

# ***Review and Analysis of the Empirical Study - “the Impact of Instruction and out-of-School Exposure to Foreign Language Input on Learners’ Vocabulary Knowledge in Two Languages”***

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**Abstract:** As the world is becoming highly digitalized and globalized, more and more people are becoming aware of the importance of a second language. Lots of linguistic researches are carried out to figure out the most effective way for second language acquisition (SLA). Based on extensive reading and discussion, this review will mainly analyze an empirical study “The Impact of Instruction and Out-of-School Exposure to Foreign Language Input on Learners’ Vocabulary Knowledge in Two Languages” which intends to discuss the importance of formal language instruction as well as the necessity of out-of-school exposure for second language acquisition. Although the essential role of intentional learning in the traditional classroom and the effective language input out of school are highlighted, the limitations of this study will also be pointed out.

## **1. Introduction**

The globe is shrinking as the wave of globalization sweeps across the world. As technology develops drastically, there is an irresistible trend that more and more countries are closely interwoven with each other in every possible way. Recent years have seen a lot of progress made in second language learning and teaching. Countless linguistic researches about second language acquisition are made to explore the most effective way for students to learn better and for teachers to teach more effectively.

A lot of original linguistic researches are carried out to better serve second language teaching, whereas most of them are mainly based on widely acknowledged Second Language Acquisition (SLA) theories like Behaviorism, Output and Input Hypothesis, Vocabulary Load Hypothesis and so on. These popular theories have been put forward and tested repeatedly in practice and these theories in turn, give language instructors better guidance.

Among all the reports and researches about SLA, the empirical study - “The Impact of Instruction and Out-of-School Exposure to Foreign Language Input on Learners’ Vocabulary Knowledge in Two Language” impressed the author most and is thus chosen as the analytic target. This review will first introduce the main idea of the study briefly, and then the methods employed. Most importantly, the limitations will be pointed out. The practicability and feasibility of this study

will be discussed and proper suggestions will also be given.

## **2. The Method and the Process of the Empirical Study**

This empirical study here aims at figuring out the relationship between the length of formal language instruction, the out-of-school exposure to foreign language input, gender and learners' vocabulary knowledge of two foreign languages, English and French. The result shows that the length of formal language instruction is positively correlated with the development of language learners' vocabulary knowledge. It recognizes the importance of intentional learning that happens in the traditional classroom and supports the idea with dynamic data.

The data was collected from a Dutch-speaking country of Belgium, Flanders. 138 participants from two local secondary schools and one university are included in the research. Vocabulary tests of both English and French are carried out and the score is recorded and compared for further analysis and a questionnaire is also precisely designed to investigate the participants' out-of-school contact with both foreign languages.

The research mainly employs written vocabulary tests to measure students' vocabulary knowledge. Participants involved in the study are asked to "complete two identical questionnaires" (Peters, Noreillie, Heylen, u Bulté & Desmet, 2019) and qualitative analysis is made accordingly. Both "spoken and written materials" of various forms and genres are involved to enhance the comparability of the test results. A simple scoring system is taken and the raw scores are then converted into percentage "to facilitate interpretation of the analyses" (Peters, Noreillie, Heylen, Bulté & Desmet, 2019). The researchers employed SPSS (IBM SPSS Statistics, Version 24), multivariate linear mixed-effects models in SPSS and the structural equation modeling. According to the researchers, the approaches are "data-driven" and proper statistical models are chosen to answer different questions.

## **3. The Limitations of This Empirical Study**

It is undeniable that the result of the study is of great guiding significance to second language teaching and learning. The importance of formal language instruction which happens mainly in the classroom is approved while the necessity of ensuring language learners with enough comprehensive language input after school is also emphasized. Scientific research methods are used to collect the data and data-based analysis tool are chosen properly to deal with the statistics as well.

However, the researchers themselves also reflected on the study and realized that there were some unavoidable limitations. First, although they tried to test the participants' real vocabulary knowledge by using lemma as the counting unit, they couldn't avoid the effect of the "cognate linguistic distance" between Dutch, English and French (Peters, Noreillie, Heylen, Bulté & Desmet, 2019). Second, they only paid attention on language learners' current out-of-school language input while neglected the importance of long-term accumulation. What's more, the limited sample size and relatively small number of participants involved also made the result less persuasive and applicable.

Besides the above limitations mentioned by the researchers themselves, the absence of a comparison between a pre-test and a post-test, the limitation of data collection, the relatively complex research context as well as the lack of enough pre-research investigation also impacted the study negatively. It would be much better if the following aspects have been taken into consideration.

### **3.1 The Absence of the Comparison of a Pre-Test and a Post-Test**

The vocabulary test is used to measure participants' vocabulary knowledge of English and French, a proper scoring system is set, and the data was collected "in February at the start of the second semester" (Peters, Noreillie, Heylen, Bulté & Desmet, 2019). However, the problem is that a pre-test was not taken at the beginning of the study. The comparison between the pre-test at the beginning and the post-test at the very end of the study could have demonstrated how much progress the participants could make during the semester. The accumulated language input will definitely bring increasing progress, and the comparison will without doubt explain how and to what extent language learners can benefit from long-term accumulation of language input.

If we want to prove that the length of instruction, out-of-school exposure activity and gender do make a difference to language learners' development of vocabulary knowledge, the comparison between a pre-test and the post-test is indispensable in supporting the idea. Although this tiny negligence will not deny the authenticity of the result, it is a pity that the absence of the comparison only makes the result less persuasive.

### 3.2 The Limitation of Data Collection

The researchers also planned to find out the relationship between gender and vocabulary knowledge at the very beginning, that is also the reason why an almost even number of participants are chosen with 72 female participants and 66 male participants involved in the research.

Actually, there are many related researches aiming at exploring the relationship between gender and language learning ability. Hannibal (2017) believed that the reason why young boys are generally better than girls in vocabulary could be partly explained by the fact that "boys game significantly more than girls, five times as much in the current study" (Hannibal, 2017). However, the researchers of this study recorded the data and felt confused about the difference, the question was then asked but a proper answer was absent.

**Table 2** Descriptive statistics (percent) for the English and French vocabulary tests by education level and by gender

Education level	English		French	
	<i>M (SD)</i>	95% CI	<i>M (SD)</i>	95% CI
2nd year secondary				
Females ( <i>n</i> = 22)	39.94 (19.24)	[30.41, 47.47]	23.49 (8.44)	[19.74, 27.23]
Males ( <i>n</i> = 26)	53.19 (21.50)	[44.81, 62.18]	25.15 (10.42)	[21.95, 30.36]
4th year secondary				
Females ( <i>n</i> = 19)	60.35 (15.75)	[52.76, 67.94]	43.11 (12.81)	[36.94, 49.29]
Males ( <i>n</i> = 24)	73.61 (15.33)	[67.14, 80.09]	46.39 (10.65)	[41.89, 50.89]
1st year university				
Females ( <i>n</i> = 31)	83.17 (9.63)	[79.64, 86.70]	63.63 (11.28)	[59.49, 67.77]
Males ( <i>n</i> = 16)	81.41 (12.84)	[74.56, 88.25]	60.83 (13.42)	[53.69, 67.98]

Note. CI = confidence interval.

(adapted from "The Impact of Instruction and Out-of-School Exposure to Foreign Language Input on Learners' Vocabulary Knowledge in Two Languages")

Table 2 is adapted from this empirical study and it shows the participants' score of the English and French vocabulary tests by educational level and by gender. The data doesn't agree with the stereotype that female is always better at language than their male counterparts and even goes against it. However, it is not difficult to notice that there is tremendous shift between the participants of the 4<sup>th</sup> year secondary and the 1<sup>st</sup> year university but the reason why the situation has changed is yet to be explained. It is a pity that the negligence of data collection then leads to the lack of evidence in supporting that gender may have positive or negative correlation with language learners' vocabulary knowledge.

### 3.3 The Research Context is Too Complex

The study was carried out in Flanders where there are three official languages, Dutch, French

and German. In order to figure out the influence of the length of formal language instruction and the out-of-school exposure of both foreign languages, the researchers should collect and analyze the data about how long these participants use English and French in and after school.

It is without doubt that the length of formal language instruction the participants receive at school is relatively fixed and easy to be collected. However, things are different for the data collection of out-of-school exposure of both foreign languages. Although the researchers claimed that Flanders was “officially a monolingual region” since “French is generally not encountered in people’s daily lives” (Peters, Noreillie, Heylen, Bulté & Desmet, 2019). What’s more, although most learners in Flanders do not receive English instruction until they are 13 or 14, English is almost omnipresent in their daily lives while they are hardly exposed to French speaking environment after school.

### 3.4 The Choice of Possible Affecting Factors Should Be More Careful

In recent years, the world is becoming highly digitalized. As a matter of fact, computer assisted language learning (CALL) is introduced to the traditional classroom to better support language teaching and learning, ever-upgrading digital devices are playing an important role in improving communication and cooperation in people’s daily lives. However, the use of social media has not been taken into consideration when exploring the relationship between out-of-school exposure and vocabulary knowledge.

The participants involved in the study are of 13 to 16 years old, and they are crazy about being connected to the big world on various social media platforms, which is also an important way of using foreign language. Mondahl and Razmerita (2014) believe that “Social media has created new possibilities for digitally native students to engage, interact and collaborate in learning tasks that foster learning processes and the overall learning experience”. Compared to formal language instruction which happens mainly in the classroom, communication on social media is more pragmatic and result-oriented since the learners should use the language to solve realistic problems. It is a pity that the researchers didn’t take social media as an important way of comprehensible language input.

## 4. Summary

Despite the fact that there are some unavoidable limitations of this empirical study, the result is thought-provoking for language instructors and language learners. Though this empirical study is carried out in Flanders, some ideas put forward in this study could still be universally applied in other context. The importance of formal language instruction as well as enough out-of-school language input should be highlighted, and language instructors should know that language learning happens not only in the classroom, but also after school. Formal language instruction in the classroom is necessary but enough comprehensible language input is also indispensable in language learning. How to provide more effective language instructions in the classroom is yet to be further discussed and what kind of out-of-school activity is more advisable is worth of being studied as well. All in all, further research on potential affecting factors of second language acquisition is needed.

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