# The Effect of Bilingualism on the Process of Learning a Foreign Language 

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#### Abstract

This paper addresses the effect of being bilingual on the process of learning a particular foreign language. In other words, it seeks to illuminate the positive aspects of bilinguals over monolinguals while learning foreign languages. Based on several studies in the field of language acquisition, it has been revealed that bilinguals tend to be more experienced and capable than monolinguals by virtue of their rich linguistic and cultural repertoire that they possess. A group of bilingual and monolingual students at the university were sampled to find out the effect of bilingualism on the process of learning foreign languages. Questionnaires along with some tests were the main instruments employed in the analysis so as to examine the primary discrepancies between bilinguals and monolinguals in the learning outcomes. The findings highlight and account for the positive impact of being bilingual.


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## 1. Introduction

Bilingualism refers to the ability of speaking at least two languages other than one's native tongue. Nowadays, it has become necessary at least to speak more than one language due to the globalization of the modern world, so we are in a way or another increasingly becoming multilingual. In addition, Intercultural contact fosters bilingualism and exposure to nearby languages might affect the rate of multilingual development. Contrary to the popular belief, bilingualism as a phenomenon can arise in contexts unrelated to immigration. In fact, individuals still can choose to study a foreign language in their home countries. A person can become bilingual via total commitment, curiosity, and regular practice of a specific foreign language. Those who desire being bilingual are often aware of the advantages of bilingualism. For instance, according to many people, acquiring a second language can result in an increase in cultural competency and an improvement in the capacity to interact quickly, smoothly and effectively with others.

Reaching and sustaining competency in both one's native and second language is quite unusual when it comes to studying two distinct languages. Typically, imbalanced bilingualism is the most prevalent type of bilingualism, since individuals tend to have a greater skill in one language over the other. However, it is essential to note that in the majority of situations, the language that is proficiently spoken is not the original tongue. It has been observed by a lot of language specialists and linguists that learners of a new language might thrive in that language if they frequently avoid using their mother tongue (Owens, 2012).

Actually a variety of terminologies have been used to describe the various phases of language acquisition that are associated with bilingualism due to the numerous approaches individuals opt for in the process of language acquisition. Examples of these terms are 'Learners of English', 'Second Language Learners', 'Learners with native-like proficiency' etc. (Wallner, 2016).

Individuals who are simultaneously studying their native language and the English language are English Language Learners (ELL). English as a Second Language (ESL) describes non-native English speakers who acquire the language in an environment where it is spoken. When it comes to Limited English Proficiency (LEP), it is employed to define someone whose first language is not English. Typically, these individuals are not good at writing, reading, comprehension, and speaking English skills. In addition, the labels first Language (L1) and second Language (L2) are used to describe the languages used by bilingual speakers. L1 refers to the native language of the speaker, whereas L2 is the additional language the speaker is studying and not the learner's original tongue (Wallner, 2016).

## 2. Literature review

The majority of research findings support the benefits of bilingual education for learners' language awareness and cognitive development (Bekerman, 2005). Skutnabb-Kangas (2001) noted a number of advantages of bilingual education: At least two language proficiency requirements, equitable academic opportunity, and crossculturally accepting attitudes toward oneself and others are also required. Despite some promising results of various studies about the pros of bilingual education, it is still a contentious area of educational system (Bekerman, 2005).

This article sheds light on the findings from studies on the advantages of bilingualism for language learning and cognitive awareness. There are some misconceptions and preconceived notions regarding the drawbacks of bilingualism. These misconceptions exist in both society and scientific communities. The majority of these myths and preconceptions are based on early studies on the IQ of bilinguals and monolingual learners. According to these researches, monolinguals had higher IQs than bilinguals. The inference made was that bilinguals' lower IQ test scores were due to their bilingualism. However, the research conclusions from these investigations are invalid, and they lack validity.

Bilingualism revolutionized the way people thought about it in the current, worldwide society, where it is now the standard rather than the exception. To function well in a multicultural and globalized environment, bilingualism is essential. Research studies now focus more on the problem of bilingualism, and more recent studies are more reliable and plausible. The positive social, linguistic, and cognitive outcomes of bilingualism are demonstrated by current research investigations.

According to studies on bilingualism and cognitive growth, bilingual people may have an edge over their monolingual peers in some situations. For instance, a bilingual child's overall vocabulary in both languages is larger than a monolingual child's in that language. The studies on bilingualism's benefits for cognitive development will be discussed in more detail in the following sections.

Baker (2006) created a specific test known as "The Symbol Substitution Test". Children were prompted to change one word in a sentence for another by a researcher. For instance, they had to substitute the term "macaroni" for "I" in sentences. In order to appropriately reply to the task, respondents must disregard word meaning, avoid crafting an appropriate response, and prevent the interference of word substitution. According to the study, bilinguals outperform monolinguals on these kinds of exams in terms of both meaning and sentence building.

Recent researches have focused on contrasting the outcomes of bilinguals and monolinguals in terms of the thinking process. Researchers focused on the information processing, memorization, and language processing strategies in monolinguals and bilinguals (Baker, 2006). Some fascinating correlations were highlighted by the research findings like when it comes to problem-solving and providing accurate mathematical solutions, bilinguals performed well (Baker, 2006).

McLeay (2003) revealed that "balanced" adult bilinguals performed better while handling challenging arithmetic spatial tasks. As for David (1985), he believes that bilinguals outperformed their monolingual counterparts at answering scientific puzzles.

Recent studies have concentrated on bilingual learners' meta-cognitive awareness. In this regard, Bialystok (2007) conducted various studies which are intriguing. She divided her research results into two categories after analyzing them in light of cognitive development the first is about the development of consistent executive processing and the second refers to the defense against executive process decline. The research investigations and conclusions can be summed up in each category as follows:

In the first study referred to as 'Creation of consistent executive processing' Bialystok (2007) compares the stability of executive processing in monolinguals and bilinguals, he conducted two investigations. The "Simon task" was employed in the first study to assess participants who were either monolingual or bilingual in terms of deliberate processing and executive control. If they see a green square, they are instructed to hit the right key, and if they see a red square, they are instructed to push the left key. On the right or left side of the screen, squares in red and green were visible. The players had to answer as rapidly as they could using the right key.

There were 97 adults that took part in the study. Fluent bilinguals made up half of the participants. The experiment involved performing various tasks under various circumstances with varying degrees of difficulty. The monolinguals and bilinguals were from the same undergraduate student body at the university, they were all seasoned computer users, and were all at ease with this kind of work, which required quick and correct responses (Bialystok, 2007).

In the experiment, two types of stimuli namely colored squares and directional arrows were used, and participants' responses to these stimuli were observed. For the arrows job, the fundamental obstacle is to resolve the discrepancy between the spatial codes provided by the direction of the arrow and its position. The main challenge is to recall the arbitrary rule that correlates each color with a response key. An arrow at the same screen position as its directional indication is easier to use than one in the opposite position because the rule is to press the key that corresponds to the direction the arrow is pointing. The clash between these two cues is the main challenge; it doesn't take much effort to recall that pressing the right arrow presses the right key and the left arrow presses the left. By designing conditions that varied in the number of inter-trial switches that took place in each block of trials, monitoring and switching were affected in both tasks. In a switch trial, a different reaction was needed than what was needed on the prior trial. The requirement for quick changes in reaction raises the overall processing demands by requiring additional watchfulness and monitoring. The fact that blocks with more inter-trial switches consistently took longer to complete than equivalent blocks with fewer inter-trial changes serves as proof for the effectiveness of this manipulation and the accuracy of its interpretation.

The experiment was carried out under a variety of circumstances. In the experiment condition with the arrows task in a block of trials with numerous inter-trial transitions, bilinguals do better. The most demanding condition for executive processing necessitates higher levels of focus, control, monitoring, and switching. In this scenario, bilinguals showed stronger executive processing control.

In the second study, Bialystok (2007) employed so-called anti-saccade tasks. 48 adults took part in the study. In the experiment, there weren't many distinctions between bilinguals and monolinguals. The most challenging aspect of the trial, the anti-saccade condition of the gaze shift task, in which two cues had to be repressed in order to respond appropriately, gave the bilinguals an advantage, but on all other conditions, the two groups had equal results (Bialystok, 2007).

In this regard, Bialystok (1988) conducted another interesting study. The study was done on children between the ages of five and nine. 120 children took part in the study. Grammatical errors in the sentences were distributed to the participants. The task for the participants was to create grammatically sound sentences. In comparison to their monolingual counterparts, the study found that bilinguals were able to create the sentences with proper grammar.

Bialystok (1988) examined how bilingual and monolingual children processed words and developed a concept of a word. She carried out three experiments to get this conclusion. Following the tests, the researcher discovered that bilingual children do better than monolingual children in comprehending the meaning of a word. The capacity to count the amount of words in a sentence was improved in bilinguals.

There are three basic classifications of language, namely syntax, morphology, and phonology. Syntax refers to the language's structure, whilst morphology and phonology describe its structure. In furthermore, content relates to the language's semantics and, last but not least, its usage or pragmatics (Owens, 2012).

However, it is important to note that language involves four essential abilities that any language student must acquire. These abilities are known as language skills and include listening, speaking, reading, and writing. Numerous studies in the field of bilingualism have demonstrated that learners who have mastered these abilities in their native language tend to have an easier time learning a second language. This type of language learners is equipped with a resource that equips them with the tools and procedures essential to acquire any foreign language rapidly and easily.

The four talents of language (sometimes known as the four skills of language) are the four abilities that allow a person to perceive and produce suitable language for efficient interpersonal communication.

### 2.1. The theoretical basis and positive features of Bilingualism

Typically, linguists in the study of bilingualism wonder if it becomes simpler to acquire any language in case a person is fluent in many languages. Numerous investigations have been conducted on this topic and have produced ideas that track and analyze the cognitive development of bilingualism.

The balance theory, the language interdependence hypothesis, the shared underlying proficiency, and the threshold theory were among the hypotheses that addressed this topic.

Indeed different studies about the concept of bilingualism have revealed various advantages of speaking two languages. These advantages include a growth in the learner's knowledge and intercultural competency (Abduh, \& Rosmaladewi, 2018).

### 2.1.1. Theories of bilingualism

One of the theories that have been employed while studying bilingualism refers to the balance theory and it is also called the separate underlying proficiency theory. This theory stipulates that each language is formed or constructed separately in the human mind. Bilash, (2009) posits that when a language learner increases competency in one particular language, the competence in the new language diminishes in turn. This notion contends that the content and the linguistic background acquired in one language will not aid or transfer to the other language.

According to the balance theory, it seems very hard for an individual to learn a new language in addition to their first and primary language. To fathom out this idea, Baker (1996) proposes to imagine the learner's brain. Within the brain of the language learner, there are two language balloons, one for their first (native) language and the other one for the second language. Both balloons can be changed in size and become smaller or bigger, representing increase or decrease in proficiency. However, when the level of one language increases or decreases, in turn the same goes for the other. Baker concludes that one language can increase, but the other must be decreased and vice versa.

Yet, the balance theory has been refused by many researchers. Various studies claim that when learners are fully immersed in a bilingual setting, reaching proficiency in L1 and L2 takes place at the same time. Research confirms that simultaneous learning of languages occurs thanks to the linguistic background which is transferred between languages (Leafstedt \& Gerber, 2005). This indicates that learners have an underlying comprehension of language structure and they are able to make use of L1 so as to learn L2. To put it differently, an individual is able to learn more than one language at one time, and no language is limited by the other.

Still, the balance theory advocates the fact that learners have been noticed to use less of L1 when learning L2. The balance theory depicts this situation on account of the fact that the background knowledge of L1 does not assist the learner in acquiring L2.

Unlike the balance theory, Common Underlying Proficiency (CUP) theory infers that bilingual speakers possess one primary operating system for the two languages (Bilash, 2009). Regardless the fact that the languages are separate, an underlying cognitive process takes place and this process is in charge of producing the languages. The common cognitive processes which bilinguals count on in order to enhance their language proficiencies are abstract thinking, literacy and problem solving (Baker, 1996).

Baker (1996) had later described the CUP theory. He suggested an iceberg comparison to clarify it. This theory is pictured as two icebergs on the surface of the sea, but which are united under the surface of the sea. In this analogy, the two icebergs represent the first and second language. The conjoined icebergs below the sea implies the notion that the two languages do not operate separately, but they function via similar operating system. Hence, Baker (1996) strongly believes that the process of learning additional languages becomes easy as long as the learner has got prior linguistic background and it is easier since all languages function through the same operating system.

In this regard Baker (1996) suggested a couple of ideas in the CUP model. First, for him there was no problem concerning which language the learner was speaking, but ideas and insights (speaking, listening, reading and writing) spring from the same primary engine. Besides, once an individual speaks two different languages, their ideas are all integrated. Second, an individual has the ability to process two or more different languages.

Moreover, the threshold theory emanated from the CUP. The threshold theory explains the connection between cognition and the ability to speak two languages (Bilash, 2009). Bilingualism is characterized by a kind of hierarchy of three levels. The lowest degree of bilingualism is called limited bilingualism, and the highest level is referred to as less balanced bilingualism, and finally, the average level namely balance bilingualism. This theory claims that the level of bilingualism and cognitive ability of the speaker are positively correlated.

The theory contends that bilingual speakers were first at the outset limited bilingual speakers. Learners at this stage go through low levels of mastery in both languages, and cognitive disabilities. Baker (1996) explained these cognitive disabilities as various hardships that students may face in the curriculum of a given school.

Likewise, the linguistic interdependence hypothesis states that proficiency in L2 is subject to the level of competence that the speaker has already attained in L1. Once the L1 is developed, it will be straightforward to learn the L2.

## 3. Methodology

This paper will investigate the influence of bilingualism on the process of learning a foreign language by putting forward this hypothesis:

Learners who possess basic knowledge of two orthographies (Arabic L1 and French L2) tend to demonstrate significantly higher proficiency in English as a third language L3 compared to learners who have knowledge of only one orthography namely Arabic language.

### 3.1. Participants

Eighty two students were randomly sampled from the University of Mohammed fifth in Rabat. Sampling was conducted from two departments namely French Studies department and English Studies department: One department teaches French, and the other department teaches English. Thus, the respondents are supposed to answer a general background questionnaire.

### 3.2. Experimental Group

The experimental group in this study is composed of 40 students from the department of English studies, 20 males and 20 females who speak Arabic Language as their first language and they had learned French as their L2 at high school. They also had been studying English language as their L3 for 3 years.

### 3.3. Control Group

The second group is the control group and it consists of 42 students, 21 of males and 21 of females. They belong to the department of English at the University but Arabic is their first language and English is the second target language as they have not received previously any special courses in French.

### 3.4. Data collection instrument

This study opted for a questionnaire to collect data; the aim behind this questionnaire is to guarantee that all the students in the two groups belong to the same social class demonstrated through their socioeconomic status (SES), level of Education and literacy. The data about the respondents was gathered via Arabic language since it
is their first language.

### 3.5. Test of measurements employed in the study

### 3.5.1. Gardner Test

Gardner's test (1996) tends to measure vocabulary in all the languages. Some items from the test were administered in Arabic and French (only for the experimental group), and in English in order to evaluate the vocabulary in each language.

### 3.5.2. Test of Orthographic Knowledge

In this present study three orthographic knowledge tests were employed in order to assess the proper spelling combinations in both the two groups in different languages. These tests were adapted from the English version of (Olson, Kliegel, Davidson \& Foltz 1985). The Cronbach's alpha which measures reliability was $(\alpha=0.72)$ in the original test (English). Reliability for the French orthographic test was ( $\alpha=0.78$ ), and for Arabic orthographic test, it was $(\alpha=0.73)$.

### 3.5.3. Test of Reading Comprehension

Three reading comprehension tests were given to the subjects, 10 questions for each test on semantic issues such as identifying the general ideas, discerning specific notions, and identification of detailed ideas.

### 3.5.4. Test Phonological Decoding

The test of Woodcock (1973) includes a list of 45 pseudowords which are grounded in the Wide Range Achievement Test and its reliability value was $(\alpha=0.88)$. The Arabic test was based on Abu-Rabia (2007) and the reliability of the test was $(\alpha=0.87)$. Abu-Rabia (2007) believes that when it comes to the morphological measures in Arabic as a Semitic morphology which is root-based, "it is logical to test the learners' ability to identify word roots and to derive words from a given root because Semitic morphology is root-based. In Semitic languages, these abilities have proven to be good predictors of reading ability" (Abu-Rabia, 2007, p. 95). As regards the French test, it was based a phonological awareness test developed by Cormier and his fellows (Cormier, MacDonald, Grandmaison \& Ouellette-Lebel, 1995)

## 4. Findings

The data were analyzed thanks to the SPSS statistical package. Descriptive statistics were calculated for all variables and groups. A MANOVA within and between groups was designed to see the main differences between the two groups (Arabic and French Speakers/ Arabic Speakers) in terms of four main areas of assessments namely vocabulary, orthography, phonological awareness and reading comprehension.

## Descriptive Statistics (\%) Control Group and Experimental Group

$\left.\begin{array}{lccc}\hline & \text { Arabic L1 (N=42) } & \begin{array}{c}\text { French L2 } \\ \text { Arabic L1 }\end{array} & \text { En=40) }\end{array}\right)$

## All the above values are presented in percentages

MANOVA significant differences between the groups
${ }^{*} p<.05,{ }^{* *} p<.005,{ }^{* * *} p<.001,{ }^{* * * *} p<.00$.
As we can see in the table above, based on the mean of the two groups, the results of the MANOVA test account for the fact that the bilingual speakers (Arabic and French) outperformed the monolingual speakers (Arabic).

Besides, a regression analysis was conducted for each group through the Enter Forward method to illuminate the contribution of the prior linguistic background in the process of learning English as a third language. The Enter Forward test is a pretty objective tool that serves the researcher's purposes.

Enter Forward Regression Analysis - The Impact of Arabic (L1) and French (L2) as Independent Variables on learning English (L3)


The table above shows that (Vocabulary=3) was regarded as a dependent variable along other variables (orthographic knowledge=4), (phonological decoding=8), (reading comprehension=12) and the independent variables were the different linguistic structures that bilinguals had already possessed. Thus, vocabulary predicted $18 \%, \mathrm{t}(3,38)=3.48, \mathrm{p}<.005$, Beta $=.45$. As for reading comprehension, it predicted $15 \%, \mathrm{t}(2,48)=$ $2.74, \mathrm{p}<.016$, Beta $=.43$; each of the total variance. Concerning the phonological decoding variable, it explained $14 \%, \mathrm{t}(1,48)=2.44, \mathrm{p}<.019$, Beta $=.41$, of the total variance. When it comes to orthographic knowledge, it explained $43 \%, \mathrm{t}(1,42)=4.50, \mathrm{p}<.001$, Beta $=.58$, of the total variance.

## 5. Conclusion and discussion

The MANOVA results suggest significant discrepancies between the groups, with the bilingual speakers (Arabic and French) outperforming French speakers on the English skills. The regression analysis as well supports the same results in a sense that speakers only of Arabic did not predict their knowledge of the third language (English), yet speakers of both Arabic and French could manage to produce and retain considerable amount of information in the third language (English)

The findings of the present study denoted that there is a kind of transfer in terms of skills from one language to another particularly between the bilingual and the trilingual speakers. Furthermore, being bilingual seems strongly as an asset to learn a third language, that is to say, being acquainted with two orthographies facilitates the process of learning a third language.
In this respect, this remark can be discerned throughout the following linguistic areas:
Concerning phonology, the results imply that bilinguals demonstrated positive achievement on the phonological tasks in the tests across the three languages (Arabic, French and English) as opposed to monolinguals (Speakers of Arabic) who showed poor results. The bilingual speakers attained higher phonological scores in the three languages whereas speakers of Arabic did not do well. The results of the two groups indicate that having an upper hand over two different orthographies does not only enhance the phonological awareness of the second language, but also transcend to the third language. To sum up, the Arabic-French phonological awareness could predict the English phonological awareness.

As to orthography, the findings were striking because the bilinguals surpassed as well the monolinguals. The two groups did not show similar results on the English orthography, as bilingual revealed better performance concerning the English orthography. Obviously, knowing the two orthographies contributed to the learning of the third orthography, even if Arabic might sound rather different than English, yet French is still a Latin language like English. In addition, the bilinguals did not show any diminution in their first and second language.

It is crystal clear that the mastery of both Arabic and French in terms of phonology spelling, vocabulary and
reading was pretty helpful and positive in the process of learning English as a third language. This denotes that the more your linguistic background is rich, the more likely you will learn a new language. Being exposed to an array of linguistic interactions within society does contribute in the development of a positive capacity, ability, willingness and aptitude in learning a new language.

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