

## **The Effect of Second- Language Learning on Elementary EFL Learners’ Literacy Skills**

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### **Abstract**

The goal of the current study was to investigate the impact of second- language learning on first- language learners’ oral reading and vocabulary skills. The researcher selected a sample of 80 (45 males and 35 females) native Arabic- speaking third-graders (46 bilinguals and 34 monolinguals) from two elementary public schools in the UAE. To examine the reading skills, students were asked to complete an oral reading accuracy measure, and for the vocabulary skills, Peabody picture vocabulary test-III and Expressive vocabulary test were conducted. Results indicated that bilingual students achieved better scores than monolingual students in both vocabulary tests and oral reading accuracy test. These results imply that L2 influences L1 performance positively and can facilitate EFL learners’ oral reading and vocabulary skills.

**Keywords:** L2 impact, L1 literacy, oral reading skills, vocabulary, EFL learners

### **1. Introduction**

At any point in life, a person who has learned a foreign or a second language (L2) will have to face certain challenges, including increased complexity in memorizing specific words to utilize at the right time in dialogue, the structures which were mastered previously in grammar will again become unstable, and the fluency skills and ability of using idioms in the English language can be adversely affected. In other terms, the language skills of the individual can become “out of practice”. This process of weakening foreign or second language skills will be denied by some L2 users. If the regular support is not provided by the environment and the user also does not seek it, then strong effort is required to keep up the L2 skills.

The previous studies have viewed the acquisition of a second language as a mechanism which is different from the acquisition of the first language (Bley-Vroman, 1990). The assumption also has been made that the factors which influence individual’s ability in accruing a second language have no role in the development of a native- language (Dornyei, 2001). There is a strong evidence in the research that the ability to manage the native language’s information is influenced by the knowledge of the second language (Marian & Spivey, 2003). Various cognitive and psycholinguistic models proved that the two languages intermingle with each other, even in the process of specific language (Dijkstra & Van Heuven, 2002). The degree to which L2 influences L1 is not highly specified. Therefore, the information flows between the networking of two languages in a single cognitive system are incomplete.

It has become established that the acquisition of a second language has been attributed to a number of factors, including length of L2 immersion (e.g., Flege, Frieda, & Nozawa, 1997), Age of L2 acquisition (AoA, e.g., Hyltenstam & Abramsson, 2003), and the extent of L2 exposure (e.g.,

Birdsong, 2005; Genesee, 1985; Kohnert, Bates, & Hernandez, 1999; Weber-Fox & Neville, 1999). Whereas, not much emphasis has been made on the impact of the acquisition of L2 on L1. The impact of L2 acquisition on L1 is focused on in the current study. The previous research regarding L1 phonological modification reviews the speakers who lose the L1 because of their membership in bilingual groups and live in the L2 society. Very few of these studies focused on the speakers of the L2 who reside in the L1 group. This study endeavors to view these L2 speakers who reside in L1 community.

This study aims to pilot test the L1 attrition through examining the English (L2) learners who live in the community (UAE) of Arabic (L1) speakers. It can be said that the advanced Arabic speaker who is proficient in English can possibly speak English with Arabic accent and will also speak the words in Arabic with English accent. The evidence is richly available on the studies which are French-English bilinguals while there is less evidence in English-Arabic bilinguals. This study tries to fill this gap.

## 2. Research Theory

### 2.1 The Effect of L2 on L1 Learning Literacy

Cummins (1976) developed two hypotheses to analyze the relationship between learning L2 and L1. In his first hypothesis entitled 'threshold hypothesis', Cummins explained that "the competency level of students in L1 and L2 is determined if they experienced cognitive benefits or deficits from L2 schooling". Cummins' second hypothesis, 'developmental interdependence hypothesis' stated that "when outside the school environment, the use of L1 is encouraged by child's linguistic surroundings, and then a high level of L2 is also likely to be achieved at no cost of L1 competence". The literacy skills of L1 and L2 are interdependent on each other. High level of proficiency in L1 encourages the acquisition of L2 and similarly, high level of proficiency in L2 positively helps develop L1 (Cummins, 1979).

The studies of immersion have raised the question that how first language learning can be influenced by second language learning? An early French immersion program in Montreal was investigated by Lambert & Tucker (1972). The program aimed at providing the speaking and writing skills of the Spanish language to the English speaking children while maintaining and promoting the development of English Language. The scoring of immersion students was quite low in English language skills. But after the English instruction had set in, this problem was solved in grade 2. Whereas, students of all levels had the fluent ability of the English language.

According to studies of Genesee & Stanley (1976), there was no particular difference found in the English composition between the English program students and the immersion students. There was a higher correlation found between the reading skills of L1 and L2 (Genesee, 1979). It was also concluded that the proficiency can be shifted from one language to another.

The immersion studies were carried out in Toronto and Ottawa by Swain & Lapkin (1982). According to their study, in the earlier grades, the skills of immersion students appeared low as compared to monolingual students. However, in the later years, these differences disappeared because of the official introduction of English language course. The performance of the immersion students was better than the English program students. These results were similar to the studies conducted by Harley, Hart & Lapkin (1986).

The effect of the increasing use of French instruction program in Vancouver was examined in the earlier studies conducted by Reeder, Buntain & Takhakuwa (1999). Their studies concluded that English language skills are not affected by the higher level instructions of French Language.

Turnbull, Hart & Lapkin (2000) presented a report to the Ontario Education Quality and Accountability Office. In this report, they evaluated the effects of French immersion on the learning

of English and Mathematics. According to the results, the immersion students of grade 3 were better in performance as compared to the performance of the English Program students. The performance of the immersion students in grade 6 was far better than the others in all aspects.

The comparison between L1 and L2 students was done in other parts of the world. For example, the study of Verhoeven (1994) showed the positive impact of L2 (Dutch) on L1 (Turkish) in the reading abilities of Turkish students in Netherland. The students of Chinese (L1) and the students of English (L2) were compared in Hong Kong and the results showed that English instruction enhanced the reading achievement in the Chinese (Marsh, 2000). Accordingly, the development of first language was not disturbed by the intensive instruction of second language. Rather, in some cases, L2 helped in the development of L1.

It can be concluded that the Cummins' Hypotheses are true on the basis of the above literature. Both the immersion and the program students can gain the functional bilingual in second language with more development in their first language.

## **2.2 Oral Reading and Vocabulary Skills**

There is less research on the speakers of a second language who retains in their L1 community. Only a few studies have provided research on this area. Caramazza et al. (1973) pointed out that the early bilinguals can be influenced in their early ages by a first language. According to the suggestions of the authors, the bilingual speakers can learn L2 while remaining in the L1 community.

Lambert & Tucker (1972) found the performance of the immersion students as outclass even in the oral learning skills, such as oral vocabulary, oral comprehension, etc. They asked the students of grade one and two to create stories on the comic strip in order to examine their speaking skills. The researchers recorded these stories in audio tapes and checked them for grammar, vocabulary, nouns and pronunciations. The stories created by the immersion students and the English Language students were almost similar. The listening comprehension of the immersion students is not also much different from the English focused group.

The results given by Lambert & Tucker (1972) were positive as far as the immersion students are concerned. The students could differentiate between the two languages if they are instructed with the French Language. Their English language skills can also be positively affected and they can enhance their complex linguistic function. Transferring of skills from one language to another was also introduced by Lambert & Tucker (1972). They stated that the development of one cognitive skill which is developed in a first language (L1) can be used in the proficiency of the other language (L2). Their ideas match up with the hypothesis given by Cummins.

Most of the research on exchange of verbal language skills in bilinguals has studied the relationship between the verbal skills in L1 and writing skills in L2. These researches have shown that second-language performance is influenced by the strong native vocabulary skills (Atwill et al., 2007; Proctor et al., 2006). However, little research is done on the relationship between the oral language skills in L1 and oral language skills in L2. Ordonez et al. (2002) examined the transfer of skills across two languages. The depth of the bilinguals was examined by testing the performance of the children through word description and definition tasks. According to the results, there was a high correlation among the vocabulary skills transferred from Spanish and English speaking children. However, there was an inverse relation among the breadth of the vocabulary knowledge of both languages.

According to Cziko (1978), EFL learners must achieve a high level of L2 proficiency before approaching words from the contexts of the first language speakers. In this vein, second-language learners will tackle unfamiliar words more frequently than first-language readers because of the

cross-linguistic differences in word multiple meanings. Most significantly, Elley's (1991) survey of "book flood" studies points out that EFL learners can get greater advantages from increases in volume of reading than do first-language learners. Furthermore, Nagy, McClure, & Mir (1995) found that even bilinguals who had achieved advanced level of proficiency in their second language can benefit from first-language syntactic patterns to recognize the meanings of new words. Nevertheless, other researchers did not come up with any significant relationship between the vocabulary knowledge of L1 and L2 (Gottardo & Mueller, 2009).

Therefore, to the best of the researcher's knowledge, the studies pertaining to the impact of L2 on L1 oral reading and vocabulary skills are very rare. Consequently, this study aims to focus on how native language oral reading and vocabulary skills are influenced by the acquisition of L2.

### **2.3 The Orthography of Arabic and English**

The study on how English language influences Arabic language is crucial. The difference between Arabic and English should be considered before examining the influence of English over Arabic. Although both English and Arabic are alphabetic orthographies, there are certain discrepancies between their writing systems (Taouk & Coltheart, 2004). English is written from left to right while Arabic is written from right to left. Arabic letters are shaped differently and their form is maintained according to the word position (Abu-Rabia & Siegel, 2003; Hussien, 2014a). Arabic language is shallow to deep while the English language is a deep orthography pointing system and vowelization (Geva & Seigel, 2000). Arabic when vowelized, becomes transparent and shallow and becomes deep and opaque when unvowelized. The proper meaning and pronunciation of a word in a sentence are represented by the vowels (Abu-Rabia, 1998; Taouk & Coltheart, 2004). Therefore, the decoding of the word in Arabic is not a mere process like English. Arabic requires letter processing, indistinguishable vowels, the homograph phenomena, and changes in vowelization of the end of a word and inflection process in the sentence structure (Abu-Rabia, 1998; Hussien, 2014b). Another difference between the two languages is that the Arabic language has orthography which consists of sound letters that are predictable and are sound conformities (Abu-Rabia, 2001; Lervåg & Hulme, 2010; Taibah & Haynes, 2011). The orthography of the English letters is not very consistent (Seymour, Aro, & Erskine, 2003), for example, there are words, like week and weak. There are significant differences between the spoken and literary language of Arabic. The standard Arabic is used in the medium of instructions, formula use and printed media (Abu-Rabia, 2000; Taha, 2013; Taouk & Coltheart, 2004; Versteegh, 2001). The most important difference is that some of the letters in English are written but not pronounced whereas, nothing like this occurs in Arabic.

### **2.4 Oral Reading Accuracy (ORA)**

Oral reading fluency depends upon the ORA (Oral reading accuracy) (Hussien, 2014a). The reading comprehension is also influenced by ORA which points to children's ability to read connected texts loudly in accordance with Arabic letter-sound conventions (Hussien, 2014a). It is a process which requires the children to disambiguate homographs if the text given to them is unvowelized, and to indicate the differences in the changes at the end of a word as an explanation of its function in a sentence (Abu-Rabia, 1998). It has been established that ORA is a holistic process in Arabic, including morphological, syntactic, and contextual process while in English it is simply an autonomous process (Abu-Rabia, 1998). ORA involves the letter-sound conventions while spelling accuracy is concerned with sound-letter rules which makes the spelling accuracy more demanding process than ORA (Hussien, 2014a; Abu-Rabia & Taha, 2004).

### **3. Methodology**

#### **3.1 Research Questions**

The following are the research questions which led towards the investigation;

1. How does the acquisition of English language (L2) influence the oral reading skills of L1 (Arabic) speakers living in L1 community?
2. How does L2 influence the expressive and receptive vocabulary skills of L1 speakers?

#### **3.2 Participants**

A sample of 80 (45 males and 35 females) native Arabic-speaking third-graders (46 bilinguals and 34 monolinguals) was selected from two elementary public schools (bilingual and monolingual) in the UAE. In the bilingual school, English and Arabic are employed as a medium of education and in the monolingual school, the medium of education is only Arabic. Each school teaches Arabic as a mother and a national language. All of the students from bilingual and monolingual schools study the same subjects, however; the bilingual school teaches English (L2) as a carrier of educational development by teaching Science and Mathematics. A written consent form was signed by the parents and the schools where the participants were selected. Furthermore, the children participating in this study gave their oral consent.

#### **3.3 Measures**

##### **3.3.1 Oral Reading Accuracy Measure**

The Oral reading accuracy measure was also developed in order to measure the extent of Arabic's reading accuracy. It contains 140 vowelized excerpts which were taken from a textbook for third grade students in the UAE. These excerpts were expected to be independently readable by participants, and were not exposed to them before. Reliability and validity were examined before conducting the actual study. Four Arabic experts in the field of teaching examined the precision of the measure. Pilot testing was also conducted with a sample of 15 monolinguals and 17 bilinguals and examined the reliability employing Split-half = 0.91 which shows a reliability of ORAM. The reading accuracy of each student was examined individually. The Student was asked to read the passage audibly from his/ her version and the researcher in his version highlighted the words that were incorrectly read. The number of errors was recorded for each student separately.

##### **3.3.2 Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997)**

This test was used to measure the receptive vocabulary skills by asking a participant to listen to a word in Arabic and to select a picture among four options that best describes the word.

##### **3.3.3 Expressive Vocabulary Test (EVT; William, 1997)**

This test was used to measure the expressive vocabulary skills by asking a participant to make a synonym for a targeted word in Arabic. For instance, the researcher reads "drink" as a target word and shows the picture of a man drinking at the same time. Then, the participant is requested to generate a synonym. The right answer would be "imbibe", "sip", "swig", etc.

#### **3.4 Analyses**

In order to describe the profile of children's reading accuracy, the descriptive statistics were performed. Additionally, to compare the oral accuracy scores between the monolinguals and the bilinguals, Independent Sample T Test was conducted. Finally, In order to examine the receptive and expressive vocabulary skills between bilinguals and monolinguals, Independent Sample T Tests were performed which examined participant's performance on EVT and PPVT-III.

#### 4. Results

Following the foremost question “How does the acquisition of English language (L2) influence the oral reading skills of L1 (Arabic) speakers living in L1 community?”, independent sample T test was executed to evaluate the scores of reading accuracy for the monolingual and the bilingual students as shown in Table 1.

**Table 1: Independent Sample T Test for Oral Reading Accuracy**

Variables	Students	N	M	SD	T	p-value
Oral reading accuracy	Monolinguals	34	8.4	4	14.79	0.001
	Bilinguals	46	2.4	2		

Note 1:  $p < 0.05$

The results in Table 1 show the significant differences in the scores of the bilingual students ( $SD = 2$ ,  $M = 2.4$ ) and the monolingual students ( $SD = 4$ ,  $M = 8.4$ ) in oral reading accuracy as  $t = 14.79$  and  $p = 0.001$ . The results suggest that L2 (English) learning significantly influences the oral reading skills of L1 (Arabic). The findings describe that fewer reading mistakes were made by the bilingual students as compared to the monolingual students.

Pursuing the second research question “How does L2 influence the expressive and receptive vocabulary skills of L1 speakers?”, independent sample T test was executed to compare the expressive and receptive vocabulary skills between the bilingual and the monolingual students (Table 2).

**Table 2: Independent Sample T Test for PPVT-III and EVT**

Variables	Students	N	M	SD	T	p-value
PPVT-III	Monolinguals	34	7.8	3	13.10	0.000
	Bilinguals	46	3.1	1		
EVT	Monolinguals	34	8.9	3	16.89	0.000
	Bilinguals	46	2.9	2		

Note 2:  $p < 0.05$

Table 2 shows the results of EVT and PPVT-III, which signify that there is a significant difference between the receptive vocabulary skills of bilinguals ( $SD = 1$ ,  $M = 3.1$ ) and the monolinguals ( $SD = 3$ ,  $M = 7.8$ ) as  $t = 13.10$  and  $p = 0.000$ . In addition, there is a significant difference between expressive vocabulary skills of bilinguals ( $SD = 2$ ,  $M = 2.9$ ) and monolinguals ( $SD = 3$ ,  $M = 8.9$ ) as  $t = 16.89$  and  $p = 0.000$ . These results illustrate that fewer vocabulary (both receptive and expressive) mistakes were made by the bilingual students as compared to the monolingual students.

#### 5. Discussion

The major results of the present research show that the performance of the bilingual students (English-Arabic) is superior to the monolinguals (Arabic) in oral reading accuracy, the Peabody picture vocabulary test-III and in the expressive vocabulary test. These findings are consistent with the previous study which found that learning of L2 enhances reading ability of L1 (Yelland et al., 1993). On oral reading accuracy, the performance of bilingual students (Hebrew-Russian) is superior to monolingual students (Hebrew, a Semitic orthography such as Arabic) (Schwartz et al., 2007). In Arabic, compared to their monolingual counterparts, university students who learn

English (L2) performed better in syntactic processing in Arabic (L1) (Noor, 2007). In this study, the positive impact of English (L2) on learning to read correctly in Arabic (L1) may be illustrated through the multi-competence idea that Cook (2003) and his partners proposed. It is argued that a person who can speak more than one language thinks differently from a person who speaks only one language (monolingual). A question arises here that how English (L2) learning influences learning to read in Arabic? Basically, the learning of L2 reorganizes, streamlines linguistic system and influences cognitive development in the mind of L2 learner (Cook, 2002; Kecskes, 2010), which consequently enhances the L2 learner's language use (Kecskes, 2008).

The current results can also be explained according to the idea that cross-linguistic literacy transfer develops between two languages (Cho, Chiu, & McBride-Chang, 2011). Ghuma (2011) argues that the reading methods, for instance, syntactic and morphological processing may be shifted from Arabic (L1) to English (L2) and vice versa. In addition, Saiegh-Haddad & Geva (2008) indicated that a cross-linguistic transfer between Arabic (L2) and English (L1), i.e., phonological consciousness in a particular language predicts word reading in the other language, whereas morphological consciousness in the two languages is not linked, which shows that morphological awareness is mainly a language-specific method. The implications of Cross-linguistic transfer can also elaborate why on the oral reading accuracy, the bilingual learners have a better performance compared to the monolingual learners (Seung-Yooun & Sookhee, 2006).

The present findings are joined with former studies (e.g., Genesee, Paradis, & Cargo, 2004) which explained that learning two languages in a young age, enhances language performance of bilingual students in L2 and L1. This study also agrees with the study implemented by Dijkstra & Van Heuven, (2002) who stated that the experiences of L2 acquisition positively affect L1 functioning. So, these findings test the general thinking among UAE people regarding the unfavorable influences of learning L2, usually English, on learning to read Arabic (L1) in the elementary schools. To sum up, there is a positive impact of learning English (L2) on learning Arabic (L1) in the elementary school (Essa & El-Mutawa, 1998). Significantly, Kecskes (2008) indicates that the favorable influences of L2 on L1 are possible but not essential. According to Kecskes these positive influences are achievable if the exposure to L1 is rigorous, managed and planned carefully. Teaching Arabic (L1) in bilingual schools in the UAE, in the current scenario, is thorough and managed as a mother language of every student, and English (L2) is also used as a carrier of academic progress to teach Mathematics and Science besides delivering English as a subject matter as well. This reinforces the present findings which point out that learning of L2 (English) positively affects L1 (Arabic).

## **6. Conclusion**

The impact of learning a second language (L2) on the fluency skills of the first language (L1) has been almost positive in the previous studies. Most of the previous studies concerning the influence of learning a second language on first language skills have been conducted in the area of immersion education, particularly French. This study extends the literature by analyzing the effect of L2 (English) on the L1 (Arabic); especially in oral reading and vocabulary skills of L1 speakers who are residing in L1 speaking community. The findings of this study suggest a positive influence of learning English on the oral reading and vocabulary skills of Arabic speakers. The present study is combined with former studies proposing that learning two languages enhances the language performance of bilingual students in L1. Therefore, Cummins' interdependence assumption, which upholds that skills of language are being shifted from one language to another, can be believed to be true for the main Arabic-English situation as well. One can assume with confidence that the skills acquired in the learning process of one language can be put to employ in the proficiency and the

acquisition of the other language. The results obtained from this study help in building confidence among Emiratis to favorably learn English (L2) in order to enhance their reading and vocabulary proficiency skills in Arabic at the elementary level. Other replica studies could be conducted to examine the influence of English language (L2) on the other skills of Arabic language (L1) at other levels of the school system and at higher education levels as well.

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