian tests dramatically excelled that of children of any age group tested and the performance of the older children was significantly superior to that of the younger ones.

Objectives and Methodology

The primary purpose of this study is to investigate the effects of the early start of English instruction at the private schools on student achievement in English at higher grades when they transfer to public schools at different levels of instruction. To recapitulate here and to facilitate the followup of the design of the study, it is worth restating that private school students start learning English in the first grade while public school students start in the fifth grade. This means that private school students have a four-year advantage in the study of English over public school students. It is also worth stating here that private school students transfer to the public system at the beginning of any school year from the fourth grade to the ninth grade. In this context, the study aims at answering the following five questions:

- 1) Does the early start of English as a foreign language in private schools in Jordan have a significant effect on students' achievement in English at various levels?
- 2) If there is such an effect, what is the nature of this effect, does it increase, decrease or stay constant as students go to higher grades in the state schools?

- 3) Do the previous differential periods of schooling at the private schools have a corresponding differential effect on the students's achievement in English in their higher grades?
- 4) Are there differences due to sex in the students' achievement in English at the various levels?
- 5) Are there differences in the students' achievement in English due to the interaction between sex and the number of years of schooling at private schools?

Population and Sample

The population of this study consists of twelfth, ninth, and sixth grade male and female students in three Jordanian school districts; namely, Irbid, Ajloun, and Madaba.

The nature of the study necessitated that students who attended private schools and who had already transferred to public schools be identified in the different public schools they were attending. Those students were given a questionnaire to provide some needed demographic data related to sex, class, school, teacher, and family monthly income. Three different samples representing differential periods of schooling were chosen as follows:

- 1) The sixth grade sample consisted of thirty-seven students in the study group--twenty-eight males and nine females--who had four years of English instruction at private schools and two years of English instruction at public schools, and thirty-seven students in the control group who started their formal education in public schools and consequently had only two years of English.
- 2) The ninth grade sample consisted of seventy-seven students in the study group of whom twenty-three students (ten M, thirteen F) had four years of English instruction at private schools before joining public school in the fifth grade and fifty-four students (twenty-eight M, twenty-six F) who had six years of English instruction before joining the seventh grade in the public schools. Those seventy-seven students were matched with seventy-seven students from public schools (control group) who started their formal education in public schools and consequently had five years of English instruction.
- 3) The twelfth grade sample **consisted of 155** students in the study group

of whom 31 (14 M, 17 F) stayed in private schools up to the end of Grade 4, 60 (17 M, 47 F) up to the end of Grade 9. They were matched with 155 students who started their education in public schools. The following table summarizes the sample:

Table 1*
Sample Distribution

Study Group					Control Group*				
	M	F	T	1	2	3	4	5	
Sixth Grade	28	9	37	4	2	6	37	2	
Ninth Grade	10 28	13 26	23 54	4 6	5 3	9 9	23 54	5 5	
Twelfth Grade	14 40 17	17 20 47	31 60 64	4 6 9	8 6 3	12 12 12	31 60 64	8 8 8	

*Control group was matched for sex, class, school, teacher, and family monthly income with the study group.

For each of these three groups, an independent measure of achievement was used. Two achievement tests were written for the sixth and ninth grades, and the scores of the sample on the English test of the General Secondary Certificate Examination (GSCE) were adopted as indicators of achievement for the twelfth grade. The GSCE is the Jordanian school leaving examination and it is prepared and administered by the Jordanian Ministry of Education.

M = Male

F = Female

T = Total

1 = Years of English in private schools

2 = Years of English in state schools

3 = Total years of English

4 = Total number of students

5 = Years of English in state schools

The two achievement tests for the sixth and ninth grades were content validated and judged by a panel of two university professors, four English teachers, and twelve students from both grades to be appropriate in linguistic content, suitable for the two levels, comprehensive in coverage, and balanced in the distribution of points. The sixth grade test consisted of ten completion questions and forty multiple choice items of which twenty items tested structure, ten vocabulary, five spelling, and five sound discrimination. The ninth grade test consisted of seventy multiple choice items of which eight were reading comprehension questions, forty-five for structure, ten for vocabulary, five for spelling, and two for punctuation. Reliability of the two tests as computed using the Kuder Richardson's formula, a coefficient of internal consistency, was .76 for the ninth grade test and .80 for the sixth grade test.

Tables 2, 3 and 4 on the following page summarize the scores of the three samples: sixth, ninth, and twelfth grades, on the achievement tests. It also shows the means and standard deviations for both male and female subjects.

Findings and Discussion

Table 2
Sixth Grade Sample: Number of Subjects, Means,
and Standard Deviations

Sex		Study Group	Control Group	$\bar{X}$
Male	N	28	28	59.37
	$\bar{X}$	61.40	57.71	
	S	18.7	20.5	
Female	N	9	9	66.58
	$\bar{X}$	64.44	69.11	
	S	18.4	13.3	
$\bar{X}$		62.74	63.41	

Table 3
Ninth Grade Sample; Number of Subjects, Means,
and Standard Deviations

Sex		4 years		6 years		$\bar{X}$
		Study Group	Control Group	Study Group	Control Group	
Male	N	10	10	28	28	48.03
	$\bar{X}$	42.8	49.8	50.5	49	
	S	11.8	16.9	16.9	13.1	
Female	N	13	13	26	26	66.56
	$\bar{X}$	76.31	71.31	60.69	57.92	
	S	12.4	15.6	17.4	17.5	
$\bar{X}$		59.56	60.56	55.6	53.46	

Table 4
Twelfth Grade Sample: Number of Subjects, Means
and Standard Deviations

Sex		4 years		6 years		9 years		$\bar{X}$
		Study	Control	Study	Control	Study	Control	
M	N	14	14	40	40	17	17	57.86
	$\bar{X}$	60.57	57.38	57	57.5	61.12	53.59	
	S	18.9	15.02	18.7	19.17	17.8	15.8	
F	N	17	17	20	20	47	47	56.23
	$\bar{X}$	53.18	57.47	57.0	54.6	60.55	53.79	
	S	19.5	12.15	18.6	18.08	16.99	15.11	
$\bar{X}$		56.8	57.42	57.4	56.05	60.83	53.69	

The data for each of the three samples were analyzed using the factorial analysis of variance to detect whether the differences in achievement were significant. Tables 5, 6, and 7 on the following pages show the results of the analysis of variance for each of the three samples.

Table 5
ANOVA-Sixth Grade Sample English
Achievement Test

Source of Variation	SS	df	MS	F
Private Schooling	6.143	1	6.143	.0164
Sex	745.8	1	745.8	1.99
Private School X Sex	217.93	1	217.93	.584
Within Cells	26131.81	70	373.31	

Table 6
ANOVA-Ninth Grade Sample English
Achievement Test

Source of Variation	SS	df	MS	F
Private Schooling	10.20	1	10.20	0.039
Sex	1094.41	1	1094.41	4.197*
Number of Years at Private Schools	973.4	1	973.4	3.733
Private Schooling X Sex	350.62	1	350.62	0.345
Private Schooling X Number of Years at Private Schools	78.22	1	78.22	0.300
Sex X Number of Years at Private Schools	2567.65	1	2567.65	0.848*
Private Schooling X Sex X Number of Years at Private Schools	229.39	1	229.39	0.879
Within Cells	38067.13	146	260.73	

* (<.05)

Table 7
ANOVA-Twelfth Grade Sample English
Achievement Test

Source of Variation	SS	df	MS	F
Private Schooling	442.37	1	442.37	1.40
Sex	167.156	1	167.156	0.527
Number of Years of Schooling at Private Schools	13.40	2	6.7	0.021
Private Schooling X Sex	36.44	1	36.44	0.115
Private Schooling X Number of Years at Private Schools	675.9	2	337.95	1.07
Sex X Number of Years at Private Schools	136.82	2	68.41	0.216
Private Schooling X Number of Years at Private Schools X Sex	332.86	2	166.43	0.525
Within Cells	94450.8	298	316.984	

α < .05

An examination of Table 2 shows the striking finding that those who started learning English in Grade 5 in state schools (control group) scored slightly higher on the achievement test than those who started learning English in Grade 1 in private schools (study group) 63.41 vs. 62.74). However, this difference, as shown in Table 5, is not statistically significant at the .05 level. It can be safely concluded here that there are no significant differences in achievement between those who learned English for six years starting in Grade 1 in private schools and those who learned English for two years starting in Grade 5 at state schools.

In the ninth grade sample (Table 3), the first study group (those who started English in Grade 1 and stayed for four years in private schools)

scored fairly higher on the achievement test (59.56 vs. 55.6) than the other study group (those who started English in Grade 1 and stayed for six years in private schools). However, the first control group (who started learning English in Grade 5 in state schools) scored slightly higher than the first study group (60.56 vs. 59.56) and fairly higher than the other study and control groups (60.56 vs. 55.6 and 53.46). Table 3 also shows that the second study group (who stayed for six years in private schools) scored higher than the second control group (56.6 vs. 53.46).

The results of the 2X2X2 factorial analysis of variance using unweighted mean solutions (as shown in Tables 5, 6, and 7) show that there is no significant difference ($\alpha \leq .05$) in achievement in English between students who started English in Grade 1 in private schools and those who started English in Grade 5 in state schools. It also shows that there was no statistically significant difference between the achievement scores of those who stayed for four years and those who stayed for six years in private schools.

The differences in means between the various groups in Table 4 of the twelfth grade sample show that the male students scored slightly higher ($\bar{X} = 57.86$) on the GSEC examination than the female students ($\bar{X} = 56.23$); that the twelfth grade students who started English in Grade 1 and stayed for nine years in private schools scored slightly higher ($\bar{X} = 60.83$) than those who started in Grade 1 and stayed for six years ($\bar{X} = 57.4$); and that those who stayed for six years scored higher than those who stayed for four years ($\bar{X} = 56.87$). It is clear from the table that in the six-year and nine-year groups of the twelfth grade sample, students who started English in Grade 1 and stayed for six or nine years in private schools scored higher on the GSEC ($\bar{X} = 57.4$, $X = 60.83$, respectively) than those in the same groups who started English in Grade 5 in state schools ($\bar{X} = 56.05$, $X = 53.69$, respectively). But in the four-year group, students who started English in Grade 5 in state schools scored about the same ($\bar{X} = 57.42$) on the GSEC as those in the same group who started English in Grade 1 and stayed for four years in private schools ($X = 56.87$).

On the whole, however, students who started English in Grade 1 in the three subgroups--4, 6, and 9 combined--scored slightly higher ($\bar{X} = 58.37$) than the students who started English in Grade 5 in the three control subgroups combined ($\bar{X} = 55.72$).

The results of the 2X2X3 factorial analysis of variance as shown in Table 7 indicate that there is no significant difference between the scores

of students who started learning English in Grade 1 and stayed for four, six, or nine years in private schools and those who started learning English in Grade 5 in state schools. The results also indicate that there is no significant difference in achievement between the students who started English in Grade 1 and stayed four, six, and nine years in private schools.

The ANOVA results of the three independent samples reveal that no substantial gains in achievement in English, as measured by comprehensive achievement tests and the GSEC, have been made by the students who started English in Grade 1 in private schools over those who started English in Grade 5 in state schools. This finding is startling because it holds true at all the three grade levels, 6th, 9th, and 12th. This finding conforms to the findings in Burstall et al (1974) which revealed no substantial gains in achievement in French between British students who started French instruction at age 8 and those who started French at the traditional age 11+. It also conforms to the findings of Justman and Nass (1956) which indicated no longterm advantage in favor of the students who had studied a foreign language in the elementary stage over those who had begun their studies later.

However, the finding contradicts the findings of Tucker et al (1970) which showed that students with prior kindergarten training in French outperformed those without prior kindergarten experience in the same language, and the finding of Vocolo (1967) which indicated significant superiority at the intermediate level of the students who had experienced a FLES program over those who experienced the more traditional high school foreign language sequence.

Though the differences in achievement in English at the various grade levels did not attain statistical significance ($\alpha \leq .05$) they indicate some slight gains in achievement in English in favor of one group or another. Tables 2, 3, and 4 show that students who started English in Grade 1 and stayed only for four years in private schools are outperformed at Grades 6, 9, and 12 by those who started English in Grade 5 in state schools. This implies that the first four years of English instruction in private schools have no significant impact on achievement in English in higher grades in public schools.

A plausible explanation of the preceding result could be that pupils, at least for the first four years of learning English in private schools, are

usually taught by teachers who themselves lack knowledge and training in the target language and sometimes they are from those who were not admitted to teachers' training colleges due to their poor performance on the GSEC.

Another factor that is worth taking into consideration is the transition difficulties students may encounter when they join state schools after the fourth grade. Students from private schools sometimes carry with them to state schools some bad habits and unfavorable language skills which they have acquired from their poor models and in this case they have to go through unlearning and substituting processes which may cause them confusion and inhibition.

An examining look at the sex factor, as revealed in the results reported in tables 2, 3, and 4 indicates that in Grade 6 sample, female students outperformed male students (66.58 vs. 59.37). It is also shown that female students who started English in Grade 5 in state schools excelled all the other groups, whereas their male counterparts performed most poorly. However, as shown in ANOVA table 2 none of the difference is significant at .05 level.

The ninth grade sample reflects different findings from those of the sixth grade. Female students performed markedly better on the tests (66.56 vs. 48.03). It is also clear from Table 5 that female students who started English in Grade 1 and stayed for four years in private school ($\bar{X} = 76.31$) outperformed all the other groups, whereas male students who started English in the same grade and stayed for the same number of years in private schools ($\bar{X} = 42.8$) performed most poorly of all groups).

ANOVA Table 8 indicates the presence of significant differences between those male and female students in achievement. To pursue the main effect of the sex variable further, a posteriori pair-wise comparison test for unequal frequencies developed by Tukey (see Kirk, 1968, p. 90) was employed to detect significant differences among the means of the various groups. Tukey's pair-wise comparisons are shown in Table 8.

Table 8 shows that there is a significant difference in achievement in English between the four-year female students and four-year male students. A significant difference in achievement in English was found between the four-year female students and the six-year male students. Statistically significant difference in achievement in English was also found between the **four-year female students** and six-year female

students, and between the six-year female students and the four-year male students. But the table shows no significant difference in achievement in English ($\alpha \leq .05$) between the four-year male and the six-year male students, between the six-year male and the six-year female students.

Table 8
Tukey's Pair-Wise Comparisons Between the Means
of the Ninth Grade Sample

1	2	3	4
Male/4 yrs. X = 46.3	Male/6 yrs. X = 49.75	Female/6 yrs. X = 59.3	Female/4 yrs. X = 73.81
1	3.45	13.01*	27.51*
2	---	9.56	24.06*
3		---	14.50*
4			---

* Significant at $\alpha \leq .05$

The advantages in achievement in favor of females in Grade 9 disappears in Grade 12 where male students scored slightly higher ($\bar{X} = 57.86$) on the GSEC examination than female students ($\bar{X} = 56.23$). Though Table 5 shows seeming differences in means between the various groups of Grade 12 sample, these differences in means are too small to be statistically significant.

These findings support the belief that females are better at languages than males and at the same time conforms to the findings of Johnson et al (1963), Nishbet and Walsh (1973) and Cornelius and Cockburn (1978) which indicated females a superiority over males in languages at elementary and intermediate levels. But this finding does not conform to the findings of Carrol (1967), Brega and Newell (1967) and Mangindaan and Elley (1979) which revealed no significant differences in achievement in languages between males and females in high grades.

However, when we go to the 12th grade students, we find that the male students outperform, though not significantly ($\alpha \leq .05$) the female students. This could be partly attributed to the relatively small number of female teachers in the secondary cycle who are university graduates and whose teachers in the secondary cycle who are university graduates and whose teaching experience exceeds three years. This shortage of university graduate females teachers makes it a common practice.

The findings show no significant differences in student's achievement in English that can be attributed to the interaction between sex and number of years of schooling in other than the ninth grade sample. Thus in the sixth and twelfth grade samples, there is no significant difference in achievement due to interaction between private schooling and sex; private schooling and number of years spent at private schools; sex and number of years at private school; private schooling, sex and number of years at private schools.

Conclusion

The striking finding of this study is that students who started English in Grade I and consequently had four years of English in private schools were not significantly better in their achievement in English than those who started English four years later in Grade 5 in state schools. The clear explanation of such a finding is that in this type of private schools the subject of this investigation, quality of instruction is not a major concern for the administrative bodies in these schools. Teachers tend to be poorly if ever trained and their command of the language tends to be shaky and, to be precise, it can best be described as minimal. This leads us to conclude that neither early age nor the duration of the program can be significant factors in the attainment of proficiency in the foreign language when compared to a prime factor which is the quality of instruction. If quality can be combined with early age and motivation the three factors can account for success in foreign language learning.

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