

Language (L2) competency in reference to sex differences

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Bu çalışmanın amacı cinsiyet değişkeninin dil öğreniminde ayırdedici bir işlevinin olup olmadığını sınamaktır. Yapılan dil edinimi çalışmalarında, ikinci dil öğrenimi ve öğretimi sürecinde içsel (internal) ve dışsal (external) etkenlerin başarı üzerinde önemli ölçüde belirleyici olduğu ortaya konmuştur (Ellis, 1994, Gass ve Varonis 1986, Caplan, 1987, Gordon, 1997). İçsel ve dışsal etkenler, güdülenme, zeka düzeyi, bireysel farklılıklar, anadil etkeni, ortam ve cinsiyet olarak sıralanabilir. Cinsiyet, dil edinimi çalışmalarında sinirsel biyoloji ve ruhdilbilimsel bağlamda ele alınarak yabancı dil öğreniminde bireylerin başarı düzeyleriyle eşdeşlendirilmektedir. Bu çalışmada da Kuzey Kıbrıs Türk Cumhuriyeti'nde 27 ilköğretim kurumundaki 4'ncü sınıf öğrencilerinin İngilizce öğrenim başarıları cinsiyet değişkeni bağlamında irdelenecektir.

1.0. Introduction and theoretical background to the study

According to Kamarae (1990) and Caplan (1987), sex is a neurobiological and neurolinguistic distinction which places emphasis on linguistic behavior. In their point of view, brain-body ratio (i.e. the proportion of brain to the whole body) is an important factor in terms of better neural network which affects the cognitive capacity of human beings. For instance, the brain-body ratio in males is 1.99%, whereas this ratio is 2.3% in females. This means that females have better neural network development, and as a consequence, they have better abilities in linguistic matters such as language learning. One more neurobiological finding is related to the difference between the heart beats of male and females. Smith (1987:74) points out that the heart beat of females is 5-8 pulses more than the males which causes the female brain to consume more fresh blood, resulting in better cognition. Smith goes on one step further and states that brain-body ratio and heart beat differences are important since they play a significant role on the hormonal activities of females. He concludes his discussion by claiming that attitudes, temperament and motivation are psychological issues which are, in fact, the outcomes of hormonal activities. What these neuroscientists put forward might be considered as vague information since mind is still to be discovered; however, the sociolinguistic studies in language education have pointed out two specific facts which are, in fact, relevant to the linguistic behaviour of the human beings. These are; a) men use nonstandard

language and b) women show great tendency towards the use of codified forms (Labov, 1991; Gordon, 1997; Ludwig, 1983).

These two findings are highly important since they can be linked closely to language education. These findings in sociolinguistic theory and neurolinguistic studies have led to several important lines of research. The primary assumption behind these was that female learners generally do better than males (Ellis, 1994).

In Burstall's (1975) longitudinal study, sex differences and the degree of language competency of 6000 English students learning French as L2 were investigated. At the end of the study, Burstall pointed out that girls scored significantly higher than boys on all tests measuring achievement in French throughout the study.

Another study which reports similar results is Boyle's, which was carried out in 1987 with 490 Chinese students in Hong Kong. The L2 English language proficiency level of these students was tested in ten tests and as in the study of Burstall (1975), female students significantly achieved higher means in all ten tests of L2 English proficiency.

Besides general language proficiency studies, some discrete point studies in grammatical categories were carried out. Adamson and Regan (1991) investigated the grammatical category of -ing in learners' speech and found that learners' sex was an influential factor in the appropriate use of the grammatical category -ing. Female students always favored [-ɪŋ] in their speech whereas male students did not rather use the non-standard form [ɪŋ]. In conclusion, Adamson and Reagan (1991) stated that sex is a significant variable which functions as a discriminator in the process of language learning.

The results of different studies cited in this particular research showed that sex is an important independent variable which clearly functions as a discriminator in success or failure in language learning and language use. The role of this independent variable in language studies is related to i) motivational factors and ii) to the neurobiological formation of brain (DeGrot, 1991; Shedadeh, 1999).

A significant number of studies report that sex variable in language learning is closely associated with motivation. According to Gardner and Lambert (1972), anglophone students in Canada learning French displayed more positive attitudes towards French. Female students showed great interest in speakers and the culture of target language whereas male students remained neutral and uninterested in both.

In a similar follow-up study with anglophone students in Canada, Burstall (1975) found that low achieving boys showed a great tendency of dropping French classes whereas low achieving girls did not. In her point of view, this was a significant reflection of the fact that girls were both motivated, determined and established positive attitude towards the target language, French.

In 1989 Spolsky carried out a study in Israel seeking to find out the role of sex in learning Hebrew. According to Spolsky (1989), female students learning Hebrew

were very much motivated, and similar to the findings in earlier studies of Burstall (1975) and Lambert and Gardner (1972), they displayed positive attitudes towards learning Hebrew.

One last study to be cited here belongs to Gass and Varonis (1986). In their study, the statistical findings showed that female students paid more attention to input and monitoring whereas male students paid more attention to production in target language. In their point of view, monitoring is highly important in learning a foreign language and according to Gass and Varonis female students in their study have been very successful in using this ability. Finally, in self-reported-studies there was clear evidence that female students used strategies appropriately in language learning (Bacon and Finemann, 1992).

2.0. The study

As pointed out in the review of literature, sex in language studies is considered as both social and neurobiological variable which affects linguistic behaviour (Altman, 1980; Skehan, 1989; Wodak and Benke, 2000). Based on this assumption, the present study aims at investigating the degree of success of the 4th grade Turkish Cypriot students. The findings of the study will be correlated with the findings of the earlier studies cited in the literature review.

2.1. Sampling population

In this study 1300 primary school 4th grade students took part. 51 percent of the population (670 students) were female and 49 percent (630 students) were male students. The sampling population, as can be seen from the classification of male-female percentages, reflects a significant balance on the basis of sex.

The spread of the students in terms of districts was as follows:

Lefkoşa	: 32%
Gazimağusa	: 19%
Güzelyurt	: 18%
Girne	: 21%
İskele	: 11%

2.2. Schools

27 primary schools were selected for the study. The schools were categorized as central schools, rural schools and private schools. Out of 27 primary schools, two were private primary schools and three were pilot schools.

2.3. Construction of the English test

The English test was constructed within the framework of Item Response Theory. In

other words, test takers' ability, tasks and item characteristics were taken into consideration in the process of the construction. The actual test was constructed in four phases:

- The English teachers from primary schools were asked to prepare and send questions to the item bank established at the Ministry of Education.
- Some of these questions were selected and or modified by the testers at the Ministry of Education.
- The first version of the test was piloted and further modifications were made.
- The new version of the test was re-piloted and the degree of validity and reliability was established.

The English test was composed of 20 questions. All the questions were valid and reliable since the test was pre-administered twice and necessary changes were made accordingly. The Cronbach's alpha value of the test was 0.854, which reflected a significant reliability. The item facility (P) was 0.521 and the item discrimination (R) was 0.591. In the construction of the test, 7 questions were used as dependent items since their item facility (P) was between 0.722-0.848 and their discrimination value (R) was ranging between 0.610 and 0.779. The Cronbach's alpha value of these 7 questions was 0.899.

All the statistical figures given above show that the final version of the English test was valid, reliable and sound.

3.0. Results and evaluation

In this specific study, the degree of success of the students was reflected by means of t score. In the study t score was taken 50 out of 100 points. t score was referred to as a benchmark of success.

Table I summarizes the general attainment results of the sampling population.

Table I. General success of students

Sex	X general	SD	X comprehension/input	SD	Xapplication/production	SD
Male	51.3	9.6	50.23	9.61	50.07	9.88
Female	51.3	9.6	54.88	3.27	54.98	4.04

n 1012

As can be seen in the Table I, the general mean (X) of the students (no sex differentiation) was 51.03 with a standard deviation of 9.6. These results show that the general mean (X) is just around the t value, which was 50 points. When sex differentiation is made, it can be seen that the success of female students was

slightly better both in comprehension and application. In general, it can be said that the female students performed better in standardized English attainment test.

Having given the general success of the English attainment test of 4th grade primary school students, the results of the districts can be indicated as follows:

Table II. Success of students in Lefkoşa district

Sex	X general	SD	X comprehension/input	SD	X application/production	SD
Male	54.30	9.11	51.73	10.20	51.33	10.11
Female	54.30	9.11	54.87	10.01	54.98	9.04

n 327

As can be seen in Table II, the results obtained in Lefkoşa are around the benchmark (t 50). In other words, both male and female students have earned grades which were all slightly above the benchmark. This can be interpreted as a kind of success at the minimum level. When a sex-based analysis is done, it can be clearly seen that there is a difference between the success of male and female students.

Table III. Success of students in Gazimağusa district

Sex	X general	SD	X comprehension/input	SD	X application/production	SD
Male	46.86	8.83	47.47	8.86	46.75	9.12
Female	46.86	8.83	48.58	8.17	48.31	7.98

n181

What is significant in Table III is that none of the sexes reached the benchmark, t 50. In other words, we can not talk about the success of the students in English attainment test. However, when the results are analyzed on the basis of sex, it is seen that female students were slightly closer to the benchmark. In other words, female students performed better in the test but still they were below the benchmark. The results in Table III are reflecting a serious problem in English language learning and teaching in that district.

Table IV. Success of students in Güzelyurt district

Sex	X general	SD	X comprehension/input	SD	X application/production	SD
Male	54.42	9.63	49.53	9.62	49.36	9.70
Female	54.42	9.63	53.38	7.96	53.86	9.01

n179

In Table IV, the results of Güzelyurt district are summarized. The general mean (X) is 54.42 with a SD of 9.63. This mean is also close to the benchmark but it can not

be defined as being at the lowest level. Table IV displays a significant difference between the success of female and male students. As can be seen in the table, male students remained below the benchmark since their mean was 49.53 in comprehension and 49.36 in application.

Finally, the results of English attainment test of İskele district are given in Table V.

Table V. The success of students in İskele district

Sex	X general	SD	X comprehension/input	SD	X application/production	SD
Male	41.02	7.62	42.60	8.31	41.30	9.58
Female	41.02	7.62	44.50	6.20	45.50	8.58

n111

In Table V, all the means (X) are below the benchmark (t 50). The general mean (X) is 41.02, which is insignificant, so there is no possibility of referring to success in English attainment test. When the analysis is based on sex differences, it can be seen that the female mean of comprehension and application was slightly higher than the mean of male students. Although the mean of the female students was relatively higher than the mean of the male students, it was still below the benchmark and it was insignificant. In short, the mean difference was not related to the success in English attainment test.

Table VI. Success of students in Girne district

Sex	X general	SD	X comprehension/input	SD	X application/production	SD
Male	50.05	8.94	47.99	8.99	48.65	9.88
Female	50.05	8.94	50.73	10.71	52.11	9.19

n111

The general mean of the English attainment test in Girne district is 50.05, which is equal to benchmark. The figures in Table VI display a significant difference between male and female students' English attainment test.

Conclusion

The findings of the study support that sex in language studies is a significant variable in determining success in language proficiency. The results of the study are in parallel with the findings of Adamson and Regan (1991) and Boyle (1987). In these two studies too sex was seen as a discriminator of success in language proficiency. The present study, however, refers to some specific differences on the basis of comprehension/input and application/production. As cited in the SLA literature, male language learners usually show tendency towards production

whereas female learners pay attention to input. Contrary to SLA literature and the findings of Gass and Varonis (1986) and Burstall (1975), in the present study female students achieved higher mean in both comprehension and application.

Another important finding in the study relates to the success of male students. In fact, only in the Lefkoşa district male students achieved the t value both in comprehension and application. The mean score they achieved was 51.73 in comprehension/input and 51.33 in application/production. In other four districts, male students remained below the benchmark (t 50).

In three districts, namely Lefkoşa, Güzelyurt and Girne, female students achieved a mean score which was above the benchmark (see tables II, IV and VI). The difference between female and male students in these three districts was significant. However, in the districts of Gazimağusa and İskele female students achieved a mean score below the benchmark but the mean score of the female students was still higher than the male students, reflecting the fact that sex is a factual discriminator of success.

Findings in this study show that girls are better in language learning. The results of the present study are not really different from the ones cited in the review of literature. This clearly means that sex is a universal variable which does not change according to the nature of the language.

As pointed out earlier in the study, the findings and the claims of Kamrea (1990), Caplan (1987) and Smith (1987) are to be taken into consideration seriously. It is evident that brain-body ratio, the heart beat differences lead to better neural development. Furthermore, hormonal activities lead to attitudinal and motivational differences between males and females (Nyikos, 1990; Webster, 1999). The result in linguistic behaviour is in favour of females.

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