



# Understanding Language Acquisition Based on Research in Language Learning Styles

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## Abstract

*The paper presents a current research project on language learning styles or preferences, as they are called nowadays, focusing on students of a technical university in Brno, the Czech Republic. The project aims at identifying students' English learning styles in order to innovate and adapt English lessons to match them. The main goal of the project is to understand how students of a technical university acquire language, taking into consideration their primary orientation on technical subjects. The research will use Ehrman and Leaver Questionnaire (2003) which identifies language learning styles based on psychological and personality types and traits. The research consists of two phases. The first stage will use the Ehrman and Leaver questionnaire whose results will also help to identify, apart from the learning styles, students who show a strong preference for some style. These students will be given a second questionnaire where they will be asked how difficult it would be for them to change it. This second stage of the research is aimed to identify how rigid and flexible the students are in their learning preferences, which the author of the research believes to be crucial for understanding learning styles in general. It is obvious that flexible students do not have problems adapting to teaching styles that do not match their learning styles. On the contrary, students with rigid preferences have many more difficulties in language acquisition if the styles do not match. The author's 14-year-long teaching experience suggests that there is a high percentage of students with rigid preferences among the technical students. The research will help to understand common features technical students share and the results will be reflected in an innovation of language education at the Department of Languages. Thus, the project also hopes to raise students' motivation in language learning and willingness to cooperate.*

**Keywords:** *language learning styles, rigidity, flexibility, technical students.*

## 1. Introduction

### 1.1 Learning styles definition

Learning styles are a very difficult notion to define precisely. We can find a lot of definitions in different authors, the terminology has also evolved throughout the years, including terms such as cognitive styles or learning preferences, and nowadays, the preferred term is preference in learning/cognition rather than a learning style, as the word "style" associates somewhat permanent quality, which is not always relevant. Another reason for avoiding the term "style" is the hot debate over the existence or non-existence of learning styles. The notion was challenged by some researchers, such as Geake [1], Kirschner and van Merriënboer [2], but so far no satisfactory or persuasive results have been presented to deny its existence.

Nevertheless, in my paper I will be mostly using the term "learning style" because it is used in Ehrman and Leaver Questionnaire.

We can define learning styles as "an individual's preferred and habitual modes of perceiving, remembering, organizing, processing and representing information." Reid [3] However, learning styles are not firmly fixed ways of behaviour, but just tendencies and preferences more or less strong, which can be modified and extended according to various tasks and situations, as Dörnyei [4] says. According to Riding [5] learning styles are probably physiologically based and they are fairly fixed for the individual.

## 2. Assessing learning styles

There are many ways of approaching, assessing and analysing learning styles. Different models have been created based on diverse criteria of understanding cognition process and on varied aspects of processing, keeping and retrieving information. Among the best known models we can list Joy Reid's Perceptual Learning Styles Preference Questionnaire [6], defining learning styles based on the preferred sensual channel of assessing information into *visual, auditory, kinaesthetic, tactile, individual*



and *group*. Rebecca Oxford [7] uses a similar model in her Style Analysis Survey where she also uses the sensual preference, but she adds personality traits such as *introversion* and *extraversion*, and she includes other dimensions, such as *intuitive* and *concrete*, *close* and *open* and *global* and *particular*. Grasha and Reichman [8] offer a completely different view of learning styles, they define them according to students' interaction amongst their peers, the instructors and learning in general into six styles: *avoidant*, *collaborative*, *competitive*, *dependent*, *independent* and *participant*. There are also many other models, so we can see that learning styles are a very complex matter.

## 2.1 Ehrman and Leaver Construct

In my research I have chosen to use Ehrman and Leaver Construct [9] whose questionnaire is based on the psychological personality typology stated by Myers-Briggs Type Indicator questionnaire [10]. The questionnaire includes cognitive, learning and perceptual styles and it combines and matches them to personality traits. Moreover, it was thoroughly tested in practice in the United States at the Foreign Service Institute, where it was used for assessing language learning problems of the Civil Servants working abroad. This model distinguishes learning styles on the continuum between *synoptic* pole and *ectenic* pole, a *synoptic* requiring a subconscious and intuitive information processing while an *ectenic* prefers and requires a conscious control over the learning process. The questionnaire contains thirty statements, expressing ten bipolar cognitive dimensions: *field dependent vs independent*, *field sensitive vs insensitive*, *random vs linear*, *global vs particular*, *inductive vs deductive*, *synthetic vs analytical*, *analogue vs digital*, *concrete vs abstract*, *levelling vs sharpening* and *impulsive vs reflective*. The person decides between the two poles and marks the preference of a statement on a 9-grade Likert scale according to the statement he/she agrees most with. The answers thus show a range of styles running from a mild preference, a strong need to an outright rigidity.

## 3. The research

### 3.1 Research background

The research, currently in its piloting stage, takes place at the Faculty of Electrical Engineering and Communication, Brno University of Technology, in the Czech Republic. The Department of Languages, where I work, teaches about 350 Bachelor and about 200 Master students every year. Students must pass two one-semester compulsory English courses during their Bachelor studies and one two-semester English course in their Master studies. Their level of English varies from A2 to C1, and they are all mixed up in their B1-B2 English classes. Despite their difference in language skills their common features are anxiety and lack of willingness to communicate (both regardless of their English proficiency), poor accuracy in grammar and vocabulary, and great problems with assessing one's language learning skills. I chose Ehrman and Leaver questionnaire because I assume, based on my 14-year-long teaching experience, that students of this faculty show similar personality traits that are also reflected in their learning style. As the questionnaire is based on cognitive dimensions related to personality traits, it should help to understand, analyse and explain the common features they share in learning English, and it should help to prepare innovations for tailoring the English instruction to their needs.

### 3.2 Research design

#### 3.2.1 Aims

The research has two aims. The first aim is to identify the most common language learning styles, to find out their proportion in the research sample and to identify the proportion of students that differ from the common pattern. This will help teachers to predict and prevent possible problems when using a non-matching teaching style.

The second research aim is more specific: to identify how rigid and flexible the students are in their learning style preferences, what cognitive dimensions they are rigid in and what their percentage in the research sample is. I believe that the notion of rigidity and flexibility of preferences is crucial for understanding learning styles. If students are flexible in their preferences, they can easily adapt to teaching styles that do not match their learning style. However, the more rigid they are in their learning preferences, the bigger problems they have if the teaching style does not match their own learning style. My teaching experience suggests there is a high percentage of students rigid in their language learning preferences



### 3.2.2 Research sample

All Master students will be given the questionnaire, as the students will already have passed two compulsory courses in their Bachelor studies. The questionnaire needs to be translated into Czech to avoid language misunderstanding. Most students are male, so we can expect some misrepresentation, since, according to psychologists, men understand, perceive and use language differently from women.

### 3.2.3 Data collection

In the first stage of the research, all students' answers will be transcribed into an Excel file which will calculate an average score in each dimension and thus, a language learning style profile of a typical student will be composed, based on the most common features they will share.

(see Fig.1)

Sample results of the questionnaire represented in the Excel file (Fig.1)

	Synoptic			12			1			10			Ectenic
	1	2	3	4	5	6	7	8	9				
1. Field Sensitive			1									Field Insensitive	
2. Field Independent				1								Field Dependent	
3. Leveling							1					Sharpening	
4. Global						1						Particular	
5. Impulsive							1					Reflective	
6. Synthetic						1						Analytic	
7. Analogue				1								Digital	
8. Concrete			1									Abstract	
9. Random					1							Sequential	
10. Inductive				1								Deductive	

5 4 3 2 1 2 3 4 5

Based on the results from the first stage, the second stage of the research will focus both on students who have shown either a strong preference for some learning style (i.e. marking answers 1 and 2 or 8 and 9) or those who could not identify their preference, which means students who marked 5, (i.e. I am in the middle), for their answer in some cognitive dimension. These students will be given a second questionnaire which will ask them how difficult it would be for them to change their preference to the other pole. If they reply it would not be difficult, their preferences are very strong, but flexible. If it is difficult for them, it shows a strong and rigid preference. Students who replied "I am in the middle" regarding their preference of a cognitive dimension will be asked whether they cannot identify their preference or they are that flexible that they can do both equally well. This will help to distinguish flexible students from the ones who cannot assess themselves.

The data will be collected from two cohorts for two years in order to make the research more reliable. They will be compared and statistically evaluated, focusing on the percentage of students with rigid preferences in particular.

### 3.2.4. Results

The results are impossible to predict, as it is difficult to make a hypothesis without any data. Large part of the results will lie in the interpretation of the data and the hypothesis statistical evaluation.

## 4. Conclusion

The aim of the research is to understand better students' preferred ways of learning, to analyse the cognitive dimensions of learning they share and to identify the proportion of the students with rigid preferences. The results will be reflected in the innovation of English instruction. For a teacher, obviously, the awareness and knowledge of students' learning styles can be a great help for the choice of adequate learning activities and the whole dynamics of a lesson. Understanding students' learning styles also gives a teacher an invaluable tool for analysing, understanding and solving various learning problems of individual students, as the teacher is more capable of deeper insight into an individual learning process, which is also beneficial for students.



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