Filters in Second Language Learning: Findings from a Six-Year Study on Language Acquisition

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Introduction

First and second language acquisition differs mainly in the cognitive filters acting at different levels in the process of acquiring language. Dulay and Burt (1977) proposed the affective filter hypothesis which was later included by Krashen (1985) in his five input hypotheses. According to this hypothesis, motivation, attitude, anxiety, and self-confidence constitute affect. Higher affective filter translates into lower second language learning and vice versa, which accounts for the differences between first and second language learning (Du, 2009). This affective filter is not present in first language acquisition. In this study, we aim to identify and understand these filters and their relevance in current language teaching trends and how they can be effectively employed in the classroom.

Method

We used an interdisciplinary approach to explore the differences between first and second language acquisition. Between February 2010 and February 2016, we studied language acquisition along different lines using a mixed methods approach (Östlund, Kidd, Wengström, & Rowa-Dewar, 2011) namely:

1) Systematic review of literature (since February 2010)

2) Non-participant observation (as physician) of neonates, infants and toddlers for 3 months in a tertiary care hospital in 2012

3) Participant observation for 6 years (between 2010-2016) as students of French, Spanish, Italian, Portuguese, Hebrew and Russian

4) Teaching (French and Spanish) for five years (since 2011)

5) Conducting in-depth interviews with language learners; and key informant interviews with psychologists, language teachers and researchers

6) Informal interactions with students who reported problems in second and foreign language learning

A systematic review of existing literature was done using established databases—Eric, PsycINFO, PubMed, and Google Scholar—to examine previous studies on filters in language learning. Preliminary findings pointed towards the affective filter hypothesis of Krashen which indicates that in spite of having voluminous comprehensible input, a learner can limit his second language learning and may fail to reach the competency of a native speaker.

Between March 2012 to May 2012, we conducted a non-participant observation of 3126 subjects (742 neonates, 1561 infants, 823 toddlers) to observe how they acquired language. Field notes were also taken and analysed.

From February 2010 to February 2016, a participant observation study was carried out to look at how the following second languages were acquired: French (500 hours), Spanish (432 hours), Italian (200 hours), Portuguese (200 hours), Hebrew (80 hours) and Russian (80 hours). Field notes were taken and analysed.

In addition, we taught French and Spanish for five years (since 2011) and in the process observed over 548 students of French and 390 students of Spanish. Simultaneously we conducted in-depth interviews with language learners (n=67), key informant interviews with psychologists (n=13), language teachers (n=33) and researchers (n=11); and informal interactions with students who reported problems in second and foreign language learning. All interviews were conducted in Chennai. Field notes for observation were developed and data collected and analysed.

Analysis

All data was qualitatively analysed using NVivo10. We conducted interviews and observations until we reached a point of saturation, beyond which the data became repetitive. The responses were recorded in writing while conducting the interview and/or observation. After the collection of the data, it was transcribed verbatim. Data analysis was carried out to look for consistencies in responses. Similar descriptive data was colour coded and then grouped under sub-categories. Similar sub-categories were inferentially grouped to form categories. Similar categories were then reduced to two broad themes—first language acquisition filters and second language acquisition filters.

Results

The studies revealed that there are cognitive language filters in the brain which facilitate and/or hinder language learning. In first language acquisition, there is a selective absorption filter which facilitates the learning of native language with ease. This filter is also instrumental in differentiating between human language and other auditory inputs. Our observation of neonates, infants and toddlers revealed that the subjects are able to differentiate between human and non-human sounds and pick up only those words that are from human sources. The sounds from toys or dolls do not make any impact on children whereas human voice evokes a response.

Filter in First Language Acquisition

Selective absorption filter helps to distinguish human voices from other sounds. This explains why children pick up only the language of human beings and not of other living creatures.
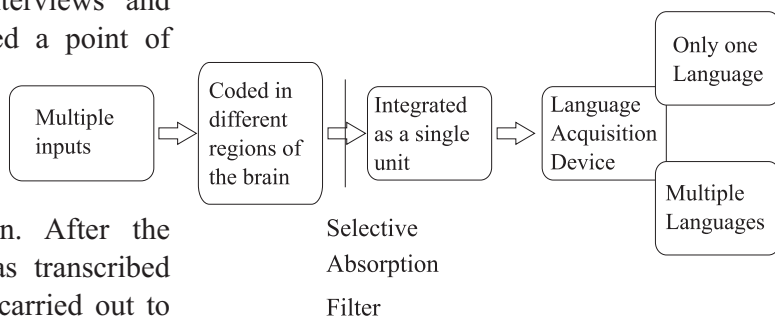

Figure 1. Filters in first language acquisition

In second language acquisition, there are five filters namely: conscious learning filter, previous language learning experience filter, motivation and attitudes filter, life skills filter and language skills filter.
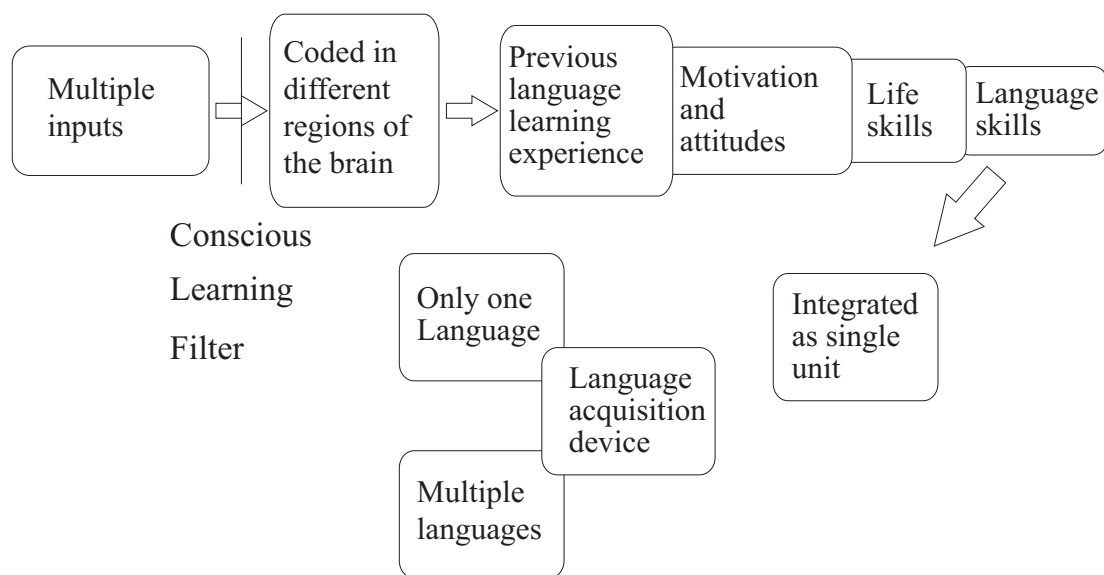
Figure 2. Filters in second language acquisition

Each of the above filters may be explained as follows:

A) Conscious Learning Filter: This filter decides whether the additional language can be acquired or not. If this filter rejects language learning, the language is never acquired.

> "I decided to learn the language (Russian) looking at various offers at the United Nations for people who speak Russian." (In-depth interview with a student from the Russian language classroom)

> "Why should I learn this language (French) when there is no purpose in it, I want to settle in USA.…" (In-depth interview with a drop out from the French language classroom)

B) Previous Language Learning Filter: Based on past experience in language learning, a previous language learning filter either facilitates or hampers language learning.

> "I was never good at languages in school, so I don't think I can do well here (Russian language classroom)" (In-depth interview with a student from the Russian language classroom)

> "I always pick [*sic*] languages faster.... I lived in Japan for 3 months.... And I picked [*sic*] Japanese very well.... I guess Italian will be easier as I can easily read the script contrary to Japanese...." (In-depth interview with a student from the Italian language classroom)

C) Motivation and Attitudes Filter: This filter is the strongest and it overrides every other filter.

> "I am a poor learner at school but the fascination of learning fashion in Paris drives me to learn French faster...." (In-depth Interview with a student from the French language classroom)

D) Life Skills Filter: Some of the participants who did not have enough life skills had a

tendency to acquire language to a lesser degree or at a slower pace.

"I am generally an introvert.... I don't mix with people easily.... And that affects my language learning." (In-depth Interview with a student from the Portuguese language classroom)

E) Language Skills Filter: Some of the participants reported that they had poor (perceived) communication skills which hindered their language learning.

"I am very poor at listening, so I think that affects my language learning too.... And I think that's why I could not learn anything in my level one.... I am slowly changing that." (In-depth Interview with a student from the Spanish language classroom)

These filters are the reasons why there is a difference between first and second language acquisition.

Discussion

Second language teachers need to understand how these filters impact learning as they are not mutually exclusive but are interdependent. For instance, a student with a positive previous language learning experience tends to have higher motivation levels, and this in turn affects the conscious learning filter. In the case of such a student, the decision to learn the language is taken quickly compared to a student with a negative previous language learning experience. Also if a student has good life skills, language skills, may be acquired easily leading to a positive language learning experience; however the inverse also is possible. These skills therefore help in acquiring an additional language more easily and quickly. The following diagram depicts how different filters impact each other (it can be both positive and negative).
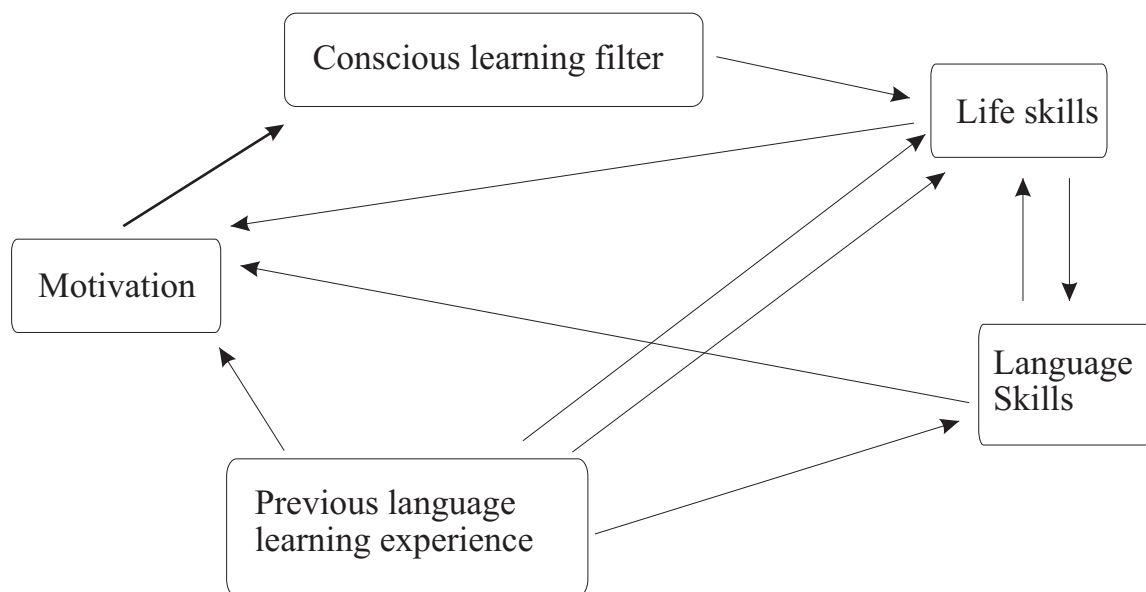

Figure 3. Language filters

If a student decides to not learn a language, then the conscious learning filter does not allow any amount of teaching or instruction to have any effect on language acquisition. So every classroom must have an activity that helps the student overcome this filter. Giving them a reason to learn or in other terms, a purpose-driven learning system is the solution for such students.

In a foreign language classroom about 70 per cent of the students (n=657) of the second language learners of French and Spanish in this study have had an experience of learning languages before. If the learning had been a pleasant experience, then they tend to show more openness to learning the new language than students whose previous language learning experience had been unpleasant.

The third filter "motivation and attitudes" is very important and can override every other filter. If adequate motivation to learn the language is given, then any student can learn the language irrespective of other filters provided there are no cognitive impairments. Every second language teacher should therefore understand the psychological advantage of motivation and structure their classes to focus on adequate motivation.

Life skills and language skills filters require special mention. Most of the students we interviewed reported that these skills are neglected, which hampers the acquisition of the second language. Students who have problems in life and language skills should be given activities and exercises to learn these skills prior to the actual teaching of the language. In case that is not possible, these skills should be integrated into the language course.

Conclusion

This understanding of the filters can be effectively employed in language teaching.

In fact, all language teachers should design and execute their classes based on these filters. Adequate motivation and exercises that facilitate language and life skills are essential for second language acquisition. Second language teachers should also understand the conscious learning and previous language learning filters to handle learners who find it difficult to acquire a second language, provided other learning disorders are ruled out. However, further research is required to understand the pedagogical implications of these cognitive filters.

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